

**ACADEMIC FAILURE AMONG *PRIMEIRO GRAU* CHILDREN
IN SOUTHERN BRAZIL:
FROM EXTRA-SCHOOL RISK FACTORS TO INTRA-SCHOOL
PROCESSES**

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Abstract

This thesis is a study of academic failure among *Primeiro Grau* children in Southern Brazil. The empirical basis of the thesis is constituted by two investigations: a study of risk factors for failure in a birth cohort of 6,000 children from the city of Pelotas, through a correlation approach, and case-studies of two *Primeiro Grau* (Primary) schools - from the same city - that presented contrasting rates of academic failure (high and low). The thesis pursues the argument that academic failure cannot be fully understood through a correlation model. Such an approach is important to identify the children at risk. Nevertheless, it offers little in terms of insights into the intra-school processes associated with failure. The second investigation aimed at making a contribution to the understanding of academic failure among *Primeiro Grau* children through exploring such intra-school processes. Their identification and investigation are of particular importance in the light of the extensive long-term epidemiological research tradition in the area, which the thesis critiques.

The theoretical basis of the second study is derived from Vygotsky's and Bakhtin's accounts of the social formation of mind, which privilege communicative means of mediation, and Bernstein's model of educational transmission, which speaks of the specialization of communication in schools. This study investigates the characteristics of the cultures of the two schools and suggests that the high rates of educational failure in one of the schools is associated with the privileging of the regulative aspects of education over its instructional aspects: teachers' beliefs that poverty affects children's attainment, negatively combined with teachers' impressions that the children attending their school were very needy, resulted in teachers stressing the socialization purposes of schooling to the detriment of its academic purposes.

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Chapter 1:

The Framing of the Thesis

The aim of this thesis is to contribute to the understanding of the reasons for academic failure¹ in *Primeiro Grau*² children attending public schools in Brazil.

The first part of the thesis is an investigation of risk factors affecting academic achievement in a cohort of 6,000 Southern-Brazilian children. The study was part of a large-scale research project, known as the “Longitudinal Study of Children Born in Pelotas in 1982” (Victora, Barros and Vaughan, 1988), to which the author of this thesis contributed from 1986. In this study, academic failure was correlated with the individual and family background variables of the cohort children. The research adopted a medical/epidemiological methodology, following the model of data analysis used in the previous phases of the longitudinal project. Initially the project aimed at studying risk factors for mortality, morbidity, undernourishment, and other health measures. It later focused its attention on aspects of the children’s schooling.

The early recognition of the limitations of such an approach to academic failure, which left the role of schooling under-theorized³, led the writer of this thesis to try to overcome such limitations. The inclusion of school variables in the correlation study, utilizing some of the methodology of school effectiveness approaches, and case studies of schools, where the influences of intra-institutional processes related to failure could be explored in depth, were the strategies adopted.

The first strategy proved unsuccessful due to the weaknesses inherent in the available data set for a multilevel analysis. The second strategy was accomplished through case studies of two *Primeiro Grau* schools, within the municipality of Pelotas. The schools had contrasting rates of academic failure - high and low - in spite of being similar in

¹ As the country’s educational system demands that a child who has not achieved a certain performance level in a specific grade repeats that grade, the concept of academic failure in the present thesis will include grade retention and school drop out.

² The basic educational system in Brazil is divided in two parts: *Primeiro Grau* (Primary), composed of eight grades and *Segundo Grau* (Secondary), composed of three grades.

³ The need to study the influence of school characteristics in attainment and failure has been suggested by scholars of different affiliations such as Reynolds (1992, p. 15), Scheerens (1993, p. 33) Stoll and Fink (1996, p. 29) - from the so-called “school effectiveness” line of analysis - and by post-Vygotskians - such as Wertsch (1985, p. 216), Daniels (1995 pp. 517-9), Ivic (1989, p. 433), and Forman, Minick and Addison Stone (1993, p. 6).

terms of administrative control, location and pupil intake⁴. The case studies were aimed at finding out which school processes were responsible for such a difference in performance between the two schools.

The thesis pursues the argument that academic failure cannot be fully understood through a correlation model such as that applied in the first part of this study. The correlation model, besides leaving out the intra-school factors associated with failure, was limited to the enumeration of risk factors. The model was thus inadequate to provide information that can be useful for devising educational action for fighting failure. Academic failure needs to be understood in all its complexity and correlation models cannot provide the means for such an understanding. Correlation models lack a theoretical framework to explain the mechanisms through which the risk factors exert their effect. Such models allow no sociological perspective in the study of failure. In addition, the operationalization of pupils', families' or schools' characteristics in variables (that need to be quantified) frequently implies distortions and oversimplification of such aspects, thus providing a restricted picture of the risk factors themselves.

The claim for the importance of the investigation of the intra-school processes associated with academic failure is a result of the perception that the correlation approaches to the problem are still very much in use in the present.

As will be seen in Chapter 2, investigations of the relationships between material deprivation and educational inequalities are still currently carried out in developing countries. According to Banks (1976, p. 72), the tendency to study the effects of poverty on academic failure sprang from the acknowledgment of the hardships of working class life before the Second World War in England and in the US. Variables like parental unemployment, poor housing conditions, overcrowding in the home, and size of families were found to be associated with children's failure and there seemed to be no need to look for alternative explanations for the poor academic performance of working class pupils at that time. Poverty can still be seen to affect the educational

⁴ The children attending both schools, as it will be seen later, presented several of the risk factors for academic failure identified in the correlation study.

attainment of children in countries with low per capita income. However, correlational research, directed at identifying risk factors associated with academic failure, is replicating the previous findings on the topic and is not offering insight into the sociology of the processes.

Another type of correlation study that is currently used to explain educational inequalities is that which associates differential educational attainment with the differential intellectual capacity of individuals⁵. The conception of intelligence as a genetically determined and fixed characteristic that can be measured by tests first gained popularity in England in the first half of the twentieth century (Foster, Gomm, Hammersley, 1996, p. 7). Such a view of educational success stresses the personal origins of academic failure without identifying the role of society in the process. The deterministic perspective offered by this approach is therefore not useful in the identification of social measures to combat educational inequalities.

The correlation model for the investigation of failure adopted in the first part of this thesis was important inasmuch as it allowed for the identification of children at risk of failure in the city of Pelotas. It also allowed for the estimation of the size of the contribution of each risk factor for the problem. The inclusion of school variables in the correlation model (in the style of the “school effectiveness” approach) would have enhanced the analysis of academic failure in the cohort by widening the focus of the study that centred on the characteristic of individuals and their families. However, the investigation would still have offered little in terms of providing an understanding of how failure of working class children is constituted taking into consideration the contexts of social practice where the failure takes place.

The account of the case studies of the two *Primeiro Grau* schools from Pelotas, that composes the second part of the thesis, was thus aimed at investigating the contexts of practices responsible for the differential rates of academic failure among working

⁵ The popularity of such an explanation for educational inequalities is illustrated by the success achieved in the USA by the 1994 book by Herrnstein's and Murray “The Bell Curve: Intelligence and Class Structure in American Life”. Critical appraisals of the book can be read in Fraser (1997, pp. 779-83) and Apple (1996, p. 128). Evans (1995, p. 9) also mentions the popularity of such an approach to explain differential academic attainment.

class children. The case studies were guided by an integration of psychological and social theories. The work of Vygotsky and the post-Vygotskians and the ideas of Bakhtin were used to provide grounds for the understanding of the dialectical processes of social formation of human mind and behaviour. Bernstein's model was also applied to understand the mechanisms of cultural transmission carried out by schools. The theoretical approaches are complementary in terms of the elements they provide for the investigation of academic failure: the first focusing on the processes that take place at the individual level and the second focusing on the processes that take place at the institutional level.

The approach to the study of academic failure proposed in this thesis follows the lines of "reproduction theory" (Althusser, 1971, Bowles and Gintis, 1976, Bourdieu and Passeron, 1990) inasmuch as schools are considered as vital instruments in the production of educational inequality. Althusser (1971) and Bowles and Gintis (1976), for instance, pictured the cultural domination that takes place in schools as a result of wider social structural forces, especially capitalism (Foster, Gomm, Hammersley, 1996, p. 12). For Bourdieu and Passeron (1990), educational failure was explained by the fact that schools' curricula reward the "cultural capital" of the dominant class and devalue that of the lower classes resulting in an inability of the latter to appropriate the knowledge imparted by the schools. The reproduction theorists, however, had a pessimistic view of the possibility of improving the educational situation of the working class population through social action within the schools (Mehan et al., 1996, p.215). The author of this thesis does not share such a view.

In accordance with the ideas expressed by the "resistance tradition"⁶, that attempted to examine the possibility of social agency to overcome structural constraints, this thesis aims at investigating the capacity of schools to act against their reproduction predicament. The thesis espouses the view that individuals act upon and are acted upon by social, cultural and historical factors.

Since educational inequalities are very large in Brazil, it is important to achieve an

⁶ Authors like Willis (1977) and Giroux (1983) are among the best known for their work about the possibilities of overcoming the deterministic view imposed by the reproduction theorists.

understanding of academic failure that can reveal possibilities for agency within the educational institutions. According to Patto (1990, p. 1) and Brandão et al. (1983, pp. 9-10), high levels of educational failure have been reported for the country since the 1930s. And the situation has not changed recently.

According to the demographic census (IBGE, 1991), there were, in 1991, nearly 27 million illiterates⁷ aged 7 or over in the country - approximately 22% of the population within this age range. The SAEB-1993 report⁸ (pp. 20-36) indicated that the average time to finish the 8 years of *Primeiro Grau* was 9.7 years and that grade retention consumed a great amount of the financial resources destined to *Primeiro Grau* education.

Brazil occupies the seventeenth position among Latin American and Caribbean countries in terms of the efficiency of its educational system. Only 56% of Brazilian children reach Year 5 of *Primeiro Grau*, when the percentage should be, according to UNICEF, 85% for the Brazilian level of per capita gross national product (UNICEF, 1995, p. 21).

Academic failure is thus considered a key issue to be addressed for the improvement of the educational level of the Brazilian population (Mello, 1993, pp. 41-9; Ribeiro, 1990, p. 13; Verhine and Melo, 1988, p. 563). Grade retention leads to school drop out (Verhine and Melo, 1988, p. 564; Patrinos and Psacharopoulos 1996, p. 3) and, in the long run, children out of school become socially excluded (EURYDICE, 1994, p. 1, OECD, 1995, p. 5). Retention causes overcrowding in schools, reduces the number of vacancies for new pupils and is a source of economic waste. Grade retention is a proxy for inadequate learning (Schiefelbein and Wolff, 1992, p. 2) and also has a negative effect on teaching. It is not rare to find 13 and 7 years old youths mixed in the same class, in Brazilian schools, causing difficulties for teachers to maintain the same level of interest in all their pupils (Patrinos and Psacharopoulos 1996, pp. 4-6, Brandão et al. 1983, p. 11).

⁷ To be considered literate in the 1991 census, a person had to be able to read and write a simple note.

⁸ Relatório do 2o. Ciclo do Sistema Nacional de Avaliação da Educação Básica [Report on the 2nd Cycle of the National System of Evaluation of Basic Education].

Therefore, preventing working class children from constantly repeating grades and leaving school early in Brazil is considered an important task by the author of this thesis. The possibility of appropriating the knowledge produced in the society and the development of cognitive skills are considered essential to enable individuals to participate more fully in their societies, reaching higher levels of formal education.

The contribution to the understanding of the academic failure offered by this thesis starts with the mapping of the problem in the 1982 Pelotas cohort in Chapter 2. The chapter presents a discussion of the research findings concerning the relationships between individuals', families' and schools' variables and academic failure at international level and in Brazil. Next, the correlation study of risk factors for failure carried out in the city of Pelotas is described, including the failed attempt to incorporate schools variables among the predictors of failure. The chapter ends with the author's claims for the need to expand the study of academic failure beyond the identification of risk factors in order to understand the phenomenon more thoroughly. The investigation of the school processes associated with the phenomenon guided by a qualitative methodology is finally proposed.

Chapter 3 deals with the theoretical background that guided the qualitative approach to academic failure in the thesis. The chapter presents a review of the literature on the themes of the social formation of the human mind - centering on the work of Vygotsky and Bakhtin - and of cultural transmission - centering on the work of Bernstein. The final part of the chapter is an account of the research on the role of intra-school processes in pupil's academic attainment that has been produced within the same theoretical orientation as that of this thesis.

In Chapter 4, the formal aspects of the qualitative investigation are presented. The chapter starts with a discussion of qualitative methodology, focusing on the case study approach. Later the research questions and the main hypotheses that guided the data collection process are presented. A description of the research design is offered, specifying the means of data collection. The last section of the chapter presents an account of the selection of the schools that were studied.

Chapter 5 presents the pilot study and the description of the context of each of the two

schools that were investigated during the main study. Chapter 6 presents an account of the second part of the findings from the main case studies which constitute the thesis contribution to the understanding of the processes associated with academic failure in the two Pelotas' schools. This chapter ends with a summary and a discussion of the findings.

The thesis' conclusions, a critical appraisal and the recommendations for future studies are presented in Chapter 7.

Chapter 2:

Risk Factors for Academic Failure in Southern-Brazilian Children

2.1 Introduction:

Chapter 2 starts with an account of a number of correlation studies on academic attainment and failure. The literature review on the subject was carried out to compare the findings from the Pelotas' cohort with studies carried out in the USA, in the UK, in Brazil and in other Latin American countries.

Next, a summary of the different phases of the "Longitudinal Study of the Children born in Pelotas in 1982" is presented, as the investigations carried out in this thesis began from this study. The fourth follow-up phase of the longitudinal research, which collected information on the academic performance of the cohort children, is described in detail. This phase was the core of the correlation study of risk factors for academic failure that is described later.

The chapter ends with comments on the strengths and limitations of this correlation study and makes a case for the qualitative investigation of academic failure that follows in the next chapters.

2.2 Correlation studies on academic attainment and failure:

Correlation studies related to children's academic performance have been well documented over the past 30 years. The literature review presented in this chapter includes both direct reports on the research findings and reviews of the investigations carried out on the topic. Most of the studies described were large-scale investigations similar to the Pelotas study. However, they had differences:

- Some were centered on aspects related to differential attainment¹, as in the research carried out by Davie, Butler and Goldstein (1972), others were concerned with failure²,

¹ When examining the research findings related to attainment, it is important to keep in mind the fact that the relationship between attainment and failure is complex, as pointed out by Wolff, Schiefelbein and Valenzuela (1994, p. 20).

² Failure has been defined differently according to the educational system it applies to. Pass/fail standards and criteria may vary, for instance, according to country, region within a country or different types of school in the same region (Schiefelbein and Wolff, 1992, summary page).

as in the study by Psacharopoulos and Yang (1991);

- Some included the analyses of several variables related to children's and families' background such as the work by Dauber, Alexander and Entwisle (1993), others were restricted to the examination of the effects of only one or a small number of these variables as exemplified by Gottfried, Gottfried and Bathurst (1988);
- Some of the multivariate studies included school variables, as, for instance, the Coleman Report (Coleman et al., 1966), others were restricted to individual and family factors such as the investigation of Bianchi (1984).

The account of the reviewed literature is organized according to the different variables of interest in this thesis. Such a presentation strategy, however, implies that the studies and reviews of studies that included multivariate analyses should be cited several times. Therefore, to overcome the possible problem of repetition, the general features of each investigation are described only once, when it is first mentioned.

The findings on academic attainment and failure are divided into five groups that relate to the following variables:

- 1) Family socio-economic background characteristics - such as social class, income, parental occupation, parental schooling, type of dwelling, crowding conditions at home, number of children and maternal age³;
- 2) Ethnicity;
- 3) Gender;
- 4) Children's nutritional characteristics;
- 5) School variables.

The first group includes a greater number of variables than the others and such a grouping is appropriate because the variables are very much interconnected, relating with social class and income.

³ The writer of this thesis assumed that maternal age has an effect on children both as a biological variable and as a social variable. Therefore, in the absence of a more adequate group of variables to include maternal age, this variable was included in the group of family socio-economic background, although its influence goes beyond the purely social effect.

The last group, which focuses on the school characteristics that are associated with academic performance, includes the investigations within the school effectiveness research as a separate sub-group. The first group of studies, that examined school effects on attainment or failure, identified no priority of either intra or extra-school variables. The school effectiveness investigations, in contrast, were designed to explore the effect of school variables on academic performance, using children and family variables as background information. As this was considered the best approach for the correlation study of failure in the Pelotas cohort, a brief account of the advantages and disadvantages of such an approach is presented along with the investigations' findings.

The information from the literature review will now be presented according to the groups described. As will be noticed, information on some of the variables was found in several studies, while other variables were included in just one of the studies reviewed, suggesting that different degrees of importance were attributed to different variables. It will also be noticed that the effect of some of the variables is consistently significant across the studies. For other variables the results are controversial.

2.2.1 Academic attainment or failure and family socio-economic background characteristics:

Among the variables associated with attainment and failure, socio-economic status of the family has been the most powerful predictor for more than 30 years (Levin 1995, p. 212).

The Coleman Report (Coleman et al. 1966, pp. 21-2)⁴ claimed that family background variables were the main factors associated with pupils' academic performance in a multivariate analysis where other student and family background variables (socio-economic status, home environment, race, attitudes and aspirations) and school variables were included.

Jencks et al. (1972, p. 143), using data from different surveys carried out in the USA, reported that family background variables were responsible for nearly half of the variation in American children's educational attainment - defined as the length of time

⁴ This study was based on a sample of 625,000 USA children and youths attending approximately 4,000 elementary and secondary schools.

people stay in school. According to the authors, father's occupation explained 35% of the variance in the effects of family background, while income explained 15% (Jencks et al., 1972, p. 167). The authors, however, pointed out that precise measures of the effects of family background were difficult to obtain, as there are multiple indicators of socio-economic status. In fact, it can be observed in this review that different researchers use different measures of socio-economic status, although the most frequent are income, parental education and parental occupation.

The literature review carried out by Bianchi (1984, pp. 184-6) also confirmed the relationship between family socio-economic status and academic achievement. The author stressed the importance of poverty status and parental education for attainment (Bianchi, 1984, pp. 191). Brandão et al. (1983, pp. 60-87), in their book on "the state of the art" of the research on failure during the 1970s and early 1980s, stressed the importance of such variables as well. Brandão et al. (1983) reviewed a series of investigations sponsored by the World Bank and The International Development Research Center (Canada) carried out in several countries, and a number of studies carried out in Brazil. These authors pointed out that socio-economic factors were more relevant variables for academic achievement in developing than in developed countries and in the initial years of schooling.

In a book published by the Organization for Economic Co-operation and Development (OECD), Evans (1995, pp. 21-23) summarized the reports of case studies from 17 countries and three Foundations. The studies examined the reasons for children failing in school and poverty was again identified as a strong predictor of low attainment and failure. Monoparental families, families of low educational level, and families that lacked adequate housing were identified as risk producing.

More recently, in a paper on academic failure in children and youths up to the age of 15, Patrinos and Psacharopoulos (1996, pp. 4-11) presented a review of research findings for Latin America and the Caribbean. Such a review stressed, once more, the association between children's failure in school and families' low socio-economic status.

The information presented above suggests that family socio-economic background exerts significant influences on academic attainment and failure. Next, the effects of

specific variables will be examined. The group of variables selected for such an examination relates to the correlation study carried out by the writer of this thesis.

Parental occupation and family economic status:

Although these two variables are not equivalent, the findings related to them will be presented together as they refer to measures closely interrelated: income and occupation.

The studies reviewed presented contrasting results: income tended to be significantly associated with attainment/failure in the bi-variate analysis reviewed. In some of the multivariate models, however, the variable lost significance, as other proxy measures of socio-economic status were introduced in the analyses. In other studies that used a measure of social class based on parental occupation, the variable maintained significance in the multivariate analyses.

Davie, Butler and Goldstein (1972, pp. 36-7)⁵ reported that children from non-manual or middle class workers achieved a gain in reading attainment of approximately 14 months and a gain in arithmetic attainment of approximately 8 months as compared to children from manual, working class workers. Such results were based on a multivariate analysis that examined the joint effect of social class⁶, level of education of the child's mother and father, social class of the child's mother's father and father's father, child's sex and family size (measured by the number of children in the household).

In the USA, Bianchi (1984, p.189) reported significant differences in the probability of being enrolled below the modal grade for their age for pupils classified as below or above poverty level. The author used a multivariate model that includes sex of the child, schooling of parents, number of siblings, maternal employment, and household type⁷.

Mortimore et al. (1988, pp. 132-7)⁸ also found a difference of approximately 10 months

⁵ The report by Davie, Butler and Goldstein (1972), based on data from the National Child Development in Britain, was a follow-up which started in 1958, and examined the variables influencing the reading and arithmetic attainment of approximately 16,000 children at the age of 7.

⁶ Measured through occupational status (Davie, Butler and Goldstein, 1972, p. 2).

⁷ The study by Bianchi (1984) was based on data from the October school enrollment supplement to the 1979 Current Population Survey in the USA. The author analyzed the academic achievement of 20,000 children and youths between the age of 7 and 15.

⁸ The study by Mortimore et al. (1988) was a follow-up of 2,000 pupils from the age of 7 to the age of 11 in 50 British schools selected at random. The researchers examined the effects of a series of child and family background characteristics and school variables on cognitive and non-cognitive outcomes.

in reading age between first grade children with fathers in professional or intermediate non-manual work and those with fathers in unskilled manual work. The difference in Mathematics attainment between the two groups was 9 months, in favour of the non-manual workers' children. These differences - like the difference in writing attainment - were maintained throughout the 4 years follow-up. The analyses were carried out with multivariate models that included ethnicity, fluency in English, family size, child's birth order, sex and age, eligibility for free school meals, and experience of nursery education.

In the study by Psacharopoulos and Yang (1991, pp. 291-3)⁹ in Venezuela, family income was shown to be associated with the probability of youths being in school and repeating a grade in the bi-variate analyses. The mean family income for children in school was 6,804 Bolivars¹⁰ per month. For children out of school, it was 6,543 Bolivars. The mean family income for the groups of repeaters and non-repeaters were, respectively, 5,899 and 7,002 Bolivars. However, no associations were found between income and educational outcomes when age and sex of the child, place of residence (rural/urban), and fathers' schooling were included in the analysis.

According to Wolff, Schiefelbein and Valenzuela (1994, pp. 27-8), however, among the fourteen Latin American countries included in their review of academic performance, Brazil and Venezuela had the greatest discrepancies in years of schooling for youths aged 15. The difference was more than three times greater for the top quintile of income as compared to the bottom quintile.

Dauber, Alexander and Entwisle (1993, pp. 330-40)¹¹ carried out a logistic regression in which different variables were entered into the equation at 3 steps. In the first step, the authors included the children's personal and social background variables: race, gender, parent's educational level, and family economic level (measured as eligibility for reduced price meals). In the second step, the variables related to the measures of

⁹ This study by, based on Venezuelan census data, analyzed the factors influencing grade repetition and the probability of pupils staying in school among 15,206 youths aged 10 to 18.

¹⁰ The average family income of the sample was 6,600 Bolivars per month.

¹¹ This research, carried out in the USA (Baltimore), studied a sample of 728 children from inner-city state schools characterized by a population of low socio-economic status and high prevalence of African-Americans. The study investigated the influence of socio-economic background variables on grade retention on first to fourth grade pupils.

academic competence of children were added. In the third step the evaluations of the children made by teachers and parents were entered. The results of the first step indicated that, after controlling for the other variables in the equation, children who received no meal subsidy were 21.4% less likely to be retained compared with those who received free meals. However, the final result of the three-step analysis indicated that, after all the variables were fitted in the equation, family economic level lost significance.

The same pattern of results was reported by Patrinos and Psacharopoulos (1996, pp. 9-11)¹². In the bi-variate part of their analysis, the authors found that rates of age-grade distortion for children born to families classified in the bottom and the top quintiles of income were, respectively, 84% and 50% in Guatemala. For Bolivia, the rates of age-grade distortion corresponding to bottom and top quintiles of income were 29% and 17%.

In the multivariate logistic regressions, nevertheless, the effect of family income for both Guatemala and Bolivia was not significant. The group of variables entered in the multivariate equation included: child's age, sex and number of siblings, family's ethnic origin, place of residence (rural/urban), type of school attended by the child (private/public), maternal schooling, employment of the head of the family, and characteristics of the dwellings (number of room, kitchen, running water).

Maternal employment:

Davie, Butler and Goldstein (1972, pp. 44-5) analyzed the effect of having a working mother on children's reading and arithmetic attainment. The regression model for the analysis also included child's sex, social class, and size of family. Children of mothers that worked part time before their children started school had a gain of approximately three months in reading attainment as compared to children of mothers who worked full time before their children started school. For arithmetic attainment, this gain was approximately one month. When comparing the effect of mothers starting to work full

¹² The work by Patrinos and Psacharopoulos (1996) presented both a review of the research findings on attainment/failure for Latin America and the Caribbean, and the results of their own investigation based on data from national household surveys in Bolivia and Guatemala. The authors studied the risk factors for age-grade distortion in children and youths younger than 15 attending primary schools in the two countries.

time with that of mothers starting to work part time after their children were enrolled in school, the difference encountered was small: one month for reading attainment. There was no gain in arithmetic attainment.

Bianchi (1984, pp. 188-91) reported that, when the effects of sex and ethnicity of the child, education and poverty status of parents, number of siblings and type of family were controlled, the effect of maternal full-time employment was unrelated to the likelihood of a child being enrolled below the grade that was modal for her/his age.

Gottfried, Gottfried and Bathurst (1988, p. 12) carried out a literature review on the relationship between maternal employment and academic achievement and reported that research on the topic provided discrepant results: detrimental, favorable and non-significant associations were encountered. The evidence from their own and Lerner and Galambos' (1988) longitudinal studies, carried out in the USA (Gottfried and Gottfried, 1988, p. 270), indicated that, in the early school years, children of working mothers presented an equivalent performance to that of the children of non-working mothers. Both studies obtained their results through multivariate analyses (Gottfried, Gottfried and Bathurst, 1988, p. 21; Lerner and Galambos, 1988, p.71).

Another review of the effect of maternal employment on the academic performance of USA children was carried out by Beyer (1995). This author also concluded that such a variable had little explanatory power in itself and claimed that the effect of maternal employment was conveyed through parenting styles (Beyer, 1995, p.242).

Parental schooling:

Davie Butler and Goldstein (1972, pp. 36-7) reported that children of mothers that had stayed in school after the mandatory age, achieved a gain in reading attainment of approximately 6 months and in arithmetic attainment of approximately 5 months compared with children whose mothers left school as soon as was legally possible. Very similar effects were found for children of fathers that stayed in school after the mandatory age. The multivariate analyses carried out by the researcher also included social class, social class of the child's mother's father and father's father, child's sex and family size.

The study by Bianchi (1984, p.189) suggested differences in the probability of being enrolled below the modal grade for their age for pupils whose parents had less than 12, 12, or more than 12 years of schooling in a multivariate analysis.

The findings from Psacharopoulos and Yang (1991, pp. 291-3) obtained through a multivariate logistic regression (that included age and sex of the child, rural/urban residence, and family income), suggested that, for each year of a father's schooling, the probability of his child being a grade repeater decreased by 3.4% and the probability of his child being in school increased by 2.6% (Psacharopoulos and Yang, 1991, pp. 291-3).

Ilon and Mook (1991, pp. 436-40)¹³ reported effects of maternal education only for the children of families that belonged to low income groups: the authors claimed that a year of maternal schooling accounted for a decrease of 1% in the probability of drop out for such a group of children. No effect of maternal education was found for the groups of middle and high socio-economic level or for father's education in any socio-economic group.

The results by Ilon and Mook were also obtained by a multivariate logistic regression model that included a large number of variables: child's sex, child being the oldest sibling, other infants under the age of five living in the household, sex of this infant, a child working on the family farm, persons older than 65 living in the household, price of local school fees, cost of non-fee school expenditures, use value of durable goods in the household, value of monthly household expenditures, years of schooling completed by father, years of schooling completed by mother, provision of school furniture by the school, provision of Math's and reading books by the school, provision of food by the school, existence of a primary school in the community, and existence of a secondary school in the community.

The investigation by Dauber, Alexander and Entwisle (1993, pp. 336-40), indicated that children of parents who graduated from high school (12 years of schooling) were approximately 8% less likely to be retained in a grade than children of parents who had

¹³ The study by Ilon and Mook (1991) was based on data from a rural household survey in Peru (n=2,500) and investigated the factors associated with school drop out in children and youths aged 6 to 14.

10 years of schooling. Such results were found in the first stage of the analysis that examined the joint effect of personal and family background. In the final stage, the level of education of parents lost significance.

Patrinos and Psacharopoulos (1996, pp. 9-11) found that, in Guatemala, children of parents¹⁴ with a complete secondary education presented an age-grade distortion rate of 31%. This rate was 74% for children of parents with incomplete primary education. The same tendency was present in Bolivia, although the percentages were overall lower: 9% and 34% respectively.

Family size:

According to Davie, Butler and Goldstein (1972, pp. 32-3), children living in households with one to four children presented a gain in reading attainment of approximately 12 months when compared to children living in households with five or more children. The gain in arithmetic attainment was equal to three months when comparing these two groups. Such results were obtained through a multivariate regression that included social class, country of residence within the UK¹⁵, and child's sex.

Bianchi (1984, pp. 188-91), in her turn, reported that, in her USA study, the presence of siblings did not significantly affect predicted probabilities of enrollment below the modal grade for their age in a multivariate model, except among the poor.

Housing conditions:

Davie, Butler and Goldstein (1972, pp. 54-7) examined the joint effect of a series of variables related to families' housing conditions. The authors studied the associations between attainment and tenure of dwelling, overcrowding¹⁶, existence of bathroom, hot water supply, indoor lavatory, garden or yard, and type of accommodation (house, flat, room) controlling for social class, country of residence within the UK, child's sex and

¹⁴ The paper by Patrinos and Psacharopoulos (1996, p. 9) is not clear on whether they refer to the level of education of mother, of father, or of both. The author of this thesis decided to describe the results in terms of both parents.

¹⁵ England, Wales and Scotland.

¹⁶ Overcrowding in this investigation was defined as more than 1.5 persons per room - bedroom, living room or kitchen, when the latter was used for sleeping and eating (Davie Butler and Goldstein, 1972, p. 50).

family size. The results indicated small associations between academic performance and housing conditions. The associations of interest to this thesis are the following: children that did not live in overcrowded houses had a gain of approximately three months in reading and two months in arithmetic attainment as compared to children that lived in overcrowded conditions. Type of accommodation was only significant in relation to arithmetic attainment: children living in flats had a gain of approximately 4 months when compared to children living in rooms.

Maternal age at the child's birth:

According to Davie, Butler and Goldstein (1972, pp. 165-74) there was a relationship between the age of the mother at the time of the child's birth and the latter's reading attainment. Children born to mothers aged between 25 and 34 had a gain of approximately 4 months as compared to children born to mothers aged 25 or less. These findings came from a multivariate analysis in which social class, child's sex, child's birth order, maternal smoking during pregnancy, birth weight, duration of gestation, maternal height, and number of children in the household were included.

2.2.2 Academic attainment or failure and ethnicity:

Most studies that were reviewed indicated an association between ethnicity and academic attainment and failure.

Ethnic differences on the results of standard achievement tests were suggested in the Coleman report (Coleman et al., 1966, p. 20), which claimed that white and oriental Americans had higher achievement levels (tested at grades 1, 3, 8, 9 and 12) than the black and Puerto Rican children in the USA. Such an association between ethnicity and achievement was found through a multivariate analysis.

Jencks et al. (1972, p. 142), however, claimed that average young North American blacks had only a year less schooling than average white youths. The authors considered such a difference surprising given the handicaps with which blacks entered schools.

The association between ethnic origin and academic progress in the USA was also confirmed by the bi-variate analyses of Bianchi (1984, p. 188-91). The researcher reported that the percentages of youths 7 to 15 years of age that were enrolled below the

mode grade for their age, for instance, were 17.1% for whites, 27.1% for blacks and 30.2% for Hispanics. Differences between the ethnic groups were still present in the multivariate analysis. The author, however, pointed out that the effect of ethnicity was modified by interaction with gender: the effect was softened for males but accentuated for females.

Reporting on data from the National Education Longitudinal Study of 1988 in the USA, Schneider and Coleman (1993, p.10-11) also observed that 31.2% of the white students in the random sample of 26,000 eighth graders had teacher-awarded grades in the highest quartile. The percentage for African Americans was 16.6%. Ethnic origin, nevertheless, presented no significant association with failure after controlling for gender and the socio-economic variables fitted in the first step of the logistic regression carried out by Dauber, Alexander and Entwisle (1993, pp. 336-7).

In the UK, Tomlison's (1983) review of a series of large-scale studies about the associations between ethnicity and academic performance (between 1960 and 1982) revealed that children of West Indian origin, in general, under-performed and under-achieved, as compared to "white" and "Asian" populations (Tomlison, 1983, p. 44). Such a tendency had also been pointed out by Little (1975, p. 133), who investigated the performance of large numbers of pupils from inner city London.

In the study by Mortimore et al. (1988, pp. 151-4), ethnic background had a significant effect on attainment after controlling for fluency in English, and other background variables: children of Caribbean, Greek and Turkish origin obtained lower reading scores than those of English, Scottish, Welsh, or Irish background. The same tendency was observed in terms of Mathematics. Among the Asians, the results were higher for some groups and lower for others in reading and Mathematics. In relation to writing, no differences were found for the first three years of schooling¹⁷.

Although not directly measuring attainment and failure, Hasenbalg and Silva (1990), using data from the *Pesquisa Nacional por Amostra Domiciliar* [National Research by Home Sample] from 1982, in Brazil, provided important information on the

¹⁷ Mortimore et al. (1988, p. 154) reported that, in the summer of the third school year, children of Asian, Caribbean and Turkish backgrounds started to show a difference in terms of the length of written scripts: these children tended to write smaller pieces than the others.

ethnicity/achievement relationship. The authors reported higher levels of schooling for the white population aged between seven and 14 as compared to the black and mixed (*pardos*) population. For the first group the percentage of youths that had between five and seven years of schooling was observed to be 12%. For the latter groups the percentages were 4% and 5% respectively. If, as discussed earlier in this thesis, drop out is a consequence of repetition, it is possible to conclude that black and mixed populations in Brazil are also more affected by academic failure than the white population.

According to Patrinos and Psacharopoulos (1996, p. 11), being indigenous in Guatemala had a much stronger predictive power for academic performance than in Bolivia. Being indigenous increased the age-grade distortion by 12% in the former and by 6% in the latter country. These authors, however, did not examine the effect of fluency in Spanish when analyzing the data from these two countries.

2.2.3 Academic attainment or failure and gender:

The findings related to academic attainment or failure and gender were not consistent across the studies reviewed. Differences between findings from different countries can be noticed.

Davie, Butler and Goldstein (1972, pp. 32-3) found that the reading attainment gain of girls was six months higher than that of boys in a multivariate analysis that also included social class, country of residence within the UK and family size. The analysis of the arithmetic attainment presented the same trend, although the gain for girls was smaller: one month.

The results from the multivariate analyses by Mortimore et al. (1988, pp. 142-6), indicated that, in the first year of schooling, there was a difference of about five months in reading age in favour of girls. The difference was maintained in the follow-ups and girls also showed better attainment in writing than boys. No gender differences were found in relation to Mathematics attainment.

According to a report from the OFSTED (Office for Standards in Education, 1996, p. 6), British girls outperform boys at ages seven, 11, and 14 in National Curriculum

assessment in English, Mathematics and Science.

Boocock (1980, pp. 84-101), writing on the subject of gender differences in academic attainment, also stated that girls tended to show advantages over boys in several areas. Reporting on data from the National Center for Education Statistics from the year of 1976 in the USA, Boocock pointed out that girls were higher achievers in the areas of reading, writing, literature and music. Boys, nevertheless, performed better in Mathematics and Science.

The results from Bianchi's (1984, pp. 188-91) analysis indicated that there were gender effects on the probability of a child or youth being enrolled below the modal grade for her/his age. This effect, however, varied according to ethnicity, income and parental educational level.

In the three-step multivariate analysis by Dauber, Alexander and Entwisle (1993, pp. 330-40), gender was still significant at the final stage, suggesting that girls were approximately 9% less likely than boys to be retained in school.

According to the review carried out by Brandão et al. (1983, pp. 69-70), the findings of the investigations carried out in Brazil did not allow for any conclusions about the association between gender and academic failure: some have found this association to be positive and others found no association. Brandão et al. did not provide any information about the effect of gender in the international studies reviewed.

In the multivariate analysis carried out by Psacharopoulos and Yang (1991, pp. 290-3), being male decreased the probability of being in school by 4% and increased the probability of repeating a grade by 13%. The rates of grade repetition in the bi-variate analysis were 36% for females and 48% for males.

The findings by Ilon and Mook (1991, pp. 438-9) indicated that dropping out of school bore no relationship with the sex of pupils when controlling for the other variables in the analysis model.

The review carried out by Wolff, Schiefelbein and Valenzuela (1994, p.28), indicated that in Bolivia, Colombia, Chile, Ecuador, Venezuela, Panama and Paraguay, there were very small differences in the repetition levels by gender: boys had 3 % more chance of

repeating a grade than girls.

2.2.4 Academic attainment or failure and child's birth and nutritional characteristics:

In the investigation by Davie, Butler and Goldstein (1972, pp. 176-9), when all the other variables were entered in the equation, except birth weight, length of pregnancy had a small but clear effect on attainment: children born at the expected time (38-42 weeks) had a gain of about 3 months in reading attainment as compared to those born more than 2 weeks earlier. However, when birth weight was entered in the analysis, such an effect lost significance. The effect of birth weight was to decrease reading age by 4 months for every 1,000 g. of reduction in weight.

The literature review carried out by Brandão et al. (1983, pp. 65-6) did not indicate positive associations between failure and malnutrition in the investigations carried out in Brazil or in the other countries. Grantham-McGregor's (1987, p. 134) review of a number of international studies also stressed the difficulty of reaching any conclusion about the association between academic achievement and nutritional status. This author pointed out the problem of separating the effects of malnutrition from those of poverty. Such a methodological difficulty constitutes a major hurdle for the studies on the topic.

The same claim was also made by Pollit (1990, pp. 96-7), although this author argued that there was enough evidence to indicate that there was an association between severe malnutrition and school learning - measured through aptitudes, time in school, motivation, achievement tests and grades attained. According to Pollit, a number of studies from developing countries indicated that well-nourished children scored higher on achievement tests than severely malnourished children, although the magnitude of the differences was not uniform across investigations. Pollit (1990 p. 110) also commented that some researchers claimed that height-for-age (an indicator of early malnutrition) was the most powerful predictor of school performance, while others suggested that weight-for-age (an indicator of current malnutrition) might be a better measure to use in investigations.

2.2.5 Academic attainment or failure and school variables:

Coleman et al. (1966, pp. 21-2) claimed that schools in the USA were remarkably similar in the way they influenced the attainment of pupils after controlling for background variables. The school characteristics Coleman et al. studied included teachers' salaries, number and age of books in the library, age of buildings, type of training of staff, specialized facilities and curricula, free kindergarten, attitudes of staff about their schools, their students and their school's policies.

Following the same line of research, and examining the effects of the amount of resources a school gets, the differences in curriculum and the access of students to different curricula, Jencks et al. (1972, p. 16) also claimed that "differences between schools have rather trivial long-term effects".

The review of international literature carried out by Brandão et al. (1983, pp. 61-4) indicated that the following aspects enhanced pupils' attainment: smaller school systems, more time spent in school, bigger size of classes (although not in all the studies reviewed), greater availability of books and other reading materials, and pre-school attendance. The positive aspects related specifically to teachers were motivation, positive expectations, higher level of training and experience, and permanence in the same school. As for the research carried out in Brazil, Brandão et al. (1983, pp. 70-8) suggested that smaller schools, longer hours in school, attendance at pre-school, high levels of teacher motivation, positive expectations on the part of the staff, and teacher stability in schools, were associated with better achievement in children from the lower socio-economic groups. The harmful aspects were cultural differences between home and school and teachers' work overload.

The schools' characteristics studied by Davie, Butler and Goldstein (1972, pp. 120-38) were analyzed in a multivariate analysis where social class, sex, age at starting school, school size, class size, and parental interest were entered together. The results indicated differences in reading attainment of approximately 6 months for children attending smaller schools, of approximately 3 months for children placed in larger classes (40 or more children), and again of approximately 3 months for children of what they called "interested parents" (defined as those that contact schools to discuss their children's

work).

In relation to school aspects, Ilon and Mook (1991, p. 441) examined the relationship between drop out and what the authors labeled as measures of school quality: provision of mathematics and reading books, provision of meals, and provision of desks and chairs. The researchers also examined the effects of school fees and other direct costs of schooling. The findings indicated no effect of the measures of school quality and negative effects of the measures of cost.

After the literature review carried out by the author of this thesis was finished, it became clear that a number of the investigations examined originated in medical psychological/psychiatric and epidemiological units and not in conventional sources of empirical educational research. This fact could explain the lack of attention devoted to school aspects in some of the studies.

The investigations by the researchers that participated in the school effectiveness movement started as a reaction against the results of some studies such as those reported by Coleman et al. (1966) and Jencks et al. (1972). Such studies presented a pessimistic view of the potential influence of schools and teachers on students' achievement, while emphasizing the impact of children's background variables (Sammons et al., 1995, p. 2; Scheerens and Bosker, 1997, p. 145). The research on school effectiveness represented an attempt to separate the impact of family background from that of schooling on children's performances. It aimed at finding out whether some schools were more effective than others were and, if so, in what respects (Stoll and Fink 1996, p. 27).

The school effectiveness approach to the study of academic performance:

In the attempt to explain the past neglect of the influence of schools on the educational attainment of children in Britain and in the USA, Reynolds (1985, p. 4) mentioned governmental interest in having home-based explanations for failure, which are considered less threatening to the State. He also pointed out other likely reasons for such a neglect: a) the influence of Psychology within educational research, resulting in an overemphasis on early experience and family life on people's behaviour; b) the influence of the Sociology of Education with its claims that schools reproduced

societies, family and home-based inequalities; and c) the difficulties associated with carrying out school-based research.

The studies by Rutter et al. (1979) and by Mortimore et al. (1988), in Britain, are examples that demonstrated that schools could make a difference. Sammons et al. (1995, p. 4) pointed out that the evidence accumulated during the last two decades indicates statistically and educationally significant differences between schools, in terms of pupils' attainment. These authors, however, did not deny the importance of the background variables for attainment. In fact, Stoll and Fink (1996, p. 37) reported that the most current studies have indicated that the amount of the total variance in a pupil's achievement attributable to school effects is between eight and 14%. The review carried out by Scheerens and Bosker (1997, p. 77) also indicated that 19% of the achievement differences between students were explained by schools, without taking into account the students' characteristics. When adjusting for such characteristics, however, the percentage decreased to 8%.

Since the beginning of the 1990's school effectiveness investigations have been utilizing the statistical technique of multilevel modeling (Goldstein, 1995) - a development of the ordinary regression models - that enables analyses of the school effects on children's attainment using the information on personal and family characteristics as background. The investigations guided by such an approach have produced several descriptions of effective schools over the years. A summary of the findings from a significant number of international investigations is presented in Table 2.1, reproduced from a recent book by Scheerens and Bosker (1997). The authors provided descriptions for each of the items on the list, in an attempt to address the criticisms directed to school effectiveness research claiming that it produces lists of inputs that are difficult to transpose to school practice (Angus, 1993, pp. 342-3). This list of effectiveness factors, however, is still fairly vague and limited in terms of allowing a degree of understanding of the processes associated with failure and low attainment that is useful for fighting such a problem.

Table 2.1: Characteristics of effective schools:

General effectiveness-enhancing factors
1. Achievement orientation / high expectations / teacher expectations
2. Educational leadership
3. Consensus and cohesion among staff
4. Curriculum quality / opportunity to learn
5. School climate
6. Evaluative potential
7. Parental involvement
8. Classroom climate
9. Effective learning time (classroom management)
10. Structured instruction
11. Independent learning
12. Differentiation, adaptive instruction
13. Feedback and reinforcement

Source: Scheerens and Bosker (1997, p. 100)

School effectiveness research has been also criticized for the types of outcome measures which it has taken up. The problem of defining the best outcomes to be measured was discussed by a series of researchers from the movement, such as Brown and Ridell (1991, p. 69), Vedder (1992, p. 3), Townsend (1994, p.128), and Scheerens and Bosker (1997, pp. 3-34).

Scheerens (1993, p. 19) commented that in most empirical studies within the school effectiveness paradigm, the short-cut answer to the issue of choosing an outcome measure, was to pick achievement scores in basic school subjects.

Stoll and Fink wrote that:

To arrive at a definition of a school as effective, people are forced to choose between competing values. What educators perceive as important outcomes of schooling may not coincide with views of pupils, parents, governors, the local community, government or the media (Stoll and Fink, 1996, pp. 26-7).

Citing the example of recent research carried out in Australia, Townsend (1994, pp. 128-9) indicated that a wider range of outcome measures are being used in that country. Besides academic and intellectual pursuits, they included personal and emotional development and social, moral and citizenship skills. This represents an advance. However, consensus in the choice of the best outcome measures has not yet been reached (Stoll and Fink, 1996, p. 27).

Besides this difficulty related to the definition of the best outcome measures, the school effectiveness line of research was also self-critical about its difficulties in explaining the processes associated with school success.

Stoll and Fink, for instance, wrote that:

studies that rely entirely on the collection of quantitative data or snapshots of the school may not tell us enough about its inner workings and processes, whereas mixed methodological approaches, incorporating case-studies as well as 'number crunching' are more likely to be able to explain processes at work (Stoll and Fink, 1996, p. 29).

Scheerens and Bosker (1997, pp. 139-209) recently reported that the qualitative approach has been used in school effectiveness research and that the claimed lack of a theoretical basis for the school effectiveness investigations has also been addressed. Nevertheless, the authors do not have an optimistic view of this line of research, due to the number of inconsistencies in the findings.

The correlation studies presented in the literature review provided important information on academic achievement. Such studies painted a picture of the epidemiology of academic attainment and failure; that is, they provided information on the distribution of the phenomena according to different groups and schools. A large amount of data on the topics of attainment and failure has been accumulated leading to well known and consistent conclusions. However, such correlation studies are limited to providing lists of individual, family or school characteristics that are associated with achievement. They do not tell the whole story of attainment or failure. A thorough understanding of the phenomena can only be achieved if the processes involved in them are examined. There is a need to explain, for instance, why poor children fail, or why structured instruction contributes to the effectiveness of a school.

Correlation studies can be considered necessary for the initial mapping of the problem and can be used as starting points for qualitative approaches that attempt to answer the “why” questions (as will be done in this thesis).

To illustrate the integration of these two approaches, a description of the correlation study carried out in Pelotas will be presented first. Such a description will start with a summary of the characteristics of the “Longitudinal Study of the Children Born in Pelotas in 1982”, in which the quantitative and the qualitative studies were embedded.

2.3 The “Longitudinal Study of the Children Born in Pelotas in 1982”: a brief description of the early phases.

This section presents an account of the design and data collection procedures of the earlier phases of the longitudinal study as part of the data utilized in the investigation of risk factors for academic failure in this thesis were collected during such phases¹⁸. A discussion of methodological issues and drawbacks of the investigation will also be included later.

The Pelotas longitudinal study (Victora, Barros and Vaughan, 1988) had the initial objective of evaluating the influence of perinatal, demographic, environmental, nutritional and health-care variables on the mortality, morbidity, and development of children. A cohort of 6,011 children born to urban families in the three city hospitals was identified and started to be followed up in 1982.

Up to 1992, the project included a perinatal study and three follow-ups¹⁹. These phases dealt mainly with children’s health aspects. The project also included a fourth follow-up, coordinated by the author of this thesis²⁰. This last phase was intended to investigate children’s academic histories.

Table 2.2 illustrates the different phases of the longitudinal project with the numbers of children identified in each.

¹⁸ A complete account of the design and the research methodology of the first four phases of the study can be found in Victora, Barros and Vaughan (1988, pp. 18-31).

¹⁹ These studies were coordinated by researchers from the Faculty of Medicine of the Federal University of Pelotas.

²⁰ A lecturer in the Faculty of Education of the Federal University of Pelotas.

Table 2.2: Phases of the longitudinal study with numbers and percentages of children identified (Pelotas 1982-1991).

Year	Phase	Number of children
1982*	Perinatal	5,914 (100%)
1983*	1 st Follow-up	1,556(sample) (81.8 % of sample)
1984*	2 nd Follow-up	5,165 (87.3%)
1986*	3 rd Follow-up	4,977 (84.2%)
1991	4 th Follow-up	4,094 (69.2%)

* Source: Victora, Barros and Vaughan (1988, p. 19)

At the time the data were collected, the fourth follow-up had the objective of studying the associations between individual and family background characteristics and academic failure in Brazil. The topic had been thoroughly investigated in developed and developing countries. However, there were no other longitudinal studies that dealt with the relationships between individual and family variables and school failure in Brazil.

More specifically, the fourth follow-up was intended to answer the following questions:

- **Do the associations between academic failure and individual and family characteristics, observed in a number of international and Brazilian studies, hold for the children of Pelotas?**
- **What is the magnitude of the contribution of each identified risk factor to academic failure in Pelotas?**

As a longitudinal study, the research was characterized by the gathering of data on the same individuals at more than one point in time. Such a design has the advantage of allowing for the examination of ordered associations and changes (Borg and Gall, 1983, pp. 411-2). However, subject drop out can be a problem. The drop out rate increases

proportionately to the study's time span. Therefore, the longer the study, the greater the probability of the remaining subjects becoming a biased sample of the original cohort (Borg and Gall, 1983, pp. 412-3).

The Pelotas study can be labeled as correlational, since its main objective was the investigation of the interrelationships among the different aspects of children's life and development (Borg and Gall, 1983, p.355). This type of research design provides reliable evidence on the association between variables and allows for considerable control to be exerted over the ones under study. Correlational designs, nevertheless, do not allow for inferences on causality relations (Borg and Gall, 1983, p. 355).

The data from the initial four phases of the longitudinal project have been collected through surveys (Victora, Barros and Vaughan, 1988, pp. 18-32). Questionnaires were administered to the children's mothers/caretakers to gather the needed information. The data collection logistical aspects were the following:

The **perinatal study** was carried out during the whole year of 1982, and gathered data on 5,914 children²¹. Questionnaires were administered to the mothers in all the city's hospitals, immediately after the birth of their babies. Similar questionnaires, which included new questions and discarded the ones that became irrelevant for the age of the children, were also administered during the next three follow-up studies.

In an attempt to deal with the problem of subject drop out, a special effort was made to locate the greater possible number of children in each phase. An analysis of missing children's characteristics was also carried out to enable a discussion about the possible ways they might affect the investigation.

During the **first follow-up** (January-March 1983), the mothers of a sample of 1,556 children born between January and April 1982 were contacted. The subjects were approximately 12 months old and were seen at home. The addresses given by the mothers in hospital (at the time of the child's birth) were used to locate the families. The identified children accounted for 81.8% of the sample initially selected for this follow-

²¹ There were 7,392 hospital births registered in Pelotas in 1982, accounting for 99% of all births in town. However, only 5,914 children were included in the study as rural residents. Some children died (Victora, Barros and Vaughan, 1988, pp. 18-27).

up. The main reasons for losses were: a) the address given by the mother was either non-existent or children were not living at them (9.3%); b) the families had moved houses and the new address were not obtainable (6.4%).

For the **second follow-up** study (January-April 1984), the mothers of 5,165 children (87.3% of the cohort) were contacted. Children's age ranged from 12 to 27 months. This time, a different strategy was used to find the subjects because families' addresses, although carefully collected, proved to be inefficient for such an endeavour. All 68,590 urban dwellings of the city were visited in order to locate the cohort's children. Drop out rate decreased from 18.2 to 12.7%, in relation to the first follow-up. At this point, 45% of the families had moved houses within the city, while another 5.2% had left the urban area of Pelotas.

In the **third follow-up** (December 1985-April 1986), mothers of 4,977 children (84.2% of the cohort), were contacted, again through visits to all Pelotas' urban dwellings (now increased in number to 77,200). The drop out rate was similar to the previous phase. The children's ages ranged from 35 to 52 months on this occasion.

During the first four phases of the study, samples of between 5% and 10% of the children were revisited a few days after the first contact in order to control the quality of the collected information.

Overall, the percentage of families refusing to participate in the study was very low (0.3%) and this can be probably attributed both to the positive attitudes of the population towards research and to the media publicity about the project that preceded each phase.

As the children became older, they were less "interesting" for medical research. When they started to approach the school age, the natural course of the investigation was to shift its focus to educational aspects. The fourth follow-up was, therefore, aimed at collecting attainment data on all the children from the 1982 cohort attending the urban schools of the city, up to the academic year of 1991. This last phase of the study will be described in detail next.

2.4 The fourth follow-up and the investigation of risk factors for academic failure in Pelotas.

The fourth follow-up was the core of the correlation study that composes the first part of this thesis. Therefore, a more detailed account of the methodology of this phase of the longitudinal study is necessary.

This section starts with a discussion on the type of research design elected for the study and on the logistics of the data collection. Then there is a description of the processes of data analyses, the presentation of the findings, a discussion of the findings and a conclusion.

2.4.1 Research design and data collection:

The fourth follow-up was also a survey. However, it was based on secondary analysis of archival data sets. Information on aspects of the educational history of the cohort children, registered on the files of all the urban schools of Pelotas, was collected. Since the schools keep the data on pupils' marks and pass/fail history, it was possible to take advantage of such resources, in spite of the possible drawbacks.

Archival research offers the opportunity to tap into extensive data sets at low cost. However, it also has disadvantages. As the data from existing archives were collected for one purpose, they might not completely fulfill the objectives of a different study. Since the researcher does not usually participate in the data collection process, it is also impossible for her/him to have any degree of control over the quality of the data used for the research (Robson, 1993, p. 280).

The fourth follow-up was carried out from December 1991 to January 1993. Data on the academic history of the children were collected in all 98 Pelotas' *Primeiro Grau* schools classified as urban by the State Secretariat of Education.

Primeiro Grau schools are either public (administered by the state or the city government) or private²². Table 2.3 illustrates the distribution of schools according to

²² There is a group of private "charity" schools, connected to philanthropic institutions, that are attended by economically deprived children. The three "special needs" schools in town - one for the blind, one for children with hearing and/or learning difficulties and one for children with learning difficulties - are private but also receive state financial support.

their administrative characteristics and the number of cohort children identified in each in 1991.

Table 2.3: Distribution of Pelotas' schools according to administrative control and number of cohort children identified in each group (Pelotas, 1991).

Administrative control	Schools n (%)	Children n (%)
State government	41 (41.8)	1,917 (46.8)
Municipal Government	37 (37.8)	1,540 (37.6)
Private	12 (12.2)	464 (11.4)
Charity (private)	5 (5.1)	155 (3.8)
Special needs	3 (3.1)	18 (0.4)
Total	98 (100)	4,094 (100)

Eight fieldworkers (undergraduate students) examined the schools' files (from preschool up to Year 5) and located the children born in Pelotas in 1982. For each school a form containing the name of the school and a list of the names of the identified pupils was completed. Further information collected on each pupil included:

- date of birth
- name of child's mother
- grade attended in 1991;
- occurrence of at least one previous episode of grade retention or drop out.

As was explained earlier, data covered the situation of children up to the end of the academic year of 1991, when they were aged 9. The data therefore covered the period between 1987 and 1991, as some children started *Primeiro Grau* at the age of 5.

2.4.2 Data analysis:

After merging the data file from the fourth follow-up with the cumulative file from the

previous phases, a selection of variables to be included in the correlation study of academic failure had to be carried out. There were approximately 700 variables available for each child and there was a need to select the group that would be of interest for this thesis, that is, the variables that could bear an association with educational outcomes. The variable selection process was carried out in the following manner:

Variable selection process:

The selection process, first of all, eliminated the variables of no direct educational interest. The initial aim of the longitudinal project was to study children's health and development. Therefore, information was collected on a large number of aspects that were of purely medical interest (e.g. reasons for having a cesarean section, types of food ingested in the previous day, type of delivery of previous children, or maternal morbidity after birth).

The variables from the first follow-up study were also eliminated. They only provided information on 1,556 children and most of this information was collected again during the other phases of the study.

Variables like family income, work situation of head of family or of mother (employed/unemployed), or number of siblings, were collected several times during the study. In such cases, the variables that either contained the most recent information and/or the smallest number of missing cases were kept.

The final selection was carried out based on the literature review on academic attainment and failure, and on plausibility, i. e., on the hypothesized possibility that a variable might be associated with academic failure.

Fourteen variables were thus selected to function as independent variables in the analyses:

- skin colour of mother (ETHNIC)
- child's gender (GENDER)
- maternal age at the time of the child's birth (AGE)
- number of child's siblings (at the age of 4) (SIBLINGS)

- presence of mother at home (at the age of 4) (MOTHER)
- crowding (at the age of 4)²³ (CROWDING)
- family's monthly income (at child's birth) (INCOME)
- occupation of the head of the family (at the age of 4) (OCCUP)
- maternal schooling (at child's birth) (MOTHSCHOO)
- type of building of the dwelling (at the age of 4) (CONSTRUCT)
- child's birth weight (BW)
- prematurity (PREMAT)
- child's nutritional status measured by hers/his weight-for-age (at the age of 4) (WAZ)
- child's nutritional status measured by her/his height-for-age (at the age of 4) (HAZ)

The outcome variable was categorized as "failed/not failed" (FAILURE).

Annex 1 presents a more detailed description of the variables and their categories. It is important to stress the fact that maternal skin colour was the only measure of ethnicity available and was based on the interviewer's judgment at the time of the child's birth. Such a variable could be criticized on the grounds of not being reliable. However, measures of ethnic origin are a problem in Brazil and have been analyzed by Pinto (1996, p. 189). The author claimed that no conclusion has been reached about the most appropriate way to deal with such a variable.

As mentioned earlier, when the fourth follow-up data were collected, the objective was to study the individual and family background variables associated with failure. There was no intention to study the school characteristics associated with this phenomenon and therefore the available variables refer solely to the children and their families.

Nevertheless, after the literature review on attainment and failure was finished, it became clear that it would be important to examine the schools' effects in the analyses of failure and that this task would be more adequately achieved through a multilevel

²³ In this study, crowding was measured as the number of people per bedroom (including other types of rooms where people slept).

modeling technique (Paterson and Goldstein, 1991, p. 387). Such a technique would allow for the analysis of factors influencing academic failure to be more precise. The multilevel model would take into account that children studying in the same school tend to be more alike in terms of their background and attainment than children chosen at random (Goldstein, 1995, pp. 3-4).

The attempt to use the multilevel modeling technique to analyze the Pelotas data set will be described next.

The attempt to use the multilevel technique:

The multilevel technique was designed to be used with data that have a hierarchical structure. The cohort data were considered to fulfill such a requirement: children's variables were considered to belong to one level and the schools' variables to another.

At that point in time, it was thought possible to calculate the failure rates for each urban school in the city of Pelotas based on the performance of the cohort children attending each school. Nevertheless, the limitations of the data collected in the fourth follow-up, did not allow for such a calculation.

The study was carried out on a very low budget and under time restrictions. As the focus of the investigation, at the time of data collection, were the individual child and her/his family, information about the schools was not gathered. The "failure/non-failure" measure was a cumulative summary of the educational history of each child from the time she/he entered school until 1991. No information was collected on when the grade repetition or the drop out had occurred or in which school it had happened. Therefore, a child who repeated a grade in a particular school and was later transferred to another school, for instance, "carried" the "failure episode" to the second school, causing the failure rate of the second school to be overestimated and the rate of the first school to be underestimated. As children frequently moved from one school to another, there was a high probability that the failure rates calculated for each school would be distorted²⁴.

²⁴ Information on transfer rates for all the municipal schools could not be obtained. However, it was hypothesized that such rates varied between them. Data on transfers for the two schools investigated in the case studies provided the following information: 10% of children from Years 1 to 5 were transferred in 1995 and 7% in 1996 in one of the schools and the percentages were 3.5% in 1995 and 2% in 1996 for the other. Such figures suggest that the possibility of data distortion was, therefore, real.

The intention to use information on schools was therefore abandoned and the quantitative data was analyzed, as initially planned, through a logistic regression model.

This data analysis process is presented next, after the statistical and the explanatory models that underpinned the analysis are described.

The hierarchical logistic regression model:

As it was not possible to use the multilevel technique, the logistic regression model (Hosmer and Lemeshow, 1989; Kleinbaum, 1994; Menard, 1995) was considered the most adequate technique for the analyses of the data. Such a model enables the description of the relationships between several explanatory variables and a dichotomous outcome (failed/never failed, in this thesis). Logistic regression also enables the assessment of the adequacy of hypothesized explanatory models and the strength and importance of the associations between the outcome and each independent variable. Through logistic regression it is also possible to control for confounding²⁵ and assess the interactions²⁶ that may affect the estimated coefficients of the variables in the model.

A hierarchical method was judged to be the most appropriate for building an explanatory model for academic failure, as this phenomenon is considered to have a hierarchical structure of determination by variables with differing levels of importance. The hierarchical method was devised to analyze the relationships between predictors and an outcome measure using logical and theoretical criteria for entering and eliminating variables from the model, rather than using purely statistical criteria, as in the stepwise method, for instance (Victora et al. 1996, pp. 224-5). The hierarchical method prevents the effect of distal explanatory variables from being absorbed by the proximal variables that, in fact, represent the mechanisms through which the distal variables exert their effect into the outcome. In the case of failure, for instance, the model prevents the effect of socio-economic variables (distal) from being absorbed by the effect of malnutrition, which is itself determined by socio-economic status.

²⁵ Confounding is the association of an independent variable both with the outcome and with another explanatory variable (Hosmer and Lemeshow, 1989, p. 63).

²⁶ An interaction (or effect modification) occurs when the association between an explanatory variable and the outcome differs for different level of another explanatory variable (Hosmer and Lemeshow, 1989, pp. 63-4).

The strength of the associations between each explanatory variable and the outcome was calculated through odds ratios²⁷. Statistical significance was assessed through the likelihood ratio test²⁸. For variables with ordinal categories, like birth weight, for instance, tests for linear trends (one-tailed) were also carried out. Therefore, these variables were analyzed both as continuous and as categorical measures.

Variables were entered in each step of the multivariate analysis according to the level they were placed in the explanatory model devised to guide the analysis. At each step, the crude and the adjusted odds ratios of the different categories of the variables were compared. If a variable proved to be clearly associated with the outcome (including dose-response patterns when the variable had more than three ordered categories) it was kept in the model. Statistical significance of the likelihood test was an additional criterion for retaining or excluding a variable.

The odds ratios for the multivariate analysis presented in the tables are not the ones obtained from the full model, i.e., from the model that included all the variables. They are the odds calculated at the level each variable was entered in the logistic regression equation. As in the full model, all the variables are adjusted for all the others, their odds ratios fail to reflect the hierarchy proposed for the analysis and may be underestimated for the distal variables.

The model that guided the analysis was the following:

Explanatory model for data analyses:

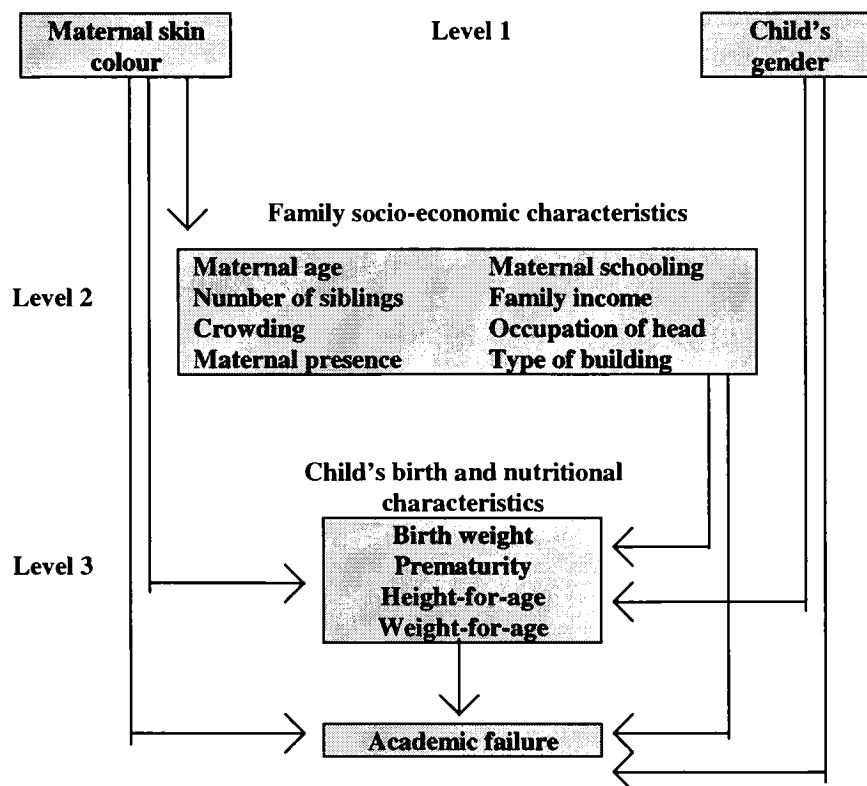
Figure 2.1 presents the explanatory model that directed the hierarchical logistic regression analysis performed on the data. The model does not intend to give a complete account of the determinants of academic failure. It proposes a way of organizing the available variables in a plausible manner based on information from other similar

²⁷ Odds ratios are measures of effect. The odds ratio is the number by which we would multiply the odds of failing for each one-unit increase in the independent variable. (Menard, 1995, p. 49; Kirkwood, 1988, pp. 177-9). For categorical variables one of the categories was selected as the baseline (odds ratio = 1.00) and the odds ratios of the other categories were calculated in relation to this baseline. The odds ratios are a slight overestimation of the cumulative incidence of academic failure. Odds ratios are similar to the incidence only for rare phenomena and academic failure is fairly common within the studied population.

²⁸ The likelihood ratio test allows comparisons between the observed and the predicted values of an outcome variable obtained from models with and without such a variable or groups of variables (Hosmer and Lemeshow, 1989, pp. 11-8).

studies and from the previous and current phases of the Pelotas longitudinal study²⁹.

Figure 2.1: Explanatory model of academic failure that guided the hierarchical logistic regression analysis.



The model hypothesizes that academic failure is influenced by a group of variables with a hierarchical structure depicted through the model's different levels. The variables placed in each level were entered together in the logistic regression model at each step of the analysis.

Level 1 contains the variables that are supposed to be associated with academic performance at the most basic level: ethnicity (skin colour of child's mother) and child's gender. As they are biological characteristics, they were entered in the model first. They are considered as not being influenced by the other variables selected for the analysis

²⁹ The unpublished results from the Pelotas longitudinal study were obtained through analyses carried out by the author of this thesis.

and the associations between ethnicity and gender with academic performance were hypothesized to happen both directly and through the associations with the variables of the subsequent levels.

The variables related to the socio-economic characteristics of the child's family were placed in level 2. They were: age of mother at the time of the child's birth, number of siblings, crowding at the child's home, maternal presence, maternal level of schooling, family income, occupation of the head of the family and type of building of the family's dwelling. The variables within this group were considered to influence each other and were entered in the model together in order to allow for adjustments for their joint effects, i.e., to partial out the effect they have on failure when controlling for the other variables in the model. The variables were also hypothesized to have both direct and indirect effects on academic failure. The indirect effect was through the associations with the variables in level 3.

The variables placed in level 3 related to the child's birth and nutritional characteristics - birth weight, prematurity, height-for-age and weight-for-age.

Next, some evidence that supported the construction of the explanatory model for academic failure will be presented.

Some of the studies reviewed in the beginning of this chapter indicated that gender had an effect on academic failure. The indirect effect, carried out through the association between gender and nutritional status of the child (placed in level 3) is illustrated through the findings from the earlier phases of the Pelotas longitudinal study. These findings indicated that the child's gender explained approximately 29% of the variation in her/his birth weight in a multivariate analysis (Victora, Barros and Vaughan 1988, pp. 55-7).

The associations of ethnicity and academic failure were also documented in the early literature review. The explanatory model, however, proposes that this variable also exerts direct and indirect effects on failure. The indirect effect is carried through the associations between ethnicity and the variables from levels 2 and 3 (respectively, child's family socio-economic characteristics and child's birth and nutritional

characteristics).

With respect to level 2 variables, Victora, Barros and Vaughan (1988, p. 36) demonstrated that maternal ethnic group was significantly associated with family income in the Pelotas cohort. Ninety-nine percent of the women in the group of families that earned more than ten minimum wages per month were white, whilst the percentage of white women fell to 68% in the poorest families, the ones that earned one minimum wage or less per month.

The chi-squared tests carried out by the author of this thesis on the data from the Pelotas cohort also indicated that the following level 2 variables were significantly associated with maternal ethnicity: maternal schooling, type of building of child's dwelling, number of siblings, occupation of the family's head, crowding and presence of mother at home. For instance, 23% of families constituted by non-white mothers lived in shacks³⁰, against 6.5% of families constituted by white mothers; 7.4% of white mothers had 4 or more children while the percentage was 13.4 for non-white mothers; 23.3% of non-white mothers only completed the first two grades of *Primeiro Grau* and the equivalent percentage was 10.9 for white mothers.

Significant associations between ethnicity and birth weight, height-for-age and weight-for-age, placed in level 3 of the model, were also found in these unpublished analyses: 14.2% of children from non-white mothers belonged to the malnourished group (more than two standard deviations below the mean of the population). The percentage was 7.1 for children of white mothers.

The study by Schneider and Coleman (1993, pp. 9-11), mentioned earlier, indicated associations between income and race/ethnicity in the USA: the median family income of white people was found to be more than double of that of African Americans. Parents' education followed a similar pattern: 30% of white students had one parent with a college degree or higher against 14% of African Americans.

The findings from the Pelotas longitudinal study also illustrate the significant interrelationships between the variables placed in level 2. As the number of associations

³⁰ Dwellings built in an improvised fashion with pieces of different materials.

between such variables is large, the presentation of all would take much space and become tedious. Therefore, only a few examples from the book by Victora, Barros and Vaughan (1988) will be cited.

Mothers living in families that earned one minimum wage or less per month had completed, in average, 3,7 years of schooling. Twenty-five per cent of such mothers were younger than 21 when the target child was born, and 15% had four or more children when the target child was four years old. Mothers living in families that earned more than ten minimum wages a month had completed, in average, 13,8 years of schooling, 2% of them were younger than 21 when gave birth to the target child, and 3% had 4 children or more (Victora, Barros and Vaughan, 1988, p. 36).

Although using different variables, Davie, Butler and Goldstein (1972, p. 52), in their report on the National Child Development in Britain previously mentioned, described similar interrelationships as those encountered in the Pelotas cohort. Approximately 50% of the families of unskilled manual workers, for instance, had 4 children or more and 37% lived in overcrowded homes. Twenty per cent of the families of higher professionals had 4 or more children and only 1% lived in overcrowded conditions. The authors also reported that the prevalence of working mothers was higher in the less skilled groups and that these mothers tended to have fewer children.

As explained before, level 2 variables (family socio-economic characteristics) were hypothesized to influence academic performance both directly and through level 3 variables. The direct effect has been extensively illustrated through the studies reviewed earlier. As for the interrelationships of variables placed in levels 2 and 3, family income and maternal schooling, for instance, have been shown to be associated with nutritional variables in the Pelotas longitudinal study (Victora, Barros and Vaughan 1988, p. 49). The prevalence of low birth weight (less than 2,500 g.), for instance, was the following: 15% in children of families that earned one minimum wage or less per month and 5% in children of families that earned ten or more minimum wages per month; 14% in children of illiterate mothers and 6% in children of women that had completed at least 9 grades in school.

The group of mothers that were younger than 21 when the target child was born had

12% of low birth weight babies. The prevalence was 7% for the group of mothers aged between 25 and 29 years. Birth weight was also significantly associated with the number of children a woman had: 7% of the group of mothers who had one previous child had a low birth weight baby next. This prevalence was 12% for mothers who had 3 previous children (Victora, Barros and Vaughan 1988, p. 50).

In terms of nutritional status at the age of 4, data from the longitudinal study shows that 21% of children from families that earned one minimum wage or less per month were malnourished according to the height-for-age measure. The percent was 2% for families that earned ten or more minimum wages per month. The same pattern of association was found for the variable weight-for-age (Victora, Barros and Vaughan 1988, p. 106).

Davie, Butler and Goldstein (1972, p. 167) reported that the duration of pregnancy was related to social class. In their study, working-class mothers were observed to go into labour either too early (resulting in premature babies) or too late.

Finally, the inter-associations between the variables placed in level 3 can also be illustrated through the unpublished results from the Pelotas longitudinal study. As could be expected, the children born with birth weight smaller than 2,000g. were more likely to be premature (67%) than the children born with birth weight between 2,500g. and 3,499g. (5%). Birth weight was also associated with later nutritional status: the prevalence of children with height-for-age measures less than two standard deviations below the mean was 28% for the ones born with less than 2,000g. and 4% for the ones born with weight greater than 3,500g.

Next, the results of the data analysis from the fourth follow-up study will be presented. The description of the identified and the missing children will be followed by the findings from the logistic regression analysis.

2.4.3 Results:

The children of the fourth follow-up study:

As stated earlier, missing cases constitute a problem for longitudinal investigations and demand analyses. Therefore, the reasons for subject loss were examined and a comparison between the found and the missing children was carried out. Before the

results of the logistic regression analysis are finally presented, the schooling situation of the children identified in the fourth follow-up is illustrated.

The 4,094 children whose schooling information was collected in the files of the 98 urban schools of Pelotas (Table 2.3) account for all the cohort children that attended such schools between the years of 1987 and 1991. They represent 69.2% of the initial cohort.

In the third follow-up study (1986) 15.8% of subjects were lost (Victora, Barros and Vaughan 1988, p. 24). The fourth follow up (1991) added a further 15% to this figure. However, if the deaths³¹ are taken into account, the overall percentage of children followed-up during the fourth phase of the study was 73%.

It can be hypothesized that a percentage of the children not identified in the fourth follow-up have migrated to other towns, as 5.2% of the cohort families had already left Pelotas at the time of the second follow-up (Victora, Barros and Vaughan 1988, p. 23). However, since data on migration for the area could not be found, it was not possible to check this hypothesis.

All urban schools of Pelotas were visited. Therefore, children attending rural schools could also explain the existence of missing cases. Such children were eliminated from the study because some rural schools have very distinctive characteristics as compared to urban schools. The former have special pedagogic and organizational features (only one classroom with children from different grades taught by one teacher, for example); some are difficult to access; and their population is also expected to be different from the urban.

It is also important to take into account the fact that the boundaries of Pelotas have changed since 1982. One of the boroughs in the outskirts of town became independent. Therefore, children living in this area (classified as urban at the start of the longitudinal study) were eliminated from the fourth follow-up and are probably included in the missing cases.

Among the 4,094 children identified, there was a proportion that had incomplete school

³¹ Another 139 deaths were added to the perinatal ones, totaling 4% of the cohort children.

records. It was thus impossible to collect data on academic performance for 173 (4.2%) children. 117 children were identified in two schools at the same time, probably due to transfers that had not been adequately registered. As it was not possible to know which school the child was actually attending in 1991, the child was assigned to one of the schools at random.

Although the findings of this study refer to the children attending Pelotas' *Primeiro Grau* urban schools and there is no intention to make inferences about all the cohort's children, it seems important to observe that the non-included children were significantly different from the included children in a number of characteristics.

Table 2.4 presents the distribution of the identified versus the missing children according to a number of variables that were available for all the children in the initial cohort.

Table 2.4: Distribution of identified and missing children on the 4th follow-up according to variables measured at children's birth (Pelotas, 1982 and 1991).

Variables	Identified children	Missing children	P level
ETHNIC			.55
White	3,321 (82.2%)	1,532 (82.8%)	
Others	697 (17.8%)	318 (17.2%)	
GENDER			.79
Females	1,911 (48.7%)	910 (49.1%)	
Males	2,010 (51.3%)	943 (50.9%)	
INCOME (minimum wages)			<0.001
< 1 MW	719 (18.4%)	501 (27.2%)	
1.1 - 3.0 MW	1,910 (48.9%)	825 (44.8%)	
3.1 - 6.0 MW	776 (19.9%)	310 (16.8%)	
> 6.0 MW	501 (12.8%)	207 (11.2%)	
MOTHERSCHOOL (years)	X=6.8 SD=4.2	X=6.1 SD=4.1	<0.001
BW (grams)	Mean = 3,226 SD=516	Mean = 3,167 SD=591	<0.001

SD = standard deviation

The missing children belonged to the lowest socio-economic groups: they had lower income, lower levels of maternal schooling, and lower birth weights. The missing children, however, were not significantly different from the identified children in terms of maternal skin colour or gender.

A thorough characterization of the cohort's families can be found in Victora, Barros and Vaughan (1988, pp. 148-63). Table 2.7 (see page 61), however, shows the distribution of the children identified in the fourth follow-up (1991) according to the variables included in the logistic regression analysis.

Among the children that were located, 26.7% either repeated a year or dropped out of school at least once after entering school.

The distribution of children according to the Year of *Primeiro Grau* they were attending in 1991 is shown in Table 2.5. Most children were attending Years 2 (30.0%) and 3 (47.4%), according to the expectations for their age. The 5.1% of children attending Years 4 or 5 started school earlier than expected and the children attending Year 1 were either kept there due to repetition or started school later (although the mandatory age is 7).

Table 2.5: Distribution of children identified in the 4th follow-up according to Year of *Primeiro Grau* attended in 1991 (Pelotas).

Year (<i>Primeiro Grau</i>)	Total n (%)
1	581 (14.8)
2	1,222 (31.0)
3	1,936 (49.1)
4 and 5	201 (5.1)
Total	3,940* (100.0)

There were 136 children with missing information. Eighteen were excluded due to being registered in special schools

The distribution of the children by Year of *Primeiro Grau* attended and their academic performance for 1991, are expressed in Table 2.6. As expected, the percentages of

failing children decreased as the year of *Primeiro Grau* attendance increased.

Table 2.6: Academic performance of cohort children by Year of *Primeiro Grau* attended in 1991 (Pelotas).

Year (<i>Primeiro Grau</i>)	Never failed n (%)	Failed n (%)	Total n (%)
1	126 (22.7)	429 (77.3)	555 (14.2)
2	748 (61.6)	467 (38.4)	1,215 (31.1)
3	1,774 (91.8)	158 (8.2)	1,932 (49.5)
4 and 5	186 (92.5)	15 (7.5)	201 (5.1)
Total	2,834 (72.4)	1,069 (27.4)	3,903* (100)

* There were 173 children with missing information on one or both variables and 18 children that were excluded due to being registered in special schools.

Since cohort children were 9 years old by the end of 1991, it is possible to suppose that the number of children attending Year 1 of *Primeiro Grau* that had never failed is an overestimation. According to Ribeiro (1990, p. 14) pupils who have not been promoted to Year 2 are often enrolled as “new pupils” in Year 1 either in the same or in a different school in Brazil.

The risk factors for academic failure will now be presented.

Risk factors for academic failure:

Table 2.7, illustrates the associations of the 14 selected variables and academic failure. The unadjusted (crude) odds ratios (with their 95% confidence intervals) indicate the risk of academic failure, at the age of 9, for each category of the variables taken separately. The adjusted odds ratios indicate the risk of failure for each category of the variables when they were entered in the multivariate model and their effects were thus adjusted for the effect of the confounders. The significance levels show the results of the likelihood ratio tests. For variables with ordinal categories, the significance level of linear trends test are also presented.

Table 2.7: Hierarchical logistic regression of risk factors for academic failure (Pelotas, 1982-1991).

Variables	Total children n (%)	Failed n (%)	Odds ratios (crude) (95% C.I.)	P Level*	Odds ratios (adjusted) (95% C.I.)	P Level*
ETHNIC				<0.001		<0.001
White	3328 (82.2)	779 (24.1)	1.00		1.00#	
Other	698 (17.8)	315 (45.1)	2.60 (2.19 - 3.08)		2.59# (2.19 - 3.08)	
GENDER				<0.001		<0.001
Female	1914 (48.7)	481 (25.1)	1.00		1.00#	
Male	2015 (51.3)	1433 (30.5)	1.30 (1.13 - 1.50)		1.29# (1.12 - 1.49)	
AGE				<0.01		<0.01
< 21	771 (19.6)	253 (32.8)	1.35 (1.12 - 1.62)		1.22@ (0.99 - 1.50)	
21 - 35	2818 (71.7)	745 (26.4)	1.00		1.00@	
> 35	340 (8.7)	97 (28.5)	1.10 (0.85 - 1.43)		0.81@ (0.60 - 1.08)	
SIBLINGS				<0.0001&		<0.001&
None	1058 (28.9)	229 (21.6)	1.00		1.00@	
1 or 2	1292 (35.3)	308 (23.8)	1.13 (0.93 - 1.37)		1.21@ (0.97 - 1.49)	
3	1011 (27.6)	323 (31.9)	1.71 (1.40 - 2.09)		1.66@ (1.33 - 2.08)	
4 or more	298 (8.1)	149 (50.0)	3.65 (2.78 - 4.79)		2.36@ (1.73 - 3.23)	
CROWDING				<0.05		0.7518+
< 4 people	2348 (71.7)	628 (26.7)	1.00		1.00@	
4 people or more	927 (28.3)	285 (30.7)	1.24 (1.04 - 1.48)		1.02@ (0.84 - 1.23)	
MOTHSCHOO				<0.0001&		<0.001&
0 to Year 2	445 (11.3)	239 (53.7)	2.32 (2.01 - 2.67)		2.34@ (1.79 - 3.06)	
Years 3 to 5	1501 (38.2)	529 (35.2)	1.10 (0.99 - 1.22)		1.49@ (1.24 - 1.80)	
Year 6 +	1979 (50.4)	325 (16.4)	1.00		1.00@	

* Likelihood ratio tests

& Test for linear trend in proportions (one-sided)

Model 1: ETHNIC, GENDER

@ Model 2: Model 1 + AGE, SIBLINGS, CROWDING, MOTHSCHOO, INCOME, OCCUP, CONSTRUCT

+ n=3045

Table 2.7: Hierarchical logistic regression of risk factors for academic failure (Pelotas, 1991) (cont.).

Variables	Total children n (%)	Failed n (%)	Odds ratios (crude) (95% C.I.)	P Level*	Odds ratios (adjusted) (95% C.I.)	P Level*
INCOME				<0.0001&		<0.001&
< 1 MW	720 (18.4)	333 (30.6)	13.71 (9.02 - 20.83)		2.94@ (1.88 - 4.85)	
1.1 to 3.0 MW	1915 (48.9)	582 (53.5)	6.89 (4.61 - 10.29)		2.25@ (1.41 - 3.59)	
3.1 to 6.0 MW	778 (19.9)	142 (13.1)	3.52 (2.29 - 5.43)		1.89@ (1.18 - 3.05)	
> 6 MW	501 (12.8)	31 (2.8)	1.00		1.00@	
OCCUP				<0.0001		<0.001
propr/administr/ professionals	217 (5.9)	8 (3.7)	1.00		1.00@	
non-manual	583 (16.0)	65 (11.1)	3.21 (1.52 - 6.80)		1.77@ (0.81 - 3.91)	
man. qualified	170 (4.7)	29 (17.1)	5.15 (2.29 - 11.61)		2.47@ (1.05 - 5.85)	
man. semi-qual	1683 (46.1)	487 (28.9)	10.41 (5.11 - 21.22)		3.07@ (1.41 - 6.72)	
man. non-qual/ outside econ. active	997 (27.3)	422 (42.3)	18.77 (9.18 - 38.37)		3.56@ (1.61 - 7.89)	
CONSTRUCT				<0.0001		<0.001
apartment	554 (15.2)	76 (13.7)	1.00		1.00@	
brick	1853 (50.8)	399 (21.5)	1.73 (1.32 - 2.26)		1.22@ (0.92 - 1.62)	
mixed	246 (6.7)	76 (30.7)	2.90 (2.01 - 4.18)		1.33@ (0.90 - 1.96)	
irregular wood	561 (15.4)	219 (39.0)	4.11 (3.05 - 5.54)		1.74@ (1.26 - 2.41)	
irregular brick	113 (3.1)	48 (42.5)	4.73 (3.03 - 7.40)		1.83@ (1.14 - 2.94)	
shack	319 (8.7)	186 (58.3)	9.03 (6.48 - 12.59)		2.61@ (1.80 - 3.78)	

* Likelihood ratio tests

& Test for linear trend in proportions (one-sided)

Model 1: ETHNIC, GENDER

@ Model 2: Model 1 + AGE, SIBLINGS, CROWDING, MOTHSCHOO, INCOME, OCCUP, CONSTRUCT

Table 2.7: Hierarchical logistic regression of risk factors for academic failure (Pelotas, 1991) (cont.).

Variables	Total children n (%)	Failed n (%)	Odds ratios (crude) (95% C.I.)	P Level*	Odds ratios (adjusted) (95% C.I.)	P Level*
BW				<0.001&		0.2406&
< 2,000g.	64 (1.6)	26 (40.6)	2.35 (1.34 - 4.14)		1.40\$ (0.73 - 2.70)	
2,000g. to 2,499g.	209 (5.3)	72 (34.4)	1.55 (1.12 - 2.16)		1.12\$ (0.76 - 1.64)	
2,500g. to 3,499g.	2436 (62.0)	688 (28.2)	1.12 (0.95 - 1.32)		0.95\$ (0.79 - 1.15)	
> 3,500g.	1220 (31.1)	309 (25.3)	1.00		1.00	
PREMAT				0.1129		0.43858+
Yes	166 (5.2)	51 (30.7)	1.34 (0.94 - 1.92)		0.85\$ (0.56 - 1.31)	
No	3002 (94.8)	756 (25.2)	1.00		1.00	
HAZ				<0.0001&		<0.001&
< - 2 SD	272 (7.4)	143 (52.6)	6.56 (4.47 - 9.63)		1.96\$ (1.17 - 3.26)	
-2 to -1.01 SD	743 (20.3)	284 (38.2)	3.69 (2.64 - 5.15)		1.58\$ (1.05 - 2.38)	
-1 to 1 SD	2291 (62.5)	537 (23.4)	1.82 (1.33 - 2.49)		1.14\$ (0.78 - 1.64)	
> 1.01 SD	357 (9.7)	51 (14.3)	1.00		1.00\$	
WAZ				<0.0001&		0.0858&
< - 2 SD	108 (2.9)	56 (51.9)	6.33 (4.01 - 10.00)		1.33\$ (0.74 - 2.41)	
-2 to -1.01 SD	613 (16.7)	228 (37.2)	3.54 (2.64 - 4.76)		1.23\$ (0.84 - 1.81)	
-1 to 1 SD	2412 (65.9)	655 (27.2)	2.17 (1.67 - 2.82)		1.32\$ (0.97 - 1.80)	
> 1.01 SD	529 (14.4)	75 (14.2)	1.00			

* Likelihood ratio tests

& Test for linear trend in proportions (one-sided)

Model 1: ETHNIC, GENDER

@ Model 2: Model 1 + AGE, SIBLINGS, CROWDING, MOTHSCHOO, INCOME, OCCUP, CONSTRUCT

\$ Model 3: Model 2 + BW, PREMAT, WAZ, HAZ

+ n= 2914

The risk of academic failure was 2.6 times greater for children of non-white mothers when compared to children of white mothers. The risk for boys was 1.3 times greater than that for girls. When the two variables were entered in the model together (level 1), their odds ratios changed to 2.59 and 1.29 respectively, showing that gender and ethnicity are not associated among themselves. The associations between these two variables and academic failure were significant for both unadjusted and adjusted analyses.

In relation to the socio-economic characteristics of the children's families (level 2), the results of the analyses were the following:

The risk of failure in children born to women that were 20 years of age or younger was 1.4 as compared to children born to women that were between 21 and 35 years of age (baseline group). Being older than 35 was not a significant risk for failure when compared to the baseline group (risk=1).

When entered in the multivariate model, maternal age produced odd ratios that were smaller than those reported above and had borderline significance. The risk of failure for children of mothers younger than 20 was 1.2 and the risk for children of mothers older than 35 was 0.8. The variable, however, made a significant contribution to the multivariate model.

The risk of failure increased with the number of siblings which children had at the age of 4. Children with one or two brothers and sisters did not have a significantly greater risk as compared to children that had no siblings (the baseline group). There were significantly greater risks of 1.7 and 3.7 for children that had respectively 3 or 4 or more siblings.

The variable made a significant contribution to the multivariate model in both categorical and continuous forms. When the risks were adjusted for the other variables, the value for the group that had one or two siblings continued to be non-significant.

For the group that had 3 siblings the odds ratio remained practically the same (1.66) and for the group with 4 or more siblings the odds became equal to 2.4.

The measure of crowding (number of people per bedroom) was significantly associated

with academic failure solely in the bi-variate analysis. The risk was 1.24 times greater for children living in houses with 4 or more people per bedroom than for children living in houses with less than 4 people per bedroom.

This variable failed to make a significant contribution when adjusted for the other variables in the model. As this variable had a large number of missing values, its effect was tested in a model with 3,045 children, as opposed to the 3,610 children that were used for the model containing the other variables of levels 1 and 2 together. The variable was not kept in the multivariate model.

The children born to women that attended school up to Year 2 of *Primeiro Grau* (including the ones who had never been to school or never completed Year 1) had odds of failing 2.3 times greater than the children of women who had completed up to Year 6 of *Primeiro Grau*. The odds of failing were 1.1 for the children born to women that had completed Years 3 to 5. This last group did not differ significantly from the baseline group, as did the group of mothers with the least amount of schooling.

The contribution of maternal schooling to the multivariate model was significant when the variable was entered both in the categorical and the continuous forms. The odds of failing for the group of children born to women that attended up to Year 2 stayed the same when adjusted for the effect of the other variables in the model. The odds of failing for the group of children born to mothers that completed Years 3 to 5 became significant and equal to 1.5 in the multivariate model.

The effect of the presence of mother at home (working or not) as opposed to mother going to work outside the home did not show any association with academic failure in the bi-variate analysis ($p=0.21$) Therefore it was not included in the multivariate model.

Children of families that earned one minimum wage or less per month had a risk of failure 13.7 times greater than the children of families that earned more than 6 minimum wages per month. The risk decreased as the income increased. It was 6.9 greater for children of families that earned from 1.1 to 3 minimum wages and 3.5 greater for children of families that earned from 3.1 to 6 minimum wages, again in comparison to the wealthier group - the baseline category.

When entered in the multivariate model, the effect of income both as a categorical and as a continuous variable was still significant. The risks of failure associated with the different levels of income, however, decreased considerably when adjusted for the effect of the other variables in the model. The values of the risks changed to 2.9, 2.3 and 1.9 for the respective categories of income described above, and the large differences between the unadjusted and the adjusted odds ratios illustrate the strong association between income and the other variables in level 2.

The occupation of the head of the family in 1986 (when children were 4 years of age), was also significantly associated with academic failure. The baseline group was composed of children of proprietors, administrators and professionals. When compared to this group, the group of non-manual workers' children had a risk of failure 3.2 times greater. Children of qualified manual workers had a risk 5.2 times greater, children of semi-qualified manual workers had a risk 10.4 times greater, and children of non-qualified manual workers (including the heads of family that were outside the economically active population) had a risk of 18.8 times greater.

When adjustments were made for the other variables in the multivariate model, the risks of academic failure decreased: the odds of failing for children of non-manual workers lost statistical significance as compared to the baseline group. For the other groups the odds changed respectively to 2.5, 3.1 and 3.6. The decrease also illustrates the strong associations between occupation of the head of the family and the other socio-economic variables included in level 2.

Children that lived in shacks at the age of 4 had a risk of failure 9.0 times greater than those of the baseline group did, that is, children living in apartment buildings. The risk of failure was 1.7 times greater for children living in brick houses, 2.9 times greater for children living in a combination of wood and brick houses, 4.1 times greater for children living in houses built with irregular wood, and 4.7 times greater for children living in houses built with rough bricks.

The association between type of dwelling and academic failure was significant both for the bi-variate and the multivariate analyses. However, the adjusted odds ratios for children living in brick and mixed (brick and wood) buildings were not significant when

adjustments for the other variables were made. For the other categories, the adjusted odds ratios in the multivariate analysis became equal to: 1.7 for irregular wood, 1.8 for rough brick, and 2.6 for shacks.

As it was considered possible that the effect of maternal skin colour on children's academic failure could be different for different levels of maternal school and family income³², the interactions between these variables were tested in the multivariate model. Interactions between income and maternal level of schooling³³ were also tested. They were all non-significant.

At level 3, the children's birth and nutritional characteristics were added to the model. The last step of the analysis produced the following results:

The children born lighter than 2,000g. had odds of failure 2.4 times greater than that of children born with 3,500g. or more (baseline). The odds for children with birth weight between 2,000g. and 2,499g. was 1.6 and the odds for children born with birth weight between 2,500g. and 3,499g. was not significantly different from that of the baseline group.

When adjusted for the effects of the other variables in the model, however, birth weight lost its significance and did not make a contribution to the model (neither as a categorical nor as a continuous variable). Birth weight was therefore discarded.

Prematurity was associated with failure at a significance level of 0.11 in the bi-variate analysis. Although this value was slightly higher than the limit of 0.10 to include variables in the multivariate model (established before the analysis started), the variable was entered in the model due to its importance as a confounder for birth weight: premature children tend to be born lighter.

The effect of prematurity was tested in a multivariate model with fewer children (n=2,914) as this variable, similarly to crowding, had a large number of missing values. When adjusted for the other variables in the model, nevertheless, prematurity continued

³² It was hypothesized that children of non-white mothers that belonged to high income and high educational level groups would fail less than children of non-white mothers, that belonged to low income and education groups.

³³ It was hypothesized that maternal education might not be an important factor determining children's academic performance in high-income groups.

to have a non-significant effect on academic failure and did not make a significant contribution to the model either. The variable was also discarded.

From the two variables that described the nutritional status of children at the age of 4, only height-for-age made a contribution to the multivariate model. This contribution was significant when the variable was entered both in categorical and continuous forms. In the crude analysis, children with a height-for-age measure of more than two standard deviations below the mean had a risk of failure 6.6 times greater than the baseline group - children with a height-for-age measure greater than one standard deviation above the mean. The risks for the other groups were the following: 3.7 for children with measures between 2 and 1.9 standard deviations below the mean and 1.8 for children with measures between one standard deviation below the mean and one standard deviation above the mean.

The adjusted odds ratios were the following: 2.0 for the group with height-for-age measures of more than two standard deviations below the mean and 1.6 for children with measures between two and 1.9 standard deviations below the mean. For the next group the odds were not significant.

The levels of the weight-for-age variable were only significant in the bi-variate analysis. Children with a weight-for-age measure of more than two standard deviations below the mean had a risk of failure 6.3 times greater than the baseline group - children with a weight-for-age measure greater than one standard deviation above the mean. The group of children with weight-for-age measures between two and 1.9 standard deviations below the mean had a risk 3.5 times greater than the baseline. The group with measures between one standard deviation below the mean and one standard deviation above the mean had a risk 2.2 times greater.

When entered in the multivariate model, both in categorical and continuous forms, this variable made no significant contribution and was excluded.

In summary, the variables that made a significant contribution to academic failure in the nine year old children from Pelotas, in a multivariate model were: **maternal skin colour, child's gender, number of child's siblings, maternal age at the time of the**

child's birth, maternal years of schooling, family monthly income, occupation of the head of the family, type of construction of the family's dwelling, and height-for-age. From the 14 variables in the model depicted in Figure 2.1, the following four were discarded: crowding, birth weight, prematurity and weight-for-age. The variable "presence of mother at home" was not entered in the multivariate model as it failed to associate with the outcome measure in the bi-variate analysis.

Up to this point, the results have been presented as they were obtained from the logistic regression analysis. Now a discussion of such results is due.

2.4.4 Discussion:

Before starting the discussion of the findings from the correlation study, a summary table (Table 2.8) comparing the findings from the Pelotas study and the findings from the other investigations reviewed will be presented.

It is important to point out, once again, that the findings from the correlation study account for all the cohort's children that attended the urban schools of Pelotas up to the year of 1991. As it was impossible to identify all the cohort children in such schools during the fourth follow-up, the results cannot be generalized to the whole cohort.

It should also be borne in mind that variables like family income, occupation of the head of the family, and type of building of the dwelling, for instance, were measured years before children entered school. Such variables could have different values at the time children's academic attainment was assessed. Results, therefore, reflect the effect of conditions in children's early lives and their relationships with subsequent academic failure.

Table 2.8 Findings from the Pelotas study and from the literature reviewed on correlation studies that examined the relationships between children and family variables and academic failure.

Variables Studies	Ethnicity	Gender	Maternal age at birth	Number of siblings	Crowding	Maternal work	Socio- economic	Schooling of parents	Housing conditions	Nutritional variables	Prematurity
Pelotas (1982)	+ (multi)	+ (multi)	+ (multi)	+ (multi)	+ (bi)	Presence of mother at home: No effect	Income: + (multi) Occupation: +(multi)	Mother: + (multi)	Type of building: + (multi)	BW: + (bi) WAZ: + (bi) HAZ: + (multi)	No effect
Coleman et al. (1966)	+ (multi)						Socio- economic status: + (multi)				
Jencks et al. (1972)	+ (multi)						Income: + (multi) Occupation: + (multi)				
Davie, Butler & Goldstein (1972)		+ (multi)	+ (multi)		+ (multi)	+ (multi)	Occupation: + (multi)	Mother: + (multi) Father: + (multi)	+ (multi)	BW: + (multi)	+ (multi) (without BW)
Little (1975)	+										
Boocock (1980) REV		+									
Brandão et al. (1983) REV		+ No effect					Poverty status: +	+		No effect	No effect
Tomlison (1983) REV	+										
Bianchi (1984) REV							Poverty status: +	+			
Bianchi (1984)	+ (multi)	+ (multi)		+ (multi) (among the poor)		No effect (multi)	+ (multi)	+ (multi)			

+ (multi): positive effect in a multivariate analysis

+ (bi): positive effect in a bi-variate analysis

REV: review of research

Table 2.8 Findings from the Pelotas study and from the literature reviewed on correlation studies that examined the relationships between children and family variables and academic failure (cont.).

Variables Studies	Ethnicity	Gender	Maternal age at birth	Number of siblings	Crowding	Maternal work	Socio- economic	Schooling of parents	Housing conditions	Nutritional variables	Prematurity
Gratham- McGregor (1987) REV										No effect	
Mortimore et al. (1988)	+ (multi)	+ (multi)					Occupation: + (multi)				
Lerner & Galambos (1988)						No effect					No effect
Gottfried, Gottfried & Bathurst (1988) REV						+ - No effect					
Gottfried, Gottfried & Bathurst (1988)						No effect					
Pollit (1990)										Severe malnutrition: + (multi)	
Hasenbalg & Silva (1990)	+ (bi)										
Ilon & Mook (1991)		No effect (multi)						Mother: + (multi) Father: No effect (multi)			
Psacharopoulos & Yang (1991)		+ (multi)					Income: No effect (multi)	Father: + (multi)			

+ (multi): positive effect in a multivariate analysis

+ (bi): positive effect in a bi-variate analysis

REV: review of research

Table 2.8 Findings from the Pelotas study and from the literature reviewed on correlation studies that examined the relationships between children and family variables and academic failure (cont.).

Variables Studies	Ethnicity	Gender	Maternal age at birth	Number of siblings	Crowding	Maternal work	Socio- economic	Schooling of parents	Housing conditions	Nutritional variables	Prematurity
Dauber, Alexander & Entwisle (1993)	+ (bi)	+ (multi)					Meal subsidy: + (bi)	+ (bi)			
Schneider & Coleman (1993)	+ (bi)										
Wolff, Schiefelbein & Valenzuela (1994) REV	+						Income: +				
Beyer (1995)						No effect					
Evans (1995) REV							Poverty status: +	+	+		
Patrinos & Psacharopoulos (1996) REV							+ (low status)				
Patrinos & Psacharopoulos (1996)	+ (multi)						Income: No effect (multi)	+ (multi)			
OFSTED (1996) REV	+										

+ (multi): positive effect in a multivariate analysis

+ (bi): positive effect in a bi-variate analysis

REV: review of research

The associations between the selected individual and family background variables and academic failure in the Pelotas study, corroborate most of the findings of the other investigations reviewed earlier. The comparisons between the studies, nevertheless, have to be made with care as the age of the subjects were different, the outcome variables varied, and the dependent variables were measured and categorized differently. Psacharopoulos and Yang (1991, p. 292), for example, had separate measures for grade repetition and drop out. Dauber, Alexander and Entwisle (1993, p. 328) only examined the effects on grade retention. Davie, Butler and Goldstein (1972, pp. 19-20) examined the effects on attainment in reading and arithmetic. Schneider and Coleman (1993, p. 10-11) reported on the effects on a composite achievement test scores. Patrinos and Psacharopoulos (1996, p. 7) studied the effect on age-grade distortions.

The findings from the Pelotas study about the relationship between ethnicity and failure confirm the results of most studies reviewed earlier. Such findings indicate that being white constitutes a protection against failure. Such a tendency is illustrated by Hasenbalg and Silva's (1990, p. 7) account of the lower levels of schooling for the Brazilian black and mixed population as compared to the whites.

The effects of ethnicity on achievement indicated in the Pelotas study can be compared to those obtained by Bianchi (1984) and by Dauber, Alexander and Entwisle (1993), inasmuch as these three studies refer to measures of failure. The results from Pelotas go in the same direction as those from Bianchi and disagree with the results reported by Dauber, Alexander and Entwisle (1993, pp. 336-7). The latter indicated no ethnic differences in failure after controlling for other variables. However, this study is one of the few that, having analyzed the relationship between ethnicity and academic attainment or failure, found no effect of the former on the latter variable.

The discrepancies between the findings from Dauber, Alexander and Entwisle and from the Pelotas study can reflect the fact that the variable of ethnicity carries particular difficulties for research³⁴. Other factors that could affect the comparability of the results

³⁴ Both Bianchi (1984, p. 188) and Dauber, Alexander and Entwisle (1993, p. 30), for instance, classified youths by ancestry. However, they did not explain exactly how the mixed ethnic origin individuals were classified. Such individuals are generally the ones that are unreliably classified and that were potential problems in the Pelotas study, as well.

are the following: the use of a number of different co-variables in the multivariate models, the different ways of operationalizing the variables, and the cultural differences between Brazil and the USA.

It is interesting to point out that, at the last level of the multivariate analysis of the Pelotas data, the effect of ethnicity was still significant: the group of black and mixed children had 50% more chance of failing than the group of white children. This result indicates that the effect of ethnicity was not totally absorbed by the effect of the socio-economic variables as happened in the study by Dauber, Alexander and Entwisle (1993).

In terms of gender, the results from the Pelotas investigation reflect the findings from most of the studies reviewed. Boys in Pelotas had 30% more chance to fail than girls did and the variable made an important contribution to the analytic model. The findings, suggesting that being a girl is a potential protective factor against failure in Pelotas' *Primeiro Grau* schools, is similar to the findings described by Bianchi (1984, p.189), Psacharopoulos and Yang (1991, pp. 290-3) and Dauber, Alexander and Entwisle (1993, pp. 330-40) who also studied the effects of gender on failure. The size of the difference encountered in the Pelotas study, however, is larger than that of the other two studies, perhaps again reflecting the differences in number and type of variables included in the multivariate analyses and in the way failure and the other dependent variables were measured.

Although it was hypothesized that the effect of gender on academic failure would be partially realized through socio-economic variables (as happened with ethnicity) the risk of failure for Pelotas' boys, in the full multivariate model, was very similar to that calculated at the first step of the analysis (level 1). Therefore, it can be presumed that the indirect effect of gender on failure (through nutritional variables) was negligible.

The relationship between maternal age and failure in the Pelotas cohort followed the same trend as the findings by Davie, Butler and Goldstein (1972, pp. 165-74) on reading and arithmetic attainment.

The effects of family income on academic failure encountered in the Pelotas investigation also confirmed the importance of socio-economic status measures in the

study of attainment and failure reported in the literature review. However, the other Latin American studies that used income in their analyses (Psacharopoulos and Yang, 1991, pp. 291-3, and Patrinos and Psacharopoulos, 1996, pp. 9-11) did not find this variable to be significantly associated with academic achievement in the multivariate models. This fact, perhaps, reflects once more the differences in variable operationalization and the specific difficulties of measuring income in large surveys, as mentioned by Psacharopoulos and Yang (1991, p. 291). The results might also be a reflection of the inclusion of other socio-economic variables in the multivariate models, causing the effect of income to be exerted also through such variables.

The Pelotas' findings, about the significantly higher risk of failure associated with manual occupations of the head of the family, are similar to the findings from the UK reported by Davie, Butler and Goldstein (1972, pp. 36-7) and Mortimore et al. (1988, pp. 132-7). The Pelotas' findings related to type of housing also followed the same trend described by Davie, Butler and Goldstein (1972, pp. 54-7), although the variables examined were again not exactly correspondent. The higher risk of failure for children who live in poor housing conditions was also claimed in the review by Evans (1995, p.22).

For the variable related to crowding in the home, the Pelotas' findings contrasted with those of Davie, Butler and Goldstein (1972, pp. 54-7): overcrowding failed to reach significance in Pelotas but was significant in Britain, although measured differently.

In terms of the influence of maternal education, the results from the Pelotas study agree with the results from most studies reviewed earlier: the higher the level of maternal education, the better children's academic performance. The only study reviewed that showed different results from the others was that by Dauber, Alexander and Entwisle (1993, pp. 336-40). These authors found no effect of the level of education of mothers on children's grade retention rates, after controlling for other variables in the model.

In the Pelotas study there was no direct measure of maternal work. However, the effect of having a working mother was indirectly measured by the variable that referred to the presence of mother at home (either working or not) as against mother working outside the home. Such a variable was not significantly associated with academic failure in

Pelotas' children and these findings go in the same direction as those of Bianchi (1984, pp. 188-91), Gottfried, Gottfried and Bathurst (1988, p.21), Lerner and Galambos (1988, p.71) and Beyer (1995, p.242). The findings from Pelotas do not agree with those from the National Child Development in Britain (Davie, Butler and Goldstein, 1972, pp. 44-5), which found associations between attainment and maternal work at different periods of the child's life. However, once again, it should be stressed that the variables from the two studies had only a small degree of similarity and the findings from the British study indicated a small effect for maternal employment.

In relation to the increase in the risk of failure for children with larger number of siblings, Pelotas' results are similar to those of Davie, Butler and Goldstein (1972, pp. 32-3). The findings from Pelotas also contrast with those of Bianchi (1984, pp. 188-91), which only found a positive association between these variables for the low-income groups.

In accordance to the claims of Pollit (1990, pp. 96-7), the Pelotas study found height-for-age to be the nutritional measure that made a significant contribution in the explanation of academic failure. Weight-for-age proved to be a less important variable. Birth weight and prematurity did not associate with failure in Pelotas, again in disagreement with the findings of Davie, Butler and Goldstein (1972, pp. 176-9).

For the sake of illustration and summary of the findings, before the conclusion of the correlation study is presented, the image of the child most likely to fail in Pelotas will be drawn. Such a child would be a black or mixed colour boy, born to a low income family and living in a shack. He would have more than 4 siblings, his mother would be younger than 29 years, have a very low level of schooling (or be illiterate) and his father would be a non-qualified manual worker (a street cleaner or a building-site unskilled labourer, for example). The boy would be short as compared to other children of his age.

2.4.5 Conclusion:

The findings from the logistic regression analyses allow for the recognition that most risk factors for academic attainment and failure identified in other parts of the world also apply to Pelotas' children. The importance attributed to the socio-economic background

of the children's families and to ethnicity was also confirmed, although it is difficult to compare the magnitudes of the risks identified in the different studies to the findings from Pelotas. The differences in the ways the studied variables were defined and measured make such comparison problematic.

The final statistical model from the Pelotas study can correctly predict the results of 29% of the failing children and such a figure is adequate for epidemiological studies. However, the percentage shows that there are other factors influencing academic failure that have not been accounted for by the multivariate model. As discussed earlier, the model utilized left out the contribution of schools to the process. Such a model might be useful to provide information about the groups of children that are at risk of failure. Nevertheless it does not offer information that could be used to choose or implement specific educational changes to tackle the problem.

The results from the correlation study cannot explain how or why the identified variables associate with academic failure in *Primeiro Grau* children. They are not able to explain, for instance, the reasons for the high prevalence of academic failure among low socio-economic children. A number of different explanations could be hypothesized for this association: low levels of cognitive ability of such children, differences in culture between their home and the school³⁵, lack of value placed by their family group on schooling. In fact, Davie Butler and Goldstein (1972), Dauber, Alexander and Entwisle (1993), for instance make attempts to explain how the different variables they studied influenced attainment or failure. Such explanations, however, could only stay at the level of speculation and the results cannot explain why some children from poor families never fail either.

To overcome this limitation and expand the findings of the correlation study, the author of this thesis planned a qualitative investigation aimed at examining the school processes involved in the academic failure of the groups of children identified as having the highest risks of poor attainment. The details of this investigation are described in the next chapters.

³⁵ The word culture is used in this thesis to mean the "way of life" of an institution including its codes of manner, dress, language, rituals, norms of behaviour and system of beliefs.

Chapter 3:

Academic Failure: The Role of Schools

3.1 Introduction:

After the identification of the personal and family risk factors for academic failure in children attending urban *Primeiro Grau* schools in Pelotas, the author of this thesis proceeded to study the intra-school processes associated with poor academic performance.

The need to study such processes was based on the propositions of Daniels (1995, p. 517, 1996, p. 21) that schooling is not a generic activity, with uniform psychological effects and that the social structures of different schools create different competencies in children.

The study of the relationship between cognition and context has been aided by the development of several theoretical approaches in the ideas of L. S. Vygotsky on the social formation of mind. Amongst these are the cultural historical activity theory (Cole and Engeström, 1997), the socio-cultural approach (Wertsch, 1991a, Wertsch, Del Río, Alvarez, 1995), the situated learning models (Lave, 1988), and the distributed cognition notions (Salomon, 1993).

The qualitative study of academic failure in this thesis has been investigated in the light of Vygotskian and Post-Vygotskian theories integrated with some ideas of Bakhtin (on the development of consciousness) and with the model of cultural transmission of Bernstein. The writer of this thesis considers that such a theoretical approach can provide important tools for the study of the types of intra-school contexts that lead to academic failure.

This chapter starts with an account of Vygotsky's ideas on the social formation of mind and on the importance of formal instruction for cognitive development. A critique of such ideas is later presented, followed by an account of the theories of Bakhtin and Bernstein. Finally, the role of academic institutions on failure is examined through a review of a number of investigations.

The theory reviewed in this chapter was the basis for the design of the qualitative investigation of academic failure that is described in the next chapters.

3.2 Theoretical background for the understanding of the process of academic failure:

3.2.1 Vygotsky and the social formation of human mind:

Vygotsky¹ (1978, p. 46) believed that the human mind is socially constructed through dialectical transactions between the individual and the social milieu. The rationalist mode of understanding the origins of mind considers it to be a property of the individual, something that is born with the individual and can exist in a cultural, historical and institutional vacuum. The empiricist mode sees the human mind solely as a product of social input. Vygotsky negated both.

Vygotsky aimed at restoring the legitimacy of the concept of consciousness (Kozulin, 1993, p. *xvi*). His first ideas were an attempt to making a synthesis between mind and behaviour and he criticized both behaviourist and introspective theories for conceiving mind and behaviour as isolated concepts (Minick, 1997, p. 119). Vygotsky stated that the origin of consciousness could be attributed to the social interaction of humans (Yaroshevsky, 1989, p. 217, Kozulin, 1993, p. *xxiv*). According to Minick (1996, p. 30), Vygotsky considered it to be impossible to develop any adequate psychological theory unless one considered human behaviour as a social and cultural phenomenon. In his explanation of the formation of human mind Vygotsky wrote that:

Cultural development is superimposed on the process of growth, maturation, and organic development of the child. It forms a single whole with these processes (Vygotsky, 1960, p. 47, cited in Wertsch, 1991a, p. 22).

To illustrate the process of consciousness formation as a social and cultural phenomenon, Vygotsky (1978, p. 56) described the development of the act of pointing in a child. Vygotsky considered that this gesture was initially just an unsuccessful

¹ Lev Vygotsky (1896-1934), was a Russian scholar who is becoming a prominent figure in contemporary psychological science. He produced a vast amount of original work during his short life. He creatively fused dialectical and historical materialist philosophy with extensive readings of a range of European and Russian scholars on philosophy, psychology, sociology, politics, literature, art, and drama. It is important, however, to point out that Vygotsky's ideas have been subjected to abuse and various interpretations due to their fragmentary, diffuse, and disorganized character and to distorted translations which circulate in academic circles (Daniels, 1996, pp. 2-3).

attempt to grasp something that was beyond the child's reach. As the mother came to the child's aid and realized her/his movement indicated something, she started to give it meaning: the gesture became pointing for the mother. When the child linked his unsuccessful grasping movement to the whole objective situation, then the gesture began to signify pointing for her/himself. At this juncture, the gesture changed from an object-oriented movement to a movement directed to another person, that is, to a means of establishing relations and communication.

Although this example exhibits a definite Marxist orientation, in that it explains the formation of ideas from material practice (Marx and Engels, 1970), it introduces a new feature to the process: semiotic mediation. The introduction of such an element in the formation of consciousness caused Vygotsky political problems² due to its departure from a purely materialistic conception of mind development (Kozulin, 1993, pp. *xliii-viii*). The development of the act of pointing involved a process of communication between mother and child. This process was responsible for the construction of the sign - a mediator between the organization of behaviour and the organization of the child's mind, that is, a mediator in the development of higher mental functions. The sign served to influence the behaviour of others and through that, became a key that the child could apply to his own mind (Yaroshevsky, 1989, p. 253).

Vygotsky (1978, pp. 52-5) conceived signs as instruments of psychological activity in the same way physical tools are instruments of labour: tools alter the process of natural adaptation by determining the form of the operations carried out with their help. Tools are externally oriented, serving the purpose of changing the physical objects. Signs, on the other hand, are internally oriented, aiming at mastering oneself. Signs acting on attention, memory, and other basic processes, allow the child to master the latter in cooperation with adults, and transform them into higher psychical processes (Yaroshevsky 1989, p. 256). Vygotsky considered that the most important psychological tool was speech:

² The political situation in Russia in the early 1930s, dominated by Stalin, demanded that psychological categories be derived directly from the works of Marx, Engels and Lenin (Kozulin, 1993, p. *xliii*). Therefore, the focus on the formation of consciousness through the mediation of signs was considered to be problematic (Daniels 1993, p. 48, Glassman, 1996, p. 312).

the most significant moment in the course of intellectual development, which gives birth to the purely human forms of practical and abstract intelligence, occurs when speech and practical activity, two previously completely independent lines of development, converge. Although children's use of tools during their preverbal period is comparable to that of apes, as soon as speech and the use of signs are incorporated into any action, the action becomes transformed and organised along entirely new lines. (Vygotsky, 1978, p. 24 , italics in the original).

Vygotsky considered that the social dimension of the mental processes was primary and the individual dimension was secondary and resulted from a process of internalization. He summarized this idea through what is known as the "general genetic law of cultural development":

Every function in the child's cultural development, appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological), and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relations between human individuals (Vygotsky, 1978, p. 57).

Vygotsky's conception of internalization, however, deserves some discussion. According to Lawrence and Valsiner (1993, p.152), this concept is frequently used in research either meaning simple cultural transmission or constructive transformation of semiotic material from the social world into subjective experience. In both cases, the dialectical quality of the process is lost. These two definitions presuppose a dualism between individual and society. Vygotsky's concept of internalization, however, did not imply that the intramental functioning was a copy of its intermental precursor.

Wertsch (1993, p. 170) claimed that the Vygotskian concept of internalization sprang from the idea that individual and social are intricately interwoven aspects of the same whole and that the fundamental tension between the two should be well understood. Wertsch explained that

On the one hand, cultural tools cannot play any role in human action if they are not appropriated by concrete individuals acting in unique contexts. On the other hand, we cannot act as humans without invoking cultural tools (Wertsch, 1993, p. 170).

The Vygotskian conception of internalization can also be understood through the ideas of Leontiev - one of the two main collaborators of Vygotsky. Leontiev (1981, p. 422) used the word "appropriation" to describe the process through which children make their

own the world of human objects and phenomena around them. The concept of “appropriation” replaced Piaget’s concept of “assimilation”, moving from a biologically oriented to a socio-historical metaphor (Newman, Griffin, and Cole 1989, p. 62) and stressing the active part of the knower in the process of cognitive change.

Vygotsky's views on the social nature of the cognitive processes can be further understood through his concept of the "zone of proximal development" (ZPD):

the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1978, p. 86).

He believed that developmental processes could be enhanced if children were exposed to learning precisely in their ZPDs. Therefore, he considered that school learning should be directed to it.

As the concept of ZPD is of utmost importance for the study of school learning, the fact that it has been given different interpretations by different researchers should be pointed out. The examination of such interpretations offers useful information for the organization of school instruction and for the production of new insights into the importance of schooling for mental development and social change.

According to Lave and Wenger (1991, p. 48) the most traditional interpretation of the ZPD is that of a scaffolding, a simple and direct version of Vygotsky's ideas, attributed to Bruner and his collaborators (Wood, Bruner and Ross, 1976, p. 90, Greenfield, 1984, p. 118, Bruner, 1985, p. 25). This interpretation provides support for the hypothesis that the initial aided performance of tasks by children will later result in the same tasks being carried out without assistance. Learning is thus considered an individualistic acquisition under this interpretation.

In the cultural interpretation, the ZPD is considered to be

the distance between the cultural knowledge provided by the sociohistorical context - usually made accessible through instruction - and the everyday experience of individuals (Lave and Wenger, 1991, p. 48).

This interpretation is attributed to Davydov and Markova (1983, pp. 50-76) and is based

on Vygotsky's distinction between everyday and scientific concepts. Its importance is the focus on the possibility of merging everyday learning with school instruction, which might transform the latter into a more motivating and useful process.

An important expansion of Vygotsky's concept can also be seen in the collectivist or societal interpretation, espoused by Engeström and Lave and Wenger (1991, p. 49), which defines the ZPD as the

distance between the everyday actions of individuals and the historically new forms of the societal activity that can be collectively generated as a solution for the double bind potentially embedded in... everyday actions (Engeström, 1987, p. 174).

This last interpretation emphasizes processes of social transformation, making it possible to study learning beyond the context of pedagogical structuring and entering the realm of the social world and its conflictual practice. It also enables the power of learning to be considered as a possible instrument of social change.

Such an interpretation of the ZPD is important for this thesis as it points out to the possibility of schools contributing for social change. It can be hypothesized that a school that adopts such a conception of learning would make a difference in terms of the schooling of working class children. In such a school, this group of children would be more successful, defying the established pattern of schooling for working class children in societies characterized by inequalities and social exclusion.

3.2.2 Vygotsky and the importance of formal instruction:

Vygotsky (1993, p. 157) considered schooling to be crucial for the child. He stressed that instruction "determines the fate of his total mental development". For Vygotsky, the best kind of instruction was that which marches ahead of development, guiding it. Instruction activates a series of functions that are in a state of maturation in children's ZPD (Vygotsky 1987, p. 212). Instruction should thus be aimed at the ripening functions and not so much at the already developed functions. The process of schooling could not, therefore, be reduced to a mere acquisition of information.

According to Vygotsky (Kozulin, 1993, p. xxxv), children's higher mental functions develop and mature under the influence of the systematic cooperation between children

and teachers. By working on the ZPD, children's empirically rich but disorganized spontaneous concepts interact with the systematicity and logic of adult reasoning. The interaction between spontaneous and scientific concepts compensates for the weaknesses of the former through the strength of the scientific logic imparted by the latter. The development of scientific concepts is mediated by and through the already formed spontaneous concepts (words) and does not demand a return to concrete experience. Spontaneous concepts do not provide the freedom and the possibility to form abstractions, which the very nature of scientific concepts prompts (Vygotsky, 1993, pp. 148-9). Scientific concepts are thus the result of systematic, organized and hierarchical thinking. For Vygotsky, spontaneous concepts, formed by everyday learning, are the result of interactions between concrete experience and language. They are acquired in the process of communicating about the world through language. Scientific concepts, on the contrary, emerge through schooling, where the linguistic units are abstracted from their direct extra-linguistic reality and become objects of communication and mental reflection (Wertsch, 1991b, pp. 38-9). In school, children learn words not as means of communication, but as part of a system of knowledge. They learn words through other words (Minick, 1985, pp. 99-100). School instruction induces the generalizing kind of perception which is decisive in making the child both conscious of his/her own mental processes and capable of mastering them Vygotsky (1993, p. 166).

Although Vygotsky's ideas on the importance of schooling are innovative and extremely important to orient pedagogic work, they have been object of criticism.

3.2.3 A critique of Vygotsky's ideas about formal instruction:

According to Wells, supporters of socio-cultural theory have defined the goals of education as the following:

- (1) to ensure cultural continuity through the transmission to each new generation of the artifacts that embody the achievements of the past; and (2) to enable individual students to appropriate these artifacts and to transform the associated knowledge and practices into a resource that both empowers them personally and enables them to contribute to the solution of problems facing the larger culture in innovative ways (Wells, 1993, p. 32).

Although such ideas are based on Vygotsky's theory, his claim that school knowledge

should take precedence over everyday practice was challenged by researchers such as Rogoff (1990, p. 46) and Lave and Wenger (1991, p. 18). The latter, for instance, wrote that “learning is a feature of practice” and can be independent of any educational action. Their studies on apprenticeship in different cultural settings demonstrated the richness of the teaching and learning processes that can take place outside schools. They stressed that everyday thinking is not illogical and enables people to handle practical problems better than the systematic knowledge (scientific concepts) acquired in school (Rogoff and Lave, 1984, p. 7). Everyday learning is motivated by the problems human beings attempt to solve in their daily lives. People are more likely to learn what is useful to solve local problems than to learn abstract knowledge directed to universal goals (such as the knowledge imparted by schools).

Vygotsky has also been criticized for his failure to analyze schools as institutions. As pointed out earlier, Vygotsky believed that schools exert vital influence on the construction of children's mental functions. Vygotsky did not, however, dedicate his efforts to studying the schools themselves, although acknowledging this necessity (Wertsch, 1985a, p. 216). The focus of his work was mainly on the influence of interpersonal (dyadic) interactions on cognitive development, and failed to theorize the social structures connected to it (Daniels 1993 p. 46). Tudge and Winterhoff (1993, p. 67) have argued that individual's goals, tools and meanings are co-constructed by the individual and the socio-cultural context in which she/he is immersed. On this argument, therefore, the study of the micro-social contexts of interaction must be complemented by the study of the broader social, cultural and historical contexts that encompass them.

Ivic (1989, p. 434) added that Vygotsky ignored the fact that schools are not always successful in stimulating learning and intellectual growth and can also have a pathogenic (sic) effect on children. To such a criticism, can be added Daniels' point (1996, p.12) that Vygotsky failed to describe the kinds of instructional or collaborative interactions appropriate within children's ZPD.

Similarly, Minick, Stone and Forman (1993, pp. 6-7) have proposed that post-Vygotskian research should take into account: a) the inadequacy of developing a socio-cultural conception of human development without looking at the ways the institutional

context of social interactions develop and relate and at the ways human social life is organized within them; b) that language is constituted by a multitude of distinct speech genres and that each one of them (including the academic genre) mediate specific forms of social and psychological life; c) that the personal relationships that develop among people in schools influence learning; and d) that modes of thinking evolve as integral systems of motives, goals, values and beliefs that are closely tied to concrete forms of social practice.

Another Russian literary scholar, semiotician, and philosopher also approached the development of human consciousness: Mikhail Bakhtin³ (1895-1975). His ideas can be considered complementary to Vygotsky's theory concerning the understanding of the social formation of human mind and the implications of such an understanding for learning and schooling.

3.2.4 Bakhtin, Vygotsky and the development of subjectivity:

Both Bakhtin and Vygotsky wrote about the ways in which semiotic systems produced meaning and shaped human action (Wertsch, 1991a, p. 67). Bakhtin claimed that consciousness takes shape by being in the material world of signs created by an organized group through social intercourse (Volosinov, 1973, p. 13).

Although there is no evidence that Bakhtin and Vygotsky ever met, their ideas, as indicated above, share a great deal (Daniels, 1993, p. 55, Emerson, 1996, p. 129). Their work reflects Marxist ideas by denying the opposition between the individual and the social.

Bakhtin and Vygotsky also considered that human mind should be studied through a developmental analysis focused on the way communicative practices give rise to mental functioning (Wertsch, 1991a, p. 13). The authors argued that semiotic mediation could provide a link between historical, cultural and institutional context on the one hand, and individual mental functioning on the other. Contrary to a tendency in contemporary

³ Wertsch (1991a, pp. 48-50) and Bakhurst (1996, p. 209) gave accounts of the dispute between different authors in relation to the authorship of the texts produced under the names of Bakhtin, Volosinov and Medvedev. The work is either attributed solely to Bakhtin - writing as himself or using pseudonyms for political reasons - or to three different people who, nevertheless, worked closely together (Emerson, 1996, p. 124). In the present thesis, the discussion of Bakhtin will also include the work published under the name of Volosinov.

linguistics that stresses the formal structure of communication, the authors privileged the importance of meaning in this link.

For Bakhtin (1986, pp. 62-3, p. 71), language should be studied through the utterances of speaking subjects. He considered that language outside the utterance was a fiction. He also characterized human communicative and psychological processes as a dialogicality of voices. Voice, for Bakhtin, was something more than the auditory signal. It was “the speaking personality, or the speaking consciousness” (Holquist and Emerson, 1981, p.434). In this respect, Bakhtin (1986, pp. 67-100) insisted that meaning only existed when two or more voices came into contact and that utterances were always a part of a dialogue, even if the addressee was temporally, spatially or socially distant from the speaker.

According to Wertsch (1993, pp. 344-6), the ideas of Bakhtin enabled the expansion of a point that Vygotsky had barely touched upon by the end of his life, as mentioned earlier: the need to go further than just exploring the relationship between intermental and intramental processes. Vygotsky recognized that forms of mediated intermental functioning were socio-culturally situated and that the wider social and institutional environment that influenced such a functioning should be studied. Bakhtin’s concepts of social language and speech genre are essential to understand this connection, although Bakhtin himself did not theorize about the social contexts either.

For Bakhtin (Holquist and Emerson 1981, p. 430), a social language was the typical discourse of a group within a given social system at a given time. He explained that, each class, profession, generation, religion, region has its own typical discourse or dialect. Such dialect is an embodiment of the dominant ideology of each of these groups. Bakhtin (1986, pp. 60-1) wrote that people speak only in definite speech genres, that is, utterances are relatively stable forms of constructions adequate for specific situations (military commands, greetings, intimate conversations). The individual’s voice, continued Bakhtin (1986, p. 87), is shaped by the languages of his/her social environment. The individual’s words do not come out of a dictionary, but from other people’s mouths, as acts of co-authorship, as dialogues with others. Words are half someone else’s words, produced through a process of “ventriloquation” in which the

individual includes her/his own accent to the social language, and adapts it to her/his own semantic and expressive intentions. Words, therefore, do not have a single correct meaning and the interpretation of discourses must consider the locus from where they are being produced. Speech genres and social languages were considered by Bakhtin to be means for organizing communicative and mental action.

In this respect, it is also important to highlight Bakhtin's differentiation between authoritative and internally persuasive discourses (Bakhtin, 1986, pp. 341-46). He described the authoritative discourse as that which does not allow interanimation with other voices and demands total acceptance or total denial. This type of discourse is indissolubly fused with political, institutional or personal authority. It cannot, therefore, function as a generator of meaning or a thinking device, due to its static nature. Bakhtin classified the discourses of church, politics and schools as authoritative. Authoritative discourse is opposed to internally persuasive discourse, that is, a discourse that allows for dialogic interanimation and invites a polyphony of voices.

Bakhtin saw the world as a conglomerate of competing meanings. As specific meanings dominate in different circumstances, it is always important to ask who is doing the talking in order to find out which voice is privileged in each speech act (Bakhtin, 1986, p. 95). Bakhtin considered that different meanings produce different kinds of consciousness, and explained :

I give myself verbal shape from another's point of view, ultimately, from the point of view of the community to which I belong. (Volosinov, 1973, p. 86).

While they considered that context was an essential element in the development of human mind, both Vygotsky and Bakhtin did not see individuals as determined by the social context. The authors considered that human agency (voluntary action) was possible. In fact, according to Wertsch, Tulviste and Hagstrom (1993, pp. 338-9), the theories of Vygotsky and Bakhtin provide an alternative way to conceive human agency, as they do not dichotomize the individual and the social structure. Individual and social are not separate and intramental processes are derived from intermental processes. Therefore, higher mental functions cannot be considered solely as individual processes: such functions are shared or collective functions as the boundaries between individual

and group processes are difficult to define (Wertsch, Tulviste and Hagstrom, 1993, pp. 336-40).

As can be seen, the work of Bakhtin and Vygotsky is essential to the study of the school processes that influence academic failure. They laid the foundations for the idea that human mind is shaped by the social environment and provide the means to understand the psychological mechanisms responsible for this process. However, as mentioned earlier, the authors theorized the social in a limited way. They did not explore the specific ways through which institutions or cultures exert their influence over thinking and behaviour and a theory that would provide the means to carry out such a task was needed for this thesis. According to Daniels (1996, p. 24), the general model of cultural transmission being developed by Basil Bernstein (1977, 1981, 1990, 1996) could be useful to this purpose.

3.2.5 Bernstein and the theory of cultural transmission:

For Bernstein (1996, pp. 39-53) schools cannot be considered neutral institutions that serve the sole purpose of teaching skills of various kinds to the new members of society. Schools are carriers of ideological messages that produce and reproduce the consciousness of people. Schools translate the power relations that exist in society into pedagogic discourses and these discourses regulate the forms of consciousness and identities of their pupils. The regulatory process is carried out by prescribing rules that allow individuals to recognize different contexts and to produce the corresponding appropriate texts for such contexts (Bernstein, 1996, pp. 9-18, p. 32, p. 39).

Bernstein (1990, p.168) claimed that class, gender, religious and regional relations produce biases in culture. Such relations act selectively on the features of a culture for the purpose of legitimization and reproduction. Education is a crucial booster for these biases. By distributing people of different groups (social class, gender, race, religion, and region) to different levels of education, for instance, schools preserve the structural relations existing in society. Therefore, the differentials in academic success or failure of pupils must be investigated through the study of this function performed by the educational institutions.

According to Bernstein (1996, pp. 9-12), to deal with the issues of social justice and

with the possible conflicts that the social function of schooling engenders, schools create what he called a mythological discourse. Such a discourse disconnects the hierarchy of success internal to school to the hierarchies external to it, resulting in schooling being generally considered neutral in terms of producing different levels of success in their pupils. The deficit position, that states that certain groups of children fail in schools because they lack certain attributes (cognitive, linguistic, and cultural), for instance, displaces the responsibility for failure from the school to the family or the community.

Bernstein's theory, according to his account (Bernstein, 1996, p. 127), presents strong links to Durkheim's ideas concerning the social basis of symbolic form. Less overt, but equally important are his connections with the ideas of Marx (related to the problem of class specialization of consciousness and its relation to the social relations of production), and to the ideas of Mead, Bourdieu and Foucault (Atkinson, Davies and Delamont, 1995, p. *ix*). Bernstein's work, however, cannot be considered only as a contribution to the investigation of the role of educational institutions. His work is also directed to the systemic analysis of the schools themselves, and this is his most important contribution.

According to Bernstein (1990, pp. 165-72, 1996, p. 18) authors like Bourdieu and Passeron, in their analyses of cultural reproduction, did not adequately study the process through which reproduction is carried out inside educational institutions. Such authors view education as nothing more than a carrier of external power relations and are mainly concerned with the messages of patterns of dominance that the educational institutions relay. The authors, therefore, failed to examine the modes of construction, circulation, contextualization, acquisition, and change of discourses inside the institutions. Bernstein claimed that it is through the structure of pedagogic discourse that the external power relations are realized.

As a response to such an approach on the part of the reproduction theorists, Bernstein made a case for the necessity of examining the specificity of schools as sites of specialization of meaning:

if we are unable to specify the rules regulating the construction, representation, and contextualizing of the 'privileging text'- that is, specifying 'relation within'- then we cannot know what has been acquired, either positively or

negatively. And if we do not know this, how can we know the relationship between the 'privileging text' and the consciousness for the pedagogic subject? And if we do not know that, then in what sense can we talk about reproduction, resistance, and transformation? (Bernstein, 1990, p. 178).

For Bernstein (1990, p. 169), the study of pedagogic communication is similar to the study of a carrier wave. One cannot understand what is carried without examining the medium that carries it, that is, without understanding the wave itself. What is carried depends upon the fundamental properties of the carrier. Therefore, pedagogic processes that shape consciousness cannot be studied solely through their surface features, leaving out the structure that makes shaping possible. Hence, his stress on the investigation of the pedagogic device.

The pedagogic device:

Bernstein (1990, p. 189) postulated that the pedagogic device is a set of rules for specializing forms of consciousness. Such rules, which regulate pedagogic communication, act selectively on the potential discourse available in a society.

Bernstein (1996, p.42-52) metaphorically called this set of rules the "grammar" of the pedagogic device. The set was composed by the distributive, recontextualizing and evaluative rules, which Bernstein claimed are hierarchically related, i. e., recontextualizing rules derive from distributive rules and evaluative rules derive from recontextualizing rules.

- Distributive rules:

Distributive rules regulate the power relationships between social groups through the distribution of different forms of knowledge between such groups.

According to Bernstein:

The distributive rules mark and distribute who may transmit what to whom and under what conditions, and they attempt to set the outer limits of legitimate discourse (Bernstein, 1996, p. 46).

Bernstein (1996, p. 43) stated that all societies produce two classes of knowledge: the "thinkable" and the "unthinkable". The former is the knowledge of the possible, the officially disseminated knowledge, which freely circulates in societies. The latter is the possibility of new knowledge and the territory of a few selected groups. Bernstein placed

the “unthinkable” in the gap between the meanings that relate the material, everyday world to the immaterial, transcendental world and explained that the relation between these two worlds is based on the specific material base of each society. In this gap lies the potential for alternative possibilities and realizations. Therefore, in all societies, there is a permanent dispute for the power to regulate and control such a gap.

In small-scale societies, with simple division of labour, the “unthinkable” is managed and controlled by religion. In modern complex societies, the control of the “unthinkable” is essentially (not exclusively) carried out by the higher agencies of education⁴, that is, by the State. Bernstein stressed that the pedagogic device does not create this distinction between the “thinkable” and the “unthinkable”. It merely reproduces it and regulates the distribution of such kinds of knowledge.

- Recontextualizing rules:

What was selected by the distributive rules to constitute the official knowledge of a society (the “thinkable”), is later shaped by the recontextualizing rules to create pedagogic discourse.

The pedagogic discourse is a principle which removes another discourse (Physics, for instance) from its substantive practice, context, and power relations, and relocates it in educational territory (as the academic discipline of Physics). The process of delocation involves applying the principles of selective reordering and focusing of the pedagogic discourse to the recontextualized discourse. Pedagogic discourse is not, therefore, a proper discourse. It is a principle for the circulation and reordering of other discourses.

Bernstein (1996, p. 46) considered that pedagogic discourse is a rule for the embedding of two discourses. The first is the discourse of skills and their interrelations - the instructional discourse - and the second a discourse of social order, relation and identity - the regulative discourse. The two are often regarded as distinct and kept apart. The separations of the two discourses is carried out as if there is a conspiracy to disguise that there is only one embedded discourse producing one embedded inseparable text. Bernstein (1996, p. 46) considered that the regulative discourse is the dominant and

⁴ Bernstein (1996, p. 43) commented that this explanation is a “brutal oversimplification” of reality. He, however, claimed to have used it to make himself better understood.

produces order in the instructional discourses.

To summarize this idea, Bernstein wrote that:

the grammar of the pedagogic discourse (the underlying ordering principle) condenses competence into order and order into competence. (Bernstein, 1990, p. 188).

He used the example of the discourse of Physics, once again, to explain this dominance. Bernstein pointed out that the features of the transmission and acquisition processes of the academic subject called Physics can no longer be derived from the internal logic of the original Physics discourse once it is recontextualized by the pedagogic device. The features of transmission and acquisition of school Physics are not logical. They are social facts since it is ideology that regulates the range of alternative principles available for the selection of transmission/acquisition processes:

It is of course obvious that all pedagogic discourse creates a moral regulation of the social relations of transmission/acquisition, that is, rules of order, relation, and identity, and that such a moral order is prior to, and a condition for, the transmission of competencies (Bernstein, 1990, p. 184).

- Evaluative rules:

The evaluative rules provide the criteria to be transmitted and acquired in the pedagogic institutions. These rules are constituted within pedagogic practice and, at classroom level, define the standards which must be reached:

evaluative rules act selectively on contents, the form of transmission and their distribution to different groups of pupils in different contexts. At the most abstract level, evaluative rules bring *time* (age), *content* (text) and *space* (transmission) into a specialized relation. (Bernstein, 1996, p. 118 - emphasis in the original).

Evaluation condenses the meaning of the whole pedagogic device. Evaluation is the key to pedagogic practice.

Bernstein claimed the existence of three interdependent fields of educational discourse, practice and organization related to the rules of the pedagogic discourse: the fields of production, reproduction and relocation (Bernstein, 1990, pp. 191-4).

The fields of the pedagogic device:

In the field of discourse production (or primary context), knowledge and specialized discourses are created, modified and changed. This is the field of research, which creates the “intellectual field” of the educational system. Discourse production is mainly maintained by State funding and is related to distributive rules.

The reproduction field (or secondary context) is the locus of the selective reproduction of the educational discourse developed in the primary context. The reproduction is carried out by appropriate agencies (schools with their different levels) and practices. The reproduction field is related to evaluative rules.

The field of discourse relocation (or recontextualizing field) is concerned with the circulation of texts/practices from the production to the reproduction field. The regulation of such circulation is accomplished in two sub-fields: the official recontextualizing field and the pedagogic recontextualizing field. The relocation field is related to recontextualizing rules.

The official recontextualizing field is created and dominated by the State both politically and administratively. It is always a recontextualizing of texts and of their generating social relations, from dominant positions within economy and symbolic control. The official field is responsible for the construction and surveillance of the official pedagogic discourse and practice and shapes them to the state’s main ideological position. The trainers of teachers, writers of books and journals, researchers, and curricular guides create the pedagogic recontextualizing field. This field does not necessarily exist in a society but if it does, it can adopt an opposing ideological position to that of the official field. This opposition creates a struggle between the two fields and may result in a certain degree of autonomy for pedagogic discourse and practice.

The main activity of the recontextualizing fields is to constitute the “what” and the “how” of pedagogic discourse, or the realization of the pedagogic device.

The realization of the pedagogic device:

The ‘what’ of the pedagogic device refers to the categories, contents, and relationships to be transmitted. It is a recontextualization from the intellectual, expressive, and manual

fields and derives from the social division of labour. The “what” can be analyzed according to what Bernstein called classification principles that provide recognition rules, that is, rules that orientate the subjects in relation to the specific features of the context. The “how”, in its turn, refers to the manner of transmission of such categories, contents and relationships. It refers to the regulation of communication in the social relations through which the social division of labour is enacted. The “how” of the pedagogic discourse involves the recontextualizing of theories from social science (usually psychology) and can be analyzed according to what Bernstein called framing principles, which provide realization rules, that enable the production of the adequate texts for the different contexts (Bernstein, 1990, p. 196, 1996, p. 32).

Bernstein (1996, pp. 19-29) explained that a variety of pedagogic structures can be generated according to the classification and framing principles, i. e., according to the pedagogic code they constitute. School subjects (or teachers), for instance, may be more or less specialized and differ in classificatory principle. Thus, when there is strong insulation, with each category being sharply distinguished, explicitly bounded, and specialized, classification is said to be strong. When insulation is not severe, the categories are less specialized and their distinctiveness is reduced. This classification is said to be weak.

The recontextualizing grammar of pedagogic discourse is linked to pedagogic practice by theories of instruction (Bernstein, 1990, p. 212-4). These theories can be implicit or explicit and are necessary to embed the instructional into the regulative discourses. The theories regulate the internal orderings of the pedagogic practice and construct models for the pedagogic subject (acquirer), the transmitter, the context, and the communicative pedagogic competence⁵.

Bernstein (1990) stressed that what is acquired in school can be different from what is actually transmitted. The transmission/acquisition process depends on the differences between the official recontextualizing discourse and the local contextualizing discourse. Bernstein suggested that the latter regulates the process of cultural reproduction at the

⁵ Theories of instruction can, for instance, privilege transmission and focus on the acquirers' performance measured through grades. They can also privilege acquisition and focus on universal, general processes internal to acquirers (Bernstein, 1990, pp. 212-4).

level of the initial contextualizing of culture: the family, the peer-group relations, and the community. Thus, the acquirer's social class will greatly influence his or her appropriation of the pedagogic message. As the pedagogic texts adopted in schools are generally similar to the official pedagogic text, the pupils from the dominant class are positioned in a way that they can easily appropriate it: their local pedagogic text is likely to be similar to the official text. On the other hand, the working class pupils have difficulties in the acquisition of the official pedagogic text and can even develop a resistance to it:

The school may include as part of its practice recontextualized discourses from the family/community/peer relations of the acquirer for purposes of social control, in order to make its own regulative discourse more effective. Conversely, the family/community/peer relations can exert their own influence upon the recontextualizing field of the school and in this way affect the latter's practice (Bernstein, 1990, p. 199).

Bernstein pointed out the possibility of conflict in different areas of the pedagogic device (see Annex 2 for the Bernstein's graphical model of the state regulated pedagogic device): in the official recontextualizing field; between the official and the pedagogic contextualizing fields; and between school and primary (family/community) recontextualizing principles. Bernstein also claimed that the transmitters can be unable or unwilling to reproduce the expected code of transmission. The existence of such areas of conflict demonstrates that the pedagogic device enables orientations to alternative orders of meaning (Bernstein, 1990, pp.195-200). He considered it important to know how innovations occur through the pedagogic discourse, indicating the possibility of agency in the pedagogic device.

Bernstein claimed that:

The pedagogic device at one and the same time constitutes a symbolic ruler and is the means of its transformation (Bernstein 1990, p. 210).

Bernstein has been considered the most original of Britain's sociologists (Atkinson, 1997, p. 119) and his model for the analysis of pedagogy is important (Ladwig, 1997, p. 128). However, there is a need to address some of the criticisms that have been directed at Bernstein's work over the years.

A critique of Bernstein's theory:

Bernstein has been criticized in the past for the scarce empirical evidence provided for his theory. Sadovnik, for instance, suggested that there was a need to carry out empirical tests of

the relationship between social class composition of schools, their local pedagogic practice and how and why they relate to social-class advantages and disadvantages (Sadovnik, 1991, p. 61).

Responding to the first criticism, Bernstein (1996, pp. 91-133), in his latest book, presented a considerable corpus of empirical evidence that have been produced in the last few years based on his theoretical model.

Sadovnik also argued for a more extensive theorizing of educational transformation, arguing that Bernstein had not developed enough the ideas concerning the potential of schooling to promote change. This second criticism was also echoed by Apple (1992, p.131), that emphasized Bernstein's "overly Durkheimian tendencies", in spite of the presence of class conflict in his theories. Other scholars, according to Bernstein's account, have also given him the label of structuralist (Bernstein, 1996, p. 127). While acknowledging his Durkheimian roots, Bernstein (1996, pp. 100-1, p. 127) claimed that his ideas are "far removed from the disembodied structures and decontextualized rules" of Levi-Strauss and Saussure (Bernstein, 1996, p. 195). He argued that he adopted the forms of structuralism originating in linguistics and that such an adoption aimed of discovering the system of rules that influence people's production of meaning. Bernstein observed that such a theoretical position could be interpreted as a sign that he believed that the system is external to people and regulates them. The author, however, stated that he did not hold this belief. He argued that his theory includes the possibility of change and human agency (Bernstein, 1996, pp. 127-8) and that the potential for change was built into his model of cultural transmission. Bernstein stated that the contradictions, cleavages and dilemmas inherent to the principle of classification are never suppressed either at the social or the individual level. Therefore, the pedagogic discourse and the pedagogic practice construct an arena of struggle over the nature of symbolic control (Bernstein, 1996, p. 30).

The literature review indicated two main points of importance for the qualitative part of

this thesis:

- Human mind is constructed through dialectical interactions between the individual and the social;
- Schools can exert influence on the process of consciousness shaping and identity building, although the role of social institutions on this process still requires further understanding.

Next, the findings of investigations that focused on the role of educational institutions on achievement will be examined.

3.3 Academic failure: the role of the educational institutions

Vygotsky and Bakhtin did not study the problem of academic failure and they were criticized for not giving much attention to the institutional processes associated with the development of the human mind. This section of the thesis presents a literature review of research that have explored the relationships between school processes and academic attainment and failure

One possible way of explaining academic failure is by considering it to be caused by the limited access or interest, on the part of some pupils, to the privileging discourse of schools.

Wertsch (1990, p. 121), classified the discourse of formal education as one of “decontextualized rationality”. He pointed out that teachers make an effort to maintain students within the boundaries of school’s “text-based reality” (Wertsch, 1987, p. 4), created by linguistic means and kept apart from other areas of experience. This could be a problem for learning.

Moll (1991, p. 10), in his turn, argued that current school instruction lacks “living knowledge”, i.e., the kind of knowledge that allows individuals to master the existing cultural tools and develop the higher mental functions necessary to deal with the demands of their specific cultural setting.

If school learning is isolated from cognition and experience outside school (Engeström, 1991, p. 243) schooling runs the risk of becoming an activity on its own rather than an

instrument for equipping children to understand and act upon the world.

Engeström proposed the method of expansive learning to overcome the process of encapsulation that characterizes school learning. He suggested that:

the object of school learning should be radically widened, to include the context of criticism, the context of discovery, and the context of application of the given contents (Engeström, 1991, p. 243).

Lave (1988, p.14) is another voice to criticize the way formal education is organized and its lack of connection to the real world. She claimed that schooling is based on the functionalist conception that children can be taught general cognitive skills (reading, writing, Mathematics, logic, critical thinking) even when such skills are disembedded from the routine contexts of their use. She argued, that the “most powerful knowledgeability of people in the lived-in-world” can only be constituted in settings of practice and such an idea is illustrated by the Brazilian “street” children studied by Nunes, Schliemann and Carraher (1993, p. 21). Such children proved to be proficient in the mathematical operations necessary for their trade (selling sweets at traffic lights) whilst being unable to succeed in school Mathematics that involved similar operations. The researchers claimed that children were capable of learning those complicated mathematical operations in the context of their work because of economic (survival) reasons. On the other hand, children seemed unable to carry out the same operations in the text-based school setting - to which they might attribute no value - as such settings did not bear any relation to their lives.

The importance of including meaningful and relevant topics in the lessons to influence pupils’ learning processes was also stressed in an investigation by Crespo (1986, pp. 100-6). Her report described findings from the case study of a teacher that had all her pupils promoted to the second year of Primary school in a small village in Bolivia - a country characterized by high rates of academic failure, mostly among the poor and indigenous children. One of the procedures adopted by this teacher was the use of “real life” elements in her teaching, besides investing in the relationship with children’s families. The teacher was also described as “caring” towards her pupils, trying to give them a degree of power, and having high expectations about their achievement.

The point – finding school knowledge that has become everyday theoretical knowledge by and integration between scientific and spontaneous concepts - has also been made, more generally by Hedegaard (1996, pp. 179-80). According to this researcher, it is through “everyday theoretical knowledge” that children can acquire new skills and carry out new actions since such knowledge enables reflection and intellectual growth. Hedegaard claimed that “everyday theoretical knowledge” can be built up by a method of “double move”, where teaching advances from the general (scientific concepts) to the concrete and children’s learning develop from the concrete (everyday concepts) to the general laws.

Tharp (1993, pp. 270-2) makes a similar point, stressing that there is little ‘teaching’ to be found in the majority of North American schools. He claimed that what takes place in the schools can be better classified as “recitation”: the assignment of tasks by teachers and the subsequent assessment of pupils’ performances on similar tasks. Tharp claimed that teaching/learning process should be an assisted performance in the zone of proximal development. Teachers should start at the child’s current level of understanding and knowledge and allow the child a meaningful role in setting her/his instructional goals. Teachers should also help the child to achieve such goals and move to the next levels.

According to Minick (1985, p. 128), successful learning can also be related to the value placed on schooling on the part of the pupils and their families. The author argued that even if the child is not personally motivated by the desire to acquire the skills and knowledge offered by the school, she/he might, nonetheless, engage in their acquisition when she/he feels it constitutes a value for the her/his family and social circle. Middle-class children, for instance, might be successful in learning the contents of the official curriculum because schooling is considered important for their future. Working class children, on their turn, might not have the same attitude towards schooling.

In this respect, Bourdieu and Passeron have explained that:

middle-class fractions whose ascension most directly depends on the school, differ from the working-class by an academic docility which is expressed in, among other things, their particular sensitivity to the symbolic effect of punishment or rewards and more precisely to the social certification effect of academic qualifications (Bourdieu and Passeron, 1990, p. 28).

Minick, Addison Stone and Forman (1993, pp. 6-7) similarly have stressed that the character of the interpersonal relationships established in the context of academic learning are important to pupils' attainment. Minick, Addison Stone and Forman argued that learning from another person requires a degree of identification with that person and the cultural community he or she represents. Therefore, lack of success in school

can represent an unwillingness to subordinate one's voice to that of another rather than an inability to learn (Minick, Addison Stone and Forman, 1993, p. 6).

Valencia (1991) and Trueba (1991), who worked with immigrant children in the USA, corroborated this view. Trueba (1991, p. 152-56) proposed that resistance to learning should be understood as a rejection of the values imparted by the schools that are alien to the culture of certain groups. The author added that schools might be perceived as oppressive and destructive of home culture due to the imposition of official values and ways of perceiving the world carried out within them.

Although this thesis is not concerned with immigrant children, the fact that working class culture is different from the middle class culture that dominates schools, makes Valencia's and Trueba's ideas relevant for the understanding of academic failure in working class children.

The influence of the conflicting values of schools and families on academic achievement has also been investigated by Connell et al., who wrote that:

the fact that the curriculum is organized as competitive individual appropriation of knowledge - what schools, universities and testers call "academic achievement"- becomes important. For this is not the characteristic way knowledge or personal interaction are organized in working-class life... Repeatedly, in studying the interviews of working-class kids and their parents, we have come across a contradiction between the family's practices of cooperative coping and the schools curriculum's demand for individual achievement (Connell et al., 1982, p. 122).

The fact that there are differences between teaching/learning processes developed in working class homes on the one hand and in school contexts on the other, was also pointed out in research carried out in Brazil by Wertsch, Minick and Arns (1984, pp. 151-71). According to the researchers, the mode of teaching/learning, which takes place in apprenticeship or household economic activities, is aimed at error-free production.

Such a mode is determined by motives of making maximum use of the individual's capacities while minimizing possible economic losses, especially in working class households. In school, on the contrary, pupils are encouraged to learn and perform actions even if they are not yet capable of doing so correctly and efficiently and even if they cannot perceive the actions' purposes.

Edward and Mercer (1987, p. 48) also claimed that pupils who do not share the same cultural background with teachers may fail to recognize that there are different sorts of discourses and appropriate ways to responding to them. Wertsch and Minick (1987, p. 3), following Bakhtin's ideas, explained that children are generally socialized into different socio-cultural settings by learning to speak the specific language⁶ of each setting. The authors stressed the difficulty in mastering school language by working class children, notwithstanding the privileged position such language occupies in modern societies. This process requires the ability to use a decontextualized language, which bears a closer relation to the language of the dominant class than to that of the working class.

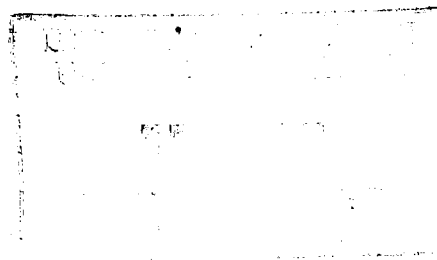
Bernstein's point (1996, pp. 34-5) is similar: middle class children are better able than others to recognize the distinguished features of school. Middle class children are more aware of what is expected of them in the academic situation than working class children. Using the Bernsteinian model of cultural transmission, Morais et al. (1995) carried out a series of investigations that ratified the idea that different pedagogic practices differently affect the academic performance of pupils depending on their social class, race and sex (Morais et al., 1995, pp. 495-508). The authors studied the attainment in Science of Portuguese children attending a state primary school. Morais et al. devised three teaching styles based on different principles of framing and their findings showed that the degree of similarity between the pedagogic practices adopted in the school and in the family affected the achievement of children. Daniels (1995, p. 527) also demonstrated that specific school organizations, (in terms of classification and framing) can facilitate or hinder children's production of adequate academic texts. This is another aspect to be taken into consideration when studying the processes associated with school attainment:

⁶ Language for these authors was used to signify more than a linguistic code. The word included all sorts of signs and implied the understanding of their meanings.

the failure to meet the standards of performance required for promotion to the next grade might be related to children's failure to acquire the required realization rules of their specific schools.

In an extensive review of research that investigated the quality of instruction for students at risk of failure (mainly African-American and Hispanic) in North American schools, Waxman and Padron (1995, p. 47) observed that: a) that teachers encourage less and have lower levels of expectation for minority students as compared to their white counterparts; b) schools serving lower achieving students often devote less time and emphasis to higher order thinking skills, adopt a less challenging curriculum and overemphasize repetition of content. The authors claimed that these characteristics of the institutions are associated with students adopting a passive orientation to schooling.

The studies reviewed suggest that the process of schooling is different in different educational institutions and for children of different backgrounds. Researchers indicated ways in which schooling can be more meaningful for the development of children's mental functions and for the acquisition of knowledge that is important for their lives. This literature review provided important elements for the planning of the qualitative investigation that aimed at understanding the process of academic failure in Southern Brazilian children. The next chapters will present an account of this qualitative investigation.



Chapter 4:

The Case Studies of *Primeiro Grau* Schools: Methodology

4.1 Introduction:

The need for expanding the initial correlation approach to the investigation of academic failure was established at the end of Chapter 2 and the account of important theories on pedagogic transmission and their implications for the qualitative investigation was presented in Chapter 3.

This chapter deals with the methodological aspects of the qualitative investigation that was carried out with the purpose of contributing for the understanding of academic failure in Pelotas *Primeiro Grau* schools. The chapter starts with a discussion about the features and the advantages and disadvantages of qualitative research. It discusses such aspects in relation to the case studies, the second broad approach chosen to study academic failure in this thesis. Next the research questions and the initial hypotheses (formulated to explain differences in academic performance among Pelotas' schools) are presented. Finally, the research design and the process of selection of schools to be investigated are discussed.

4.2 General methodology:

4.2.1 Qualitative approach to research:

Qualitative research in education has roots in many academic disciplines from social sciences and humanities (Gall, Borg and Gall, 1996, p.592). According to Robson (1993, p.148), the ethnographic approach is exploratory and seeks to develop theories about the ways participants accomplish the actions that take place in a group.

Qualitative methodology allows for the understanding of the meanings of human behaviour (Patton, 1980, p.22), which makes it a useful approach for the point of the second part of this thesis: grasping the processes involved in the academic failure of children.

According to Miles and Huberman, qualitative studies can produce:

well-grounded, rich descriptions and explanations of processes in identifiable

local contexts (Miles and Huberman 1994, p.1).

The authors also argued that qualitative studies could be considered advantageous as they allow researchers to go beyond their initial conceptions and generate or revise their conceptual frameworks. Miles and Huberman (1994, p. 1) stressed what they called the “undeniability” of qualitative data which, when organized into incidents and stories, give a more concrete, vivid flavour for the reader than pages of summarized numbers.

Miles and Huberman pointed out that qualitative investigations can be conducted in a variety of ways although they share the following recurring characteristics:

- Qualitative research is conducted through an intense and/or prolonged contact with a “field” or life situation. These situations are typically “banal” or normal ones, reflective of the everyday life of individuals, groups, societies, and organizations.
- The researcher’s role is to gain a “holistic” (systemic, encompassing, integrated) overview of the context under study: its logic, its arrangements, and its explicit and implicit rules.
- The researcher attempts to capture data on the perceptions of local actors “from the inside”, through a process of deep attentiveness, of empathetic understanding (*Verstehen*), and of suspending or “bracketing” preconceptions about the topic under discussion.
- Reading through these materials, the researcher may isolate certain themes and expressions that can be reviewed with informants, but that should be maintained in their original forms throughout the study.
- A main task is to explicate the ways people in particular settings come to understand, account for, take action, and otherwise manage their day-to-day situations.
- Many interpretations of this material are possible, but some are more compelling for theoretical reasons or on grounds of internal consistency.
- Relatively little standardized instrumentation is used at the outset. The researcher is essentially the main “measurement device” in the study.
- Most analysis is done with words. The words can be assembled, subclustered, broken into semiotic segments. They can be organized to permit the researcher to contrast, compare, analyze, and bestow patterns upon them (Miles and Huberman, 1994, pp. 6-7, italics in the original).

From the point of view of the traditional research paradigm, the trustworthiness of the findings yielded by the qualitative approach, their internal and external validity, their

reliability and objectivity are often challenged (Miles and Huberman 1994, p.2). Qualitative researchers, however, claim that qualitative data can be trustworthy. Guba (1981, pp. 83-7), for example, prescribed the following procedures to deal with validity and reliability issues. He called such procedures a “naturalistic mode for dealing with questions of trustworthiness”.

According to Guba, internal validity (or truth value) can be tested through procedures like prolonged engagement in the research site, persistent observation, peer debriefing, use of multiple data sources (triangulation), checking the findings with members of the relevant data source groups or the establishing of structural coherence in the interpretations.

The author claimed that external validity, or generalizability is not a crucial issue in qualitative research inasmuch as human behaviour is considered to be context-bound. Such investigations do not provide truth statements that can have general applicability. The degree of transferability of findings from one context to another depends upon the degree of similarity (fittingness) between such contexts. Therefore, the aim of the researcher should be to produce detailed descriptions of the investigation site and working hypotheses for the explanations of phenomena that allow for the recognition of similarities and/or differences by others.

Guba explained that in qualitative investigations the reliability, or consistency of findings, implies not only invariance, but also traceable variance, as human beings are unstable and change all the time. The author suggested that triangulation is a good strategy to check the results obtained through different instruments and advised the researchers to have “audit trials” (Guba, 1981, p. 87), i.e., to have an external auditor to examine the processes of data collection, analysis and interpretation.

Finally, for Guba, the issue of objectivity or neutrality could also be addressed by triangulation and the practice of reflexivity, that is, the intentional revelation of the researcher’s underlying assumptions which may have induced her/him to present and interpret the data in a particular way.

After discussing the general issues concerning qualitative methods, the specific

approach elected for the investigation of academic failure in Pelotas - the case study approach - will be examined.

The case studies approach:

The need to explore the institutional processes that influence pupils' academic failure in *Primeiro Grau* schools led the author of this thesis to choose a case study strategy within the qualitative paradigm.

Stake (1994, pp. 236-7) stated that "a case study is not a methodological choice, but a choice of object to be studied". This author defined a case as a system or a "functioning specific" and a case study as "both the process of learning about the case and the product of our learning". According to Robson (1993, p. 146), a case study is an empirical investigation of a particular contemporary phenomenon within its real life context, through multiple sources of data.

Such an approach was thus considered by the researcher as the most adequate to answer the "how" and "why" questions related to academic failure which the correlational approach was unable to do in this thesis. Pelotas' *Primeiro Grau* schools present a variation in terms of rates of academic failure for their pupils. Therefore, the researcher decided that it would be more useful to study two cases of extreme performance (a high failure rate and a low failure rate schools) than to concentrate on one school that presented high level of failure. An approach by comparison of two cases was chosen as was considered essential to provide insightful information about the ways in which otherwise similar schools achieve different results, in spite of its disadvantages.

Patton (1990, p. 68) claimed that qualitative methods are "particularly useful for capturing differences among people and programs". This author also stressed the usefulness of case studies of extreme cases for understanding specific situations such as unusual success or failure in programs or policies. Miles and Huberman (1994, p. 254) claimed that comparisons date back to Aristotle as classic ways to draw conclusions and present several examples in which comparisons were successfully used to provide important information for researchers. Stake (1994, pp. 241-2),

however, pointed out that although comparisons are powerful mechanisms, they might fix attention upon the features that are being compared and obscure other knowledge about the case, reducing the detail and level of analysis of single cases and glossing over uniqueness and complexities.

The writer of this thesis recognized that the comparison between two schools with contrasting performance could affect the level of description provided for each institution. However, the aim of the investigation was to maximize the chances of a deeper understanding of the role that schools play in failure rather than to understand all the processes associated with academic failure within a particular institution. Therefore, there was no need for total descriptions of all the features that characterized the institutions. The focus of the investigation will be on the specific aspects of the school life that lead to their contrasting performances, within the framing provided by the research questions and the tentative hypotheses that guided the case studies.

4.2.2 Research questions and working hypotheses:

The main research questions to be answered through the case studies were the following:

- **What are the differences between the schools that are responsible for their contrasting rates of academic failure in working class children?**
- **How do these differences operate in the production of academic failure or success in working class¹ children?**

Before the design of the fieldwork, a series of hypotheses were generated with respect to the features that were expected to characterize each school and might be responsible for the differences in rates of failure among their pupils. Such hypotheses were based on the theoretical aspects discussed in the literature review and reflected the researcher's personal beliefs and biases. The hypotheses create ideal models and it was not expected that the schools would fit such models exactly. The schools, however, were expected to present at least some of the features depicted by the

¹ The author uses the term "working class" in this thesis to refer to families whose heads belong to the following occupational groups: manual qualified, manual semi-qualified and manual non-qualified (see Annex 1). The unemployed were also included in the term.

models.

Table 4.1 presents a summary of the hypotheses related to the differences in characteristics that were expected to be encountered between the high failure rate school (HF) and the low failure rate school (LF)². Such aspects were expected to account for the contrasting performance of their pupils.

Table 4.1: Summary of the hypotheses related to the differences between the two schools (HF and LF)

DIMENSIONS	LOW FAILURE RATE SCHOOL (LF)	HIGH FAILURE RATE SCHOOL (HF)
Theories of instruction: - Definitions of learning - Understanding of academic failure - Model of the acquirer - Model of the transmitter	- group construction in ZPD - context-dependent - intra-school causes acknowledged - active, challenging - contributor in the development of mental functions and acquisition of cultural tools	- simple incorporation of knowledge - context-independent - extra-school causes stressed - passive, compliant - transmitter of knowledge and total controller of the process
Pedagogic practice:	- working class culture included and valued - presence of "real life" in teaching - motivating - emphasis on different approaches to teaching - pupil/teacher dialogue - pupil/pupil interactions - weak boundaries between academic subjects - effort to understand and help failing/misbehaved children - emphasis on acquisition of skills and cultural tools - evaluation of pupils' progress - small group and individual work with teacher - weak power relations within the school community (weak framing) - emphasis on innovations and social change	- working class culture excluded and not valued - teaching disconnected to "real life" - non-motivating - standardized approaches to teaching - teacher monologue - little pupil/pupil interactions - strong boundaries between academic subjects - failing/misbehaving children excluded - emphasis on transmission of contents - evaluation of pupils' performance - whole-class work with teacher - strong power relations within the school community (strong framing) - acceptance of social <i>status quo</i> ; conservative practices
Evaluations of the schools:	- staff satisfied with institution - pupils and families satisfied with institution and feeling welcome there	- staff dissatisfied with institution - pupils and families dissatisfied with the institution

² From this point on, the two schools will be referred to as HF and LF.

The hypotheses are divided into three groups related to: schools' theories of instruction, their pedagogic practices, and the evaluations of the schools by their staff, pupils and families.

The hypotheses were the following:

Hypotheses related to theories of instruction:

With respect to the theories of instruction, the focus was on the definitions of learning, on the understanding of the causes of academic failure, and on the models of the acquirer and the transmitter, according to the guidelines provided by the work of Bernstein.

- Hypotheses related to definitions of learning:

Learning in **LF** would be understood as a dialectical process, a process of construction, of intensive teacher/child cooperation in the latter's ZPD to assist in the development of children's mental functions. The context-dependent characteristics of learning would be highlighted in this school.

Learning in **HF** would be conceived as a simple incorporation, on the part of pupils, of what is transmitted, ready-made, by the teacher. The teaching process would be carried out as an act of "recitation", following Tharp (1993, p.270) or as an act of depositing, according to the "banking" concept of education described by Paulo Freire (1996, p.53). Teachers would be considered the depositors and pupils the depositories of the knowledge they were supposed to receive, file and store. The success in learning would be considered as mainly determined by pupil's innate capacities or cultural background.

- Hypotheses related to the understanding of academic failure:

Following the characteristic pattern of Brazilian *Primeiro Grau* public schools (Mello, 1985, pp. 77-119, Verhine and Melo, 1988, p. 561, Davico, 1990, pp. 109-12, Gama et al., 1991, p. 377, Penin, 1994, p. 114), it was expected that teachers in **HF** would attribute failure mainly to extra-school causes: children's and their families' background variables.

The idea that the most important causes of academic failure were laziness, malnutrition or low level of intelligence in pupils and poverty, carelessness, emotional imbalance, or cultural deprivation on the part of pupil's families would predominate in **HF**. The belief in the natural inequality of people in terms of their capacity to profit from schooling and the neo-liberal illusion that educational opportunities are the same for all would be very visible in this school.

Teachers in **LF**, on the opposite, would recognize the role that institutional features play in academic failure. They would be aware of the social function of schools as agents for the reproduction of society, of schools as means of positioning people in the social hierarchy, following the current trends in the theories of schooling (Bourdieu and Passeron, 1990, Bernstein, 1996).

-Hypotheses related to the model of the acquirer:

It was expected that, in **HF**, pupils would be considered as immature persons who have to be taught skills and knowledge by the teachers. The ideal pupil would be considered compliant and interested.

In **LF** pupils would be regarded as active beings, capable of constructing knowledge with the aid of adults or more advanced peers (a Vygotskian model). The ideal pupil would be a creative, questioning and active individual, capable of making an important contribution to the teaching/learning process.

- Hypotheses related to the model of the transmitter:

As a consequence of the prevailing conceptions about learning and failure, the ideal teacher in **LF** was expected to be described as someone who believed that working class children are able to learn, as someone who tried to devise the most adequate ways to make pupils succeed. Rather than a simple transmitter of knowledge, the ideal teacher would be a person that contributed to the development of pupils' higher mental functions and the acquisition of cultural tools. This teacher would make use of an internally persuasive type of discourse as described by Bakhtin (1981, pp. 341-6).

In contrast, the ideal teacher in **HF** would be concerned with transmitting the assigned syllabus to the pupils. The teacher would be the director of the process and her/his

discourse would be authoritative.

Hypotheses related to pedagogic practices:

It was expected that LF would be characterized by an emphasis on a multiplicity of "voices" or by a polyphony of speech genres, in the Bakhtinian sense. The knowledge load and the values that pupils brought from home (voice of the working class culture) would be used and considered important. The boundaries between academic and popular knowledge would be weak (weak classification, in Bernsteinian terms).

School culture would be motivating as the connections with "real life", with practice outside school, would be stressed. Pupils would be more interested in learning and learning would be more useful to their lives.

Different ways to approach school tasks would be permitted, even encouraged. The school would accept many different narratives for the same phenomenon rather than being preoccupied with the search and preservation of "the truth". There would be an integration of academic subjects (weak classification).

There would be a constant dialogue between teachers and pupils and among the pupils themselves (weak framing). An effort would be made to understand the causes and help "failing" or "misbehaved" children.

Teachers in LF would be concerned with aspects of the acquisition of skills and cognitive strategies. However, the transmission of the systematic, organized and hierarchical knowledge produced by society would also be considered important for the development of children's higher mental functions. Evaluations would take into account the progress of each child, rather than solely the results of their tests.

Teachers would pay attention to pupil's individual needs (as much as it is possible to do this in a crowded classroom) and also work with small groups and not solely with the whole class. Stress would be placed on pupils' opinions in the classroom and administrative decisions would include teachers', pupil's and community's participation. Power would be distributed among all the actors involved in the school (weak framing).

There would be a conscious effort to promote social change in the sense described by (Engeström, 1987, p. 174 and Lave and Wenger, 1991, p. 49). The social role of schooling would be clearly discussed in **LF**. The staff would be involved in the political struggle for a better and more democratic educational system, for better working conditions, and for adequate professional training and recognition. Therefore, **LF** would have a distinctive local pedagogic discourse that would be different and opposed to the official pedagogic discourse - as considered possible by Bernstein. **LF** would allow the presence of the “unthinkable”.

HF, in contrast, would be homophonic, in Bakhtinian terms. It would be characterized by a dominance of the official pedagogic discourse, that, in a society like the Brazilian, is concerned with class reproduction. There would be strong boundaries between home and school (strong classification).

Teachers in **HF** would not encourage doubting, reflection or controversy (authoritative discourse), and their aim would be to impart only that body of officially prescribed recontextualized knowledge - the “thinkable” (Bernstein, 1996, p. 43) - in a routinised manner. The school’s discourse would be disconnected to “real life” and practice. The whole school culture would be non-motivating for working class children.

The teacher would be offering monologues, most of the time, and the interactions between pupils would not be encouraged.

There would be strong boundaries between the academic subjects (strong classification). Teachers would work with the class as a whole aiming at what they imagine to be the “average” pupil (the more advanced and the slower being left to cope on their own). Teachers would lecture children and drill them through repetitive exercises as observed by Waxman and Padron (1995, p. 47) to happen in schools with poor academic performance. Evaluations would be based on the results of tests (Freire’s banking style education) and on children’s behaviour.

Low achievers and “misbehaved” pupils would be segregated in “special classes”, as reported for other schools in Southern Brazil (Freitas, 1991, p. 112): teachers would not be interested in understanding the reasons why such children present problems.

Teachers would feel without power and think there was nothing they could do to change the situation. They would believe that children's problems were mainly related to extra-school (generally untreatable) causes. Pupils' lack of success would, therefore, be accepted.

In **HF**, power relations would be strong and vertical. Decisions would generally be taken by the Headteacher and not shared among the staff. Teachers' different opinions and teaching methods would be ignored and stay unexpressed (homophony of teachers' voices) due to the dominance of the official educational voice. The relationships between staff and pupils would be bureaucratized and hierarchy would be valued and preserved (strong framing).

Hypotheses related to the evaluations of the schools:

Pupils and families would feel accepted and integrated in **LF**. They would feel welcome to participate in the school's life, they would feel their voices were heard and valued (weak framing in the school/community relations).

In **HF**, pupils and families would complain of prejudice, discredit and lack of interest in relation to working class and black people.

The staff working in **HF** would not be satisfied with their work and with the institution, complaining about the difficulties of dealing with working class children.

In **LF**, the level of satisfaction with the work and with the institution would be high.

These hypotheses were guides to the design of the research that will be next presented.

4.2.3 Research design:

Besides the guidelines provided by the hypotheses, the data collection procedures were also based on elements from Bernstein's model of cultural transmission.

Data collection:

The main general and specific dimensions to be investigated during the fieldwork are illustrated on Table 4.2. The table also presents the instruments planned to be used for data collection on each proposed dimension.

Table 4.2: Dimensions that were to guide the case studies' data collection and sources of data.

GENERAL DIMENSIONS	SPECIFIC DIMENSIONS	SOURCES OF DATA
School context	Physical features Staff Pupils and their families	Unstructured observations of classrooms Documents + interviews with teachers Documents (school files)
Theories of instruction	Definitions of learning Causes of academic failure Model of the transmitter Model of the acquirer	Interviews with teachers + Instrument 1 Interviews with teachers Interviews with teachers + Instrument 1 Interviews with teachers + Instrument 1
Pedagogic practice	Perceived: teaching new contents disciplinary measures evaluation of pupils Acted: instructional behaviour discipline-control behaviour evaluative behaviour	Interviews with teachers + Instrument 1 Interviews with teachers + Instrument 1 Interviews with teachers + Instrument 1 Semi-structured observations of classrooms Semi-structured observations of classrooms Semi-structured observations of classrooms
Evaluation of the school	Teachers' evaluation of the school Teachers' evaluations of relationships among staff Teachers' suggestion for improvements Pupils' perceptions of school Families' perceptions of school	Interviews with teachers + Instrument 2 Interviews with teachers + Instrument 2 Interviews with teachers + Instrument 2 Interviews with pupils Interviews with families

A general description of schools (school context) was included as a fourth dimension to be investigated in addition to the three main dimensions previously planned. Such a description was expected to be another important source of data to compare the two institutions. The other main dimensions for data collection were schools' theories of instruction, their pedagogic practice and their evaluation by the people involved in the schooling process. Within each general dimension, specific dimensions were devised. The school context, for instance, was to include the physical features of each institution and the characteristics of their staff, pupils and their families. The theories of instruction were to be investigated through the definitions of learning, understanding of the causes of academic failure and models of the transmitter and

acquirer held by the staff. The dimension of pedagogic practice was to be investigated through teachers' instructional, discipline-control and evaluative behaviours in the classrooms. As such behaviours would be both observed and discussed with teachers during the interviews³ they were to be divided into two groups: acted (expressing the actual way teachers behaved when observed) and perceived (expressing teachers' own accounts of their behaviours). Within the evaluation of school dimension, the specific aspects to be explored were: teachers', pupils' and families' evaluations of the schools. In addition to that, teachers' suggestions for school improvement were considered to be a possible source of important additional information related to their evaluations.

The data collection instruments were to be scales, unstructured and semi-structured observations, semi-structured interviews with staff and parents, and document analysis, according to the following descriptions:

- Scales:

Two scales were to be used. The first scale (see Annex 3), Instrument 1, was aimed at investigating teachers' beliefs about learning, teaching and schooling and teachers' instructional practices. It was made up of 17 pairs of statements expressing opposing positions. Teachers were expected to express their opinion in relation to each pair through a 10-point scale. As an example, they were expected to position themselves in relation to the following dichotomy:

Teaching should be directed to the whole class and planned to reach the "average pupil" or the time should be divided among all the pupils and the teaching should be directed to specific needs.

The lowest points in the scale expressed agreement with the first statement. The highest points expressed agreement with the second statement.

Instrument 1 had a second section where teachers would have to complete incomplete sentences such as the following:

When pupils make mistakes, I usually...

³ The researcher considered that the two sources of data would be complementary.

The scale was to be applied to all teachers in each school.

The second scale (Annex 4), Instrument 2, was aimed at collecting information about teachers' evaluations of the schools. Teachers were to be asked to position their schools on a horizontal line between the "best possible school" (placed at one extreme) and the "worst possible school" (placed at the other extreme) and describe the schools' qualities. Next, they were to mark the place their school could occupy on the same line if positive changes were to occur. It was to be explained that they should imagine changes that were possible within the current situation - as opposed to ideal changes. Later, they were to be asked to specify such changes.

This scale was to be applied only to the teachers selected for the interviews.

- Observations:

Unstructured observations of the different aspects of the schools' cultures were to be carried out. Meetings, staff room activities, playtimes, mealtimes, physical settings, for instance, were to be observed. Informal conversations were to be held with staff and pupils.

Semi-structured observations were to be carried out in classrooms of all grades. The topics to be observed were teachers' instructional, discipline-control and evaluation practices.

The observations' notes were to be taken by the researcher both at the time of their occurrences and afterwards.

- Interviews:

Semi-structured interviews were to be carried out with Head and Deputy Headteachers and with a sample of teachers that worked in each school. The selected teachers were preferably to cover all ranges of different styles and opinions encountered in the school. They were to be selected through the information provided by Instrument 1, previously administered.

The interviews with teachers, Heads, and Deputy Headteachers were to cover the following aspects (see Annex 5 for the actual interview schedule):

- Main motivations for being a teacher
- Methodology for introducing new topics
- Disciplinary practices
- Pupil assessment practices
- Ideas on how people learn
- Opinions about the causes of high levels of academic failure - especially in the working class children
- Relationship with Headteacher and colleagues
- Likes and dislikes about their work

Semi-structured interviews were also to be carried out with ten pupils and their families in each school. The pupils were to be selected from the 1982 cohort children that had attended or were still attending the two schools.

The points to be discussed during these interviews were the following:

- Opinions about the school
- Reasons for the pupil to have failed (if appropriate)
- **Documentary analysis:**

Samples of class work and tests were to be used in the documentary analyses to investigate teaching and evaluation methods.

School files were to be examined to collect further information on characteristics of the schools (year of foundation, number of pupils, number and type of staff, number of meals provided), the staff (type of training, time in school, other jobs), the pupils (educational history) and the families (schooling of parents, occupation).

After the data collection process, a summary description was to be produced for each school. A group meeting of the staff was to be organized to discuss such a description that would have to be approved by staff to be validated. This procedure aimed at checking the validity of the researcher's perceptions and giving an opportunity for the subjects to

have a saying on what was being stated about them and their schools.

During the fieldwork, the researcher was to keep an open mind in order to try and capture other aspects of the schools' cultures that had not been covered by the research design. This attitude allowed for the inclusion of aspects not anticipated at the time the hypotheses were generated.

After the design of the research was defined, a selection of schools to be case studied was carried out. An account of this process will be presented next.

4.3 Selection of schools for the case studies:

Cases for study do not necessarily have to be representative of all other cases, as there is no intention to generalize their findings (Robson, 1993, pp. 154-5). However, for the present study, it was considered important to use a set of criteria for the selection of schools to be investigated. The selection process was aimed at maximizing certain differences between the schools while minimizing others in order to produce an understanding of the specific role of institutions in academic failure. The selection criteria were to ensure that the differences in the performances of the two schools would be attributed to differences in their institutional processes and not to other factors that are known to associate with academic failure.

The schools were to present contrasting rates of academic failure for their pupils (extreme cases - high and low) while being similar in relation to the risk factors identified in the correlation study. It seemed reasonable to suppose that: a) schools with the same type of administrative control (state, municipal or private) would be similar; and b) schools located in the same borough would be more likely to serve similar populations. Therefore, to select schools according to such additional criteria was also considered important by the researcher.

Following the established parameters, the initial decision was to select schools among the group administered by the Municipality of Pelotas. As they are the ones that have the highest rates of grade retention⁴ (Table 4.3) in the city, the researcher decided that

⁴ The official statistics are presented in terms of percentages of grade retention, that is, the percentages of pupils that were not promoted to the next grade at the end of the academic year.

the investigation should focus on such schools.

Table 4.3: Grade retention and drop out for *Primeiro Grau* schools in Pelotas according to administrative control.

Administrative control	Grade retention (%)	Drop out (%)
State	21.8	9.8
City	26.9	9.0
Private	14.3	2.8

Source: Dall'Igna (1992, p. 239)

The municipal schools were first separated into different groups according to their location⁵. They were distributed in 16 boroughs. A pair was chosen from one of the two boroughs that presented the largest number of municipal schools within their boundaries as the probability of finding schools that fulfilled selection criteria within such boroughs was expected to be larger.

Data from the Secretariat of Education were utilized to examine the performance of each school and data from the longitudinal study were utilized to examine the similarities in schools' populations. Graphs were drawn using the yearly rates of grade retention and drop out for each school for a period of eight years. Distributions of risk factors for academic failure in the cohort pupils that attended each school were calculated and statistically tested.

The schools were selected by comparing the graphs and the tables that presented the distribution of risk factors in each school. The pair that presented the most contrasting rates of academic failure (one high and one low) and fewer differences in the characteristics of their populations was chosen for the qualitative investigation.

It is important to bear in mind that the information used to select the schools was only moderately reliable. The drawbacks of the cohort data in providing information about the schools were already discussed in Chapter 2. There were also limitations in the data set from the State Secretariat of Education, as indicated next.

⁵ Information about school's addresses and their administrative control had been collected from the files kept by the State Secretariat of Education before the fourth follow up of the longitudinal study started.

The grade retention and drop out measures provided by the Secretariat had a composite nature: they were calculated from the total number of children that start each grade each year. Such a total included children that did not repeat a grade, children that repeated grades several times, and children that dropped out of school and later went back to studying. In order to carry out a proper statistical test of the differences between the rates of academic failure of each school, it would be necessary to break down this aggregate data. For such a procedure, however, the schooling history of each individual pupil needed to be available, as well as data on the characteristics of pupil intake for each school. Therefore, statistical comparisons were not carried out, as was not possible to obtain such data. The information on rates of retention and drop out for each school was examined by looking at the graphs.

In spite of the flaws of the data sets, they were still used for the selection of schools. The aim of the process was to choose a pair of schools that fulfilled the established criteria and there was no intention to select the pair that best fitted them. The available data was considered sufficiently adequate to enable an appropriate selection process. The writer of this thesis, however, decided that further information on the academic performance of the schools and on the distribution of risk factors among their pupils would be collected later. This procedure would aim at checking the comparability of the schools.

4.3.1 Results:

The graphs featured in Figures 4.1 to 4.4 illustrate the percentages of retention and drop out for each grade (Years 1 to 4)⁶ between 1986 and 1993, for each school.

When examined as a group, the figures indicate a tendency for **HF** to present higher grade retention and drop out rates for the majority of calendar years and grades. In fact, if the 31⁷ pairs of points that show the percentages of grade retention for the four graphs are analyzed together, the percentages in 25 pairs are higher for **HF**. For the drop out rate this tendency was not so clear: **HF** presented higher percentages in 17 out of the 30⁸ pairs of points. However the data featured in the graphs at best provide

⁶ As Year 5 day classes only started in 1995 in **HF**, data from this grade was excluded from the comparison.

⁷ No data on grade retention was available for **LF** in 1993 (Year 2).

⁸ No data on drop out was available for **LF** in 1991 (Year 2) and in 1992 (Year 1).

hints on the better academic performance of LF. The differences between the two schools were to be confirmed later through other data sources.

Figure 4.1 Grade retention and drop out for Year 1 classes in HF and LF:

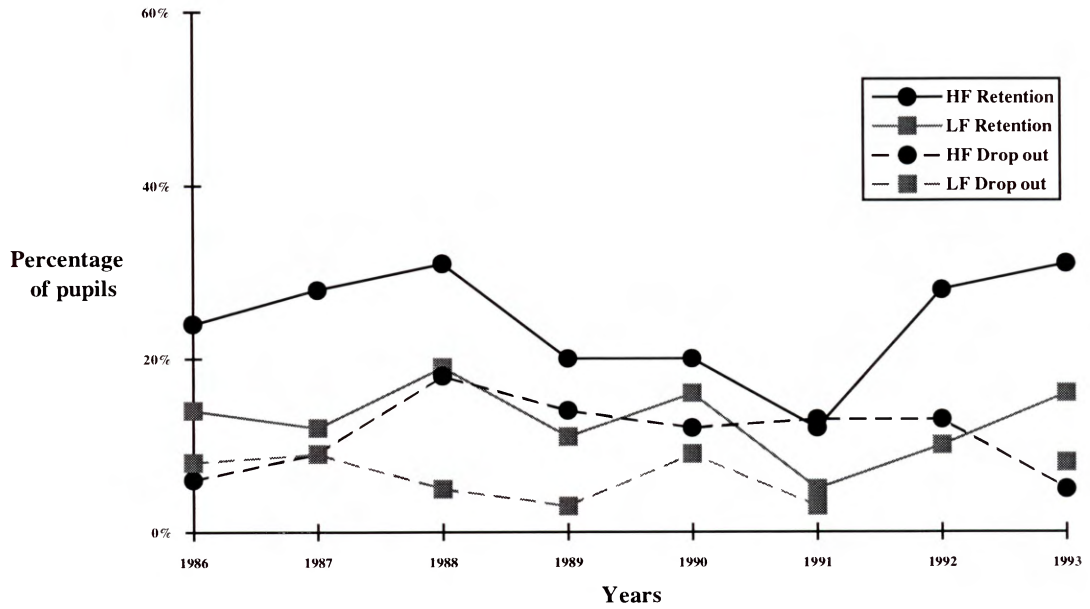


Figure 4.2 Grade retention and drop out for Year 2 classes in HF and LF:

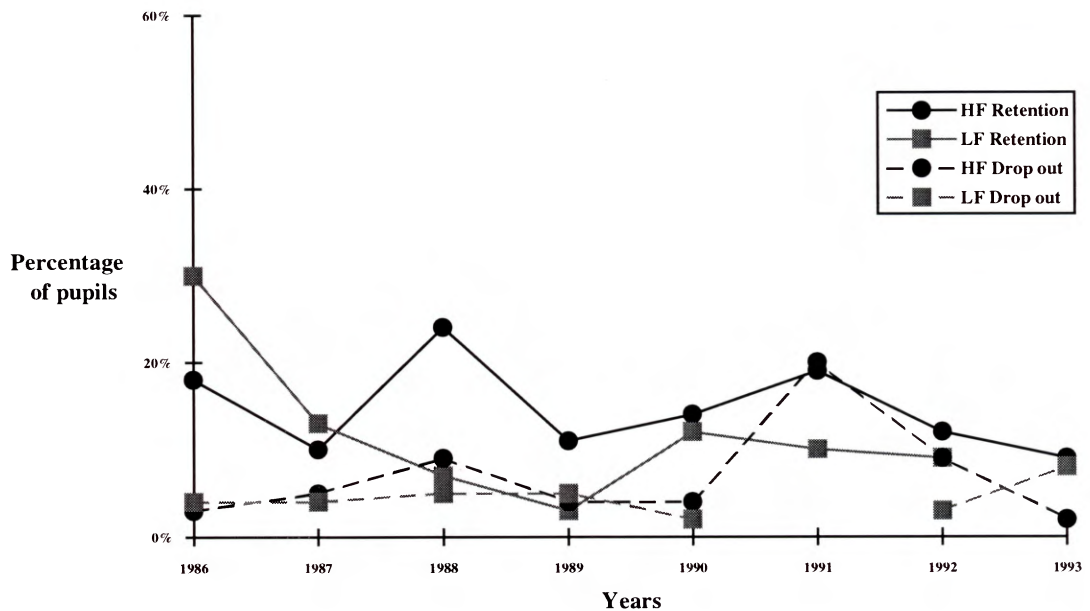


Figure 4.3 Grade retention and drop out for Year 3 classes in HF and LF:

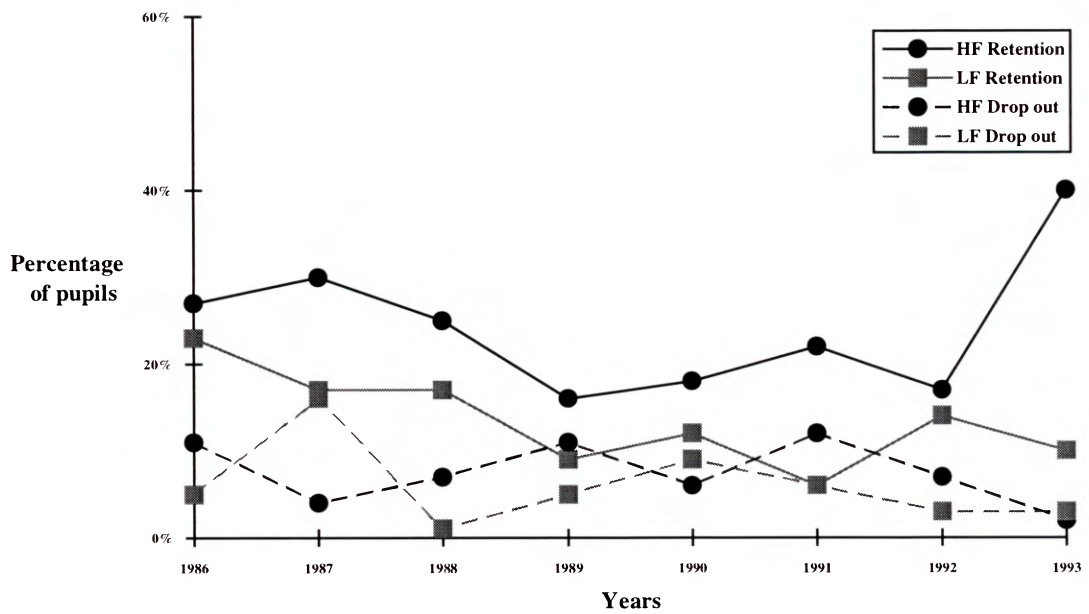


Figure 4.4 Grade retention and drop out for Year 4 classes in HF and LF:

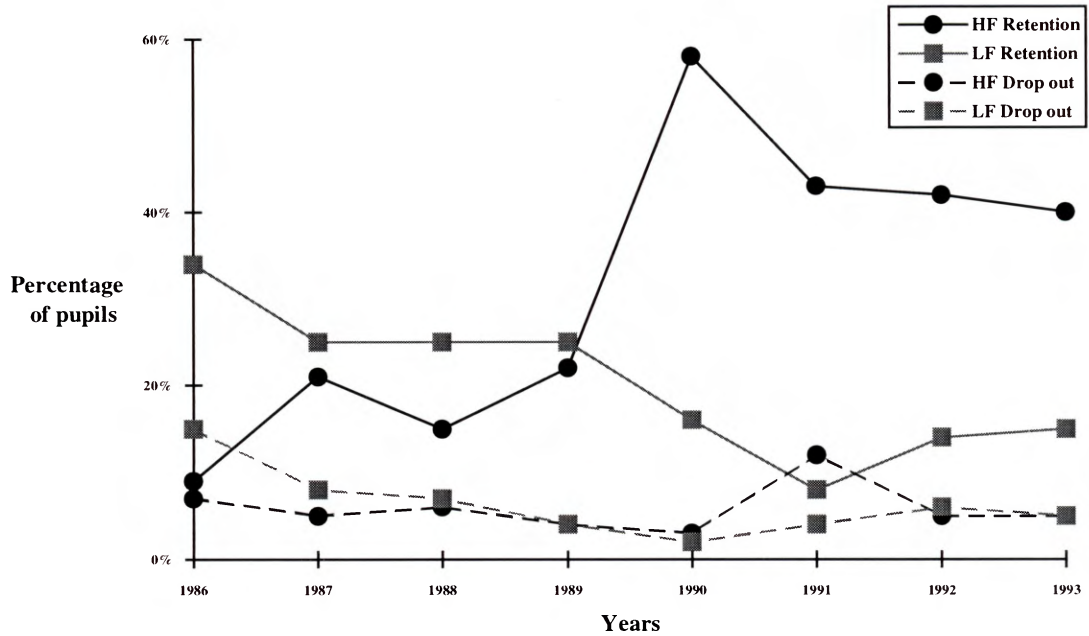


Table 4.4 illustrates the distribution of the risk factors for academic failure for the two selected schools. The comparison was based on the variables that made significant

contributions to the multivariate model used in the logistic regression analysis of the 1982 Pelotas cohort data.

Table 4.4: Distribution of the cohort children identified in HF and LF according to risk factors for academic failure (Pelotas, 1982-1991).

Variables	HF n (%)	LF n (%)	P level*
ETHNIC			< 0.01
White	42 (79.2)	64 (97.0)	
Others	11 (20.8)	2 (3.0)	
GENDER			0.49
Female	25 (47.2)	27 (40.9)	
Male	28 (52.8)	39 (59.1)	
AGE			0.73
< 21	13 (24.5)	15 (22.7)	
21-35	34 (64.2)	46 (69.7)	
>35	6 (11.3)	5 (7.6)	
SIBLINGS			0.64
None	17 (35.4)	19 (31.1)	
1 or 2	20 (41.7)	32 (52.5)	
3	5 (10.4)	6 (9.8)	
4 or more	6 (12.5)	4 (6.6)	
MOTHSCHOO			0.11
0 to Year 2	7 (13.2)	9 (13.6)	
Years 3 to 5	22 (41.5)	39 (59.1)	
Years 6 +	24 (45.3)	18 (27.3)	
INCOME			0.84
<1 MW	11 (20.8)	12 (18.2)	
1.1 to 3.0 MW	31 (58.5)	37 (56.1)	
3.1 to 6.0 MW	10 (18.9)	14 (21.2)	
> 6 MW	1 (1.9)	3 (4.5)	

* Chi-square test

Table 4.4: Distribution of the cohort children identified in HF and LF according to risk factors for academic failure (Pelotas, 1982-1991) (cont.)

Variables	School HF n (%)	School LF n (%)	P level*
OCCUP			#
Non-manual	3 (6.3)	2 (3.3)	
Manual (qualified)	1 (2.1)	2 (3.3)	
Manual (semi-qualified)	23 (47.9)	37 (60.7)	
Manual (non-qualified) / outside economically active population	21 (43.8)	20 (32.8)	
CONSTRUC			#
Brick	22 (45.8)	30 (50.8)	
Apartment building	3 (6.3)	3 (6.3)	
Mixed	9 (18.8)	6 (10.2)	
Irregular wood	7 (14.6)	14 (23.7)	
Irregular brick	2 (4.2)	2 (3.4)	
Shack	5 (10.4)	4 (6.8)	
HAZ			#
< -2.00 SD	3 (6.3)	3 (4.9)	
-2.00 to -1.01 SD	9 (18.8)	20 (32.8)	
-1.00 to 1.00 SD	34 (70.8)	37 (60.7)	
> 1.00 SD	2 (4.2)	1 (1.6)	

* Chi-square test

* The chi-square test could not be carried out due a high number of cells with expected frequency smaller than 5.

The table indicates that the cohort children attending the two schools differed only in terms of maternal skin colour. Although the numbers are small, the results show that **HF** had more children of non-white mothers than **LF**.

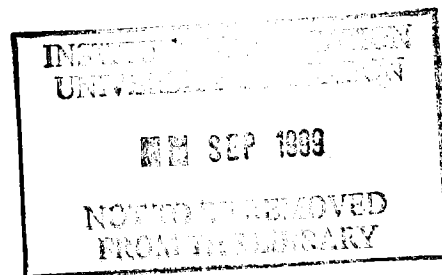
The data suggests that the groups of cohort children that attended the two schools were otherwise similar. There were the similar proportions of boys and girls. The schools were also similar in the following respects: most mothers had between 21 and 35 years of age, most children had one or two siblings, the majority of families earned up to 3 minimum wages per month, and most mothers had attended school up to Year

5 (*Primeiro Grau*).

It was impossible to carry out statistical tests for the differences between the schools in relation to the following variables: “occupation of the head of the family”, “type of building” and “height-for-age”. Numbers of cases were too small in the chi-squared cross tabulations.

After the research design was defined, the author of this thesis decided to test the design through a pilot study. The two schools to be case-studied during the pilot were selected from the other borough that had a large number of schools in Pelotas. The criteria for this selection were the same as those used for the selection of the schools for the main study. The schools had contrasting rates of academic performance and similar characteristics in term of the pupils and families they served.

An account of the findings from the pilot study will be presented in Chapter 5. The chapter will also describe the final research design that resulted from the modifications suggested by the pilot study.



Chapter 5:

The Case Studies: Part One

5.1 Introduction:

As explained earlier, a pilot study was carried out to test the methodology to be used in the case studies. This chapter presents an account of this pilot study, analyzing its findings and their implications for the main study. The chapter later presents the data collection and analysis procedures finally adopted for the main case studies. The chapter ends with a description of the contexts of the two schools thus investigated.

5.2 The pilot study:

The pilot lasted two weeks. Therefore, the information collected through this study was limited due to its short duration. The data related to the main research questions were especially restricted, as, by their nature, such data demanded a longer period of time to be collected. The pilot, however, provided useful material to examine the adequacy of the data collection instruments.

The main activities carried out during this study were administration of Instruments 1 and 2, semi-structured observations of classrooms, and interviews with staff (teachers and Heads and Deputy Headteachers). Data were also collected during informal contacts with schools' staff and pupils.

The school with high rates of failure selected for the pilot will be called **HFp** and the school with low failure rate will be called **LFp**.

Instrument 1 was administered to 23 teachers (seven in **HFp** and 16 in **LFp**). For this activity, the researcher had to rely on teachers' good will. A number of teachers in each school refused to complete it.

The ten observations (five in each school) were also carried out according to teacher's availability and, again, the researcher had to count on teachers' good will for this activity. It was not possible to establish a criterion for selection of classrooms to be observed, due to the initial staff resistance. The researcher approached the more receptive teachers as a way to become more accepted in the school. Thus, the sample

of observations might be biased.

Test and assessment procedures were not observed as the periodical evaluations are carried out every two months and did not fall into the time period of the fieldwork.

The interviewed teachers were also recruited according to their availability. The recruitment process was, however, difficult: teachers had little free time and were reluctant to participate. Therefore, only the more receptive members of staff were interviewed and offered Instrument 2. The interviewed teachers might, therefore, again constitute biased samples of schools' teachers.

Altogether, eight teachers (four from each school), including Head and Deputy Headteachers were interviewed. The interviews were not tape-recorded, as was considered that such an activity would demand unnecessary work for this phase of the research. Notes were taken by the researcher during the conversations.

The interviewing of pupils and families was not carried out during the pilot study. It was difficult to handle all dimensions of the research in a short period of time. As the core of the investigation was the schools' cultures, the researcher decided that the pilot should be restricted to such aspect.

The pilot study's main findings are summarized next.

5.2.1 Findings from the pilot study:

The general descriptions of the schools that were fed back to the teachers after the pilot study are presented in Annexes 6 and 7. It was impossible to organize group meetings to discuss the descriptions. However, the teachers who read them in the two schools considered the documents to be accurate.

In **HFp**, a large number of teachers read it and "adored it" (sic), according to the information given by the secretary who was in charge of passing the description around to the teachers. A group of student teachers¹ who were doing their practice in **HFp** at the time also considered the description to be correct. Their supervisor had the same opinion.

¹ The student teachers were doing their training courses in the same institution (Faculty of Education) where the author of this thesis works as a lecturer.

In **LFp**, the Headteacher reported having read the description aloud in the staff room, during break time, both in the morning and in the afternoon shifts. The staff considered the description to be precise. However, the Headteacher made comments about two points. The first was that she felt uncomfortable with the image of herself that she thought was implied in the document: She said she was pictured as “a sergeant”(sic). The second was that she considered that the prohibition of children going to the playground during playtime was not a common procedure to establish discipline in the school. She added that it was not uncommon that teachers and pupils took joint decision on disciplinary measures and that she thought the playground prohibition might be the product of one such joint decisions. Student teachers working in **LFp** (and their supervisor) also agreed with the description written by the researcher.

The findings from the pilot study will be divided into two sections: the first will report on the adequacy of the instruments for data collection and the second will provide information concerning the research questions. However, before the findings are presented, a summary of schools’ contexts and of the characteristics of their teachers will be presented.

Schools’ contexts and teachers’ characteristics:

HFp’s general features suggested a need for decorating and other repairs (fixing windows, doors, floorboards, blackboards and toilets). The difficulty in obtaining funds from the municipality to carry out repairs was pointed out by the staff as the main reason for the school’s current condition.

HFp was characterized by the administration of a strong Headteacher, who had been occupying this position for 19 years. In spite of the reported fierce competition during the last elections, she was confirmed in the post for another three years. The election process, however, ended with much distress and resulted in some teachers leaving the school. Most teachers said they were worried about peer integration and relationships which were disturbed by this episode.

LFp’s physical appearance contrasted with that of **HFp**: the school was adequately

decorated, tidy and clean, suggesting that staff had been successful in arranging funds to invest in the school's infrastructure. The existence of up to date notice boards and of a significant amount of children's work displayed on the walls was a feature of **LFp** that was not present in **HFp** in the same proportion.

The Headteacher of **LFp** also seemed to be strong and powerful. She had been in this position for ten years and had been elected again recently. Teachers in **LFp** seemed to be proud of their integration and cooperative spirit. They were concerned with always having a consensus of opinion in the school.

Instrument evaluation:

Instrument 1 proved to be a non-efficient tool. It did not differentiate teachers from one another in terms of their conceptions of learning, teaching and schooling. The results were extremely similar and the instrument was therefore discarded since it could not be used to select teachers for the interviews, as planned.

Instrument 2 provided useful information on teachers' perceptions and evaluations of the schools. However, besides the investigation of non-guided suggestions for the improvement of the schools, the researcher considered it important to investigate teachers' propositions for improvements of specific aspects of the schools also. The views of teachers on the necessary improvements related to the building, to teaching and to the role of school in relation to working class children were regarded as topics of interest for the investigation (see Annex 4 for the proposed additions to Instrument 2). They would provide more information on teachers' evaluations of their schools.

The teacher interview schedule presented a few problems: some teachers in both schools had difficulty expressing their ideas on "how people learn" and even seemed to be uncomfortable with the question. Such a question proved to demand a high degree of abstraction and reflection on the part of the teachers and was therefore discarded. The question about teachers' "reasons to choose teaching as a profession" was also eliminated since it did not differentiate interviewees: they all gave the stereotyped answers that basically claimed their love of children as the reason for them being teachers.

Answers to research questions:

The findings of the pilot will be presented according to the general dimensions described in Table 4.2 (p. 115). However, as Instrument 1 and some questions from the teacher interview schedule were eliminated, some of the dimensions specified in Table 4.2 will not be presented in the account of the findings from the pilot study.

It is important to point out that the questions about teachers' pedagogic practices were not asked of the Head and Deputy Headteachers as they were not teaching at the time of the interview. The information on such topics, therefore, is even more restricted than that obtained through the other interview questions.

- Theories of instruction:

It was not possible to use the answers to the question about "the way people learn" to describe the conceptions of teachers about the learning process, as explained earlier. Therefore this dimension was excluded from the model as a direct area to be explored.

In both schools academic failure was attributed to pupils' and families' difficulties. In **HFp**, the low socio-economic status of the community the schools serves was emphasized. However, the main cause of failure was attributed to hunger and malnutrition. In **LFp** parents' lack of interest in children's academic work due to low socio-economic status was the most mentioned cause of failure. In **LFp**, however, the possibility that the schools might contribute to children's lack of success was also mentioned by a few teachers.

The information to describe the models of the acquirer and the transmitter that were prevalent in each school was to be obtained partially from the question about "the way people learn". As such a question was not fruitful, the models were constructed from the information gathered through the observations. In **HFp**, learners were considered to be passive absorbers of content and transmitters as simple conveyors of information. In **LFp** some teachers mentioned that they wanted to develop habits of thinking and learning by themselves in children.

- Pedagogic Practice:

Contrary to expectations, **HFp** and **LFp** appeared to be highly similar in their pedagogic practice.

The classrooms were organized in a formal way: desks in rows facing the blackboard. The teachers lectured the whole class, following the content they had written on the board beforehand. Pupils copied these contents but spent most of their time doing what teachers called “fixation exercises”, i.e., exercises which would help children to memorize the contents through repetition. Pupils were expected to work individually and silently on most occasions. Large periods of time were spent by the teacher correcting the exercises in each child’s notebook and later, collectively, on the blackboard.

Teachers did most of the talking in the classrooms. New topics were introduced according to the teacher’s plan and there was little exchange between teachers and pupils. Nevertheless, teachers in both schools emphasized, during the interviews, the need to include pupils’ own ideas and experiences when new contents were being taught.

In both schools teachers mentioned talking to pupils as a measure to control their behaviour. They also mentioned sending “misbehaving” children to the Headteacher’s office or calling parents to school to deal with more serious disciplinary problems.

Teachers in both schools spent a lot of time trying to control pupils in order to keep them silent. In **LFp**, threats to keep the children in the classroom during break time (rather than let them go to the playground) were observed. In **HFp**, children were threatened with being sent to the Headteacher’s office or with having their parents called to school to hear complaints, if they did not behave as expected.

LFp’s teachers seemed to be nicer to the children, treating them more affectionately and more politely. A small degree of autonomy and power were delegated to the pupils in this school. It was observed that children were allowed to make a few suggestions or criticisms and take a few decisions. Hostility and rudeness in teacher-pupil relationships, on the other hand, was observed in **HFp**.

Teachers' assessment of pupils was not observed, as mentioned earlier. Teachers in both schools mentioned the number of tests or other written assignments they generally carried out and there seemed to be no differences between the schools in this respect.

- Evaluations of the schools by teachers:

Although this dimension was especially affected by the recent conflict connected with the Head and Deputy Headteachers' election process in **HFp**, the differences in school evaluation were significant between the two schools. Staff in **LFp** considered their school to be closer to the ideal when evaluating it through Instrument 2. Several teachers from **LFp** told the researcher that they had decided to stay in that school in spite of being offered "better jobs" (sic). Teachers claimed that they liked to work there, mentioning that the school was well respected in the borough and in the Secretariat of Education. The level of consensus of teachers' opinions and actions was one aspect which was considered to need improvements in the school.

Teachers in **LFp** seemed proud when reporting that they had met to discuss the schools' problems some time ago and produced a document with the guidelines which included school's objectives and policies. According to teachers' accounts, such a document was written with the participation of pupils and parents.

In **HFp**, teachers placed the school either in the middle of the continuum between the "best possible" and the "worst possible" schools or close to the latter (Instrument 2). The main point for improvement mentioned was staff relationships and integration. The capacity to maintain the pupils in school was a quality stressed by some teachers.

The data collected through the pilot study were not sufficient to draw conclusions about the reasons for the contrasting performance of the two schools in terms of their pupil's failure rates. However, a few differences between schools were encountered and deserve to be examined. The discussion of these findings and the recommendations for the main study are the next topics to be presented.

5.2.2 Discussion:

The differences between the two schools were not expressed in terms of teachers'

instructional practices, as expected. Such practices were similar and did not match teachers' descriptions of their classroom behaviours or their ideas about teaching. This was a striking finding.

There were small differences between the schools in terms of teachers' relationships with the pupils and in terms of teachers' general attitude towards their schools. Teachers in **LFp** were more gentle and caring with the children and granted them a small amount of power. The opposite was true for **HFp**. Teachers in **LFp** took pride in their pedagogic practice, in spite of their failure to perceive that they behaved differently from how they described their behaviours. Teachers in this school appeared to be more knowledgeable and up to date in terms of educational theory and were more capable of articulating their thoughts than teachers in **HFp**. One can hypothesize that this latter difference between the schools might be due to the frequent meetings to discuss education in general and their own practices in **LFp**. Staff integration and "the group spirit", that prevailed in this school, could also contribute to differentiating **LFp** and **HFp**. The physical appearance of the schools and the satisfaction teachers expressed towards their work might, once more, be a reflection of such aspects.

5.2.3 Implications for the main study:

After the data from the pilot was analyzed, the following measures were devised for the main study:

- Special attention was to be paid to establishing a trusting relationship with the staff in the schools since there was some resistance on the part of the teachers to participate in the pilot study.
- As the direct question on "ways people learn" was abandoned and as the topic was considered important for the investigation, this topic was to be explored through other types of questions (perhaps less direct) in the main study. Specific questions on what constitutes an ideal pupil and an ideal teacher should be included in the schedule. Such questions have the potential of assembling information on the ideas teachers have about learning processes.
- Questions about classroom practice should be asked of Head and Deputy

Headteachers who were practising teachers at some point in their lives. Other specialized staff, such as Pedagogic Coordinators or Counselors should also be asked such questions. The Counselors might not have been teachers. However, they were expected to be able to report their perceptions of the usual practices of their schools.

- Teachers' criteria to assess pupils' attainment were to be examined as the differences between the performance of the two schools could be due to differences in evaluation practices rather than to other features of the schooling process.
- As there were noticeable differences between the teachers in the two schools, as well as between the physical conditions of their buildings, it was considered important to include a more detailed investigation of such aspects in the fieldwork. They might be important to the understanding of the contrasting academic performances of such schools.

Next, a description of the data collection and analyses procedures carried out during the main case studies will be described.

5.3 The main study:

The case studies were carried out during the second academic semester of 1995. The author of this thesis worked simultaneously in the two schools, dividing the time equally among them - for a period of two months – and attending morning and afternoon shifts. Spending a month in one school and later moving to the other could bias the data gathering as the pattern of activities changes during the school year. Pupil evaluation, for instance, is an example of an activity which is carried out every two months².

One year after the fieldwork was finished (in November 1996); the researcher visited the two schools again and interviewed the teachers once more. The complementary interviews had the aim of checking on an important topic which was not given sufficient attention during the first interview. The topic - related to the perceptions of

² During the time preceding the elaboration of report cards (that are sent to parents with pupils' marks in different subjects), teachers spend a large proportion of time giving written tests or other kinds of evaluation assignments.

teachers about the communities served by the schools - was not considered to be very important at the time of the main fieldwork. However, as the data analysis proceeded, such perception proved to be central for the understanding of schools' differences and was, therefore, further explored in this second interview.

After the modifications introduced in the study due to the results of the pilot, a new plan - that guided the data collection and their subsequent analysis - was devised and followed. This plan is illustrated in Table 5.1.

Table 5.1: Dimensions that guided case studies' data collection and analyses and sources of data.

General dimensions	Specific dimensions	Source of data
School context	Physical features Staff Pupils and their families	Unstructured observations + school files Documents + interviews with teachers Documents (school files)
Theories of instruction	Causes of academic failure Model of the acquirer Model of the transmitter	Interviews with teachers Interviews with teachers Interviews with teachers
Pedagogic practice	Perceived: teaching new contents disciplinary measures evaluation of pupils Acted: instructional behaviour discipline-control behaviour evaluative behaviour Teachers' perceptions of pupils and their families	Interviews with teachers Interviews with teachers Interviews with teachers Semi-structured observations of classrooms Semi-structured observations of classrooms Semi-structured observations of classrooms + written tests Interviews with teachers (mainly second)
Evaluation of the school	Teachers' evaluation of the school Teachers' evaluations of relationships among staff Teachers' suggestion for improvements Pupils' perceptions of school Families' perceptions of school	Interview with teachers + Instrument 2 Interview with teachers + Instrument 2 Interview with teachers + Instrument 2 Pupil's essays Interviews with families

The data collection process had the following characteristics:

5.3.1 Data collection:

The data collection process was carried out through interviews, observations and documentary analysis. These procedures will be described next, as there were differences between the initial plan and the actual activities carried out during the fieldwork.

Interviews with teachers:

Before describing the sample of teachers who was selected for the interviews it is necessary to present an account of the teachers who worked in each school, in order to understand the sample selection process.

There were 18 teachers working with classes of Years 1 to 4 in **HF**: 11 “class teachers”³ (one of them also worked as an Art teacher), four “subject teachers”⁴ (two Physical Education, one Art Education, and one “Library”⁵ teacher), and three substitutes. Including the Head and the Deputy Headteachers, therefore, the total number of teachers working with classes of Years 1 to 4 in **HF** was 20.

There was one additional teacher who worked only with Year 5 classes.

In **LF**, 21 teachers/specialists were in contact with classes of Years 1 to 4. There were 17 teachers: 12 “class teachers”, four “subject teachers” (two Physical Education and two Art Education) and one substitute. Apart from the Head and the Deputy Headteachers, **LF** also had a Pedagogic Coordinator and a Counselor. Years 5 to 8 were taught by a group of 12 other teachers.

According to the initial plan, ten teachers were to be selected for the interviews in **HF**: seven who worked with children in Years 1 to 4 (including both “class” and “subject teachers”), one who worked with Year 5, the Headteacher, and the Deputy Headteacher. For **LF**, a similar group of teachers was to be selected, although the

³ Those were teachers that taught all the subjects to one class.

⁴ Those were teachers that specialized in a specific academic subject, like Physical Education or Art.

⁵ The “Library” teacher, as she was called in **HF**, worked with most Year 1 to 4 classes, carrying out reading and writing activities.

Pedagogic Coordinator⁶ and a teacher who worked with Years 6 to 8 were to be added to the list, totaling 12 interviewees.

As Instrument 1 had been eliminated from the investigation after the pilot study, the teachers were selected at random within each of the described sub-groups. The random selection method was chosen, as it was judged important to ensure sample comparability. The teacher who started working in the schools in 1995 did not participate in the selection process as the author of this thesis considered that they had not spent enough time in schools to capture their cultures adequately.

At the end of the fieldwork, the number of teachers who were interviewed in **HF** was as planned. In **LF**, however, only ten teachers were interviewed. Two of the teachers working in Years 1 to 4 in **LF** refused to be interviewed. One did not agree from the start, giving no reason for her attitude. The other complied with the invitation but kept making excuses, changing the appointments, until the fieldwork finished and it was impossible to carry out the interview. An unsuccessful attempt was made to find a substitute for the first teacher. There was only two other teachers (Years 1 to 4) left in the group and they declined the invitation to be interviewed. Perhaps they perceived they were to be used as replacements for the others and did not like the idea. The Pedagogic Coordinator of **LF** can be considered a substitute for the teacher from this sub-group who refused to participate in the investigation. This Pedagogic coordinator had been working with classes of Years 1 to 4 up to the previous year.

The characteristics of the sample of teachers interviewed in **HF** are presented in Table 5.2 and the characteristics of the sample interviewed in **LF** in Table 5.3. All the teachers were female. The teachers classified with “H” or “L” labels worked with classes of Years 1 to 4. The “H*”s and “L*”s were teachers who worked with classes of Years 5 to 8 or were occupying administrative/specialist positions at the time.

The same group of 20 teachers from the two schools was interviewed again in the following year (1996). During the second interview, photographs.⁷ of the children in

⁶ Although **HF** did not have a Pedagogic Coordinator the woman that had just started working in this post in **LF** was included in the list of interviewees as she worked as a regular teacher in school before. The new school Counselor was not included as she had just started working in the school.

⁷ Photographs were taken by a professional photographer one month before the researcher returned to the schools for the complementary interviews with the teachers. Such photographs were used as a further means of

their classrooms were shown to the teachers in order to check their opinions about the communities the schools served.

Table 5.2: Characteristics of the sample of teachers interviewed in HF (Pelotas, 1995).

Teacher	Training	Years in school (Full-time/Part-time)	Position
H1	secondary	20 (FT)	2 Year 3 classes
H2	secondary	18 (FT)	Years 1 and 4
H3	university	9 (FT)	Years 1 and 4
H4	university	8 (PT)#	Year 3
H5	secondary	5 (FT)	Years 1 and 5
H6	no specific training	5 (FT)	Years 1 to 5 (Libr. & Geo.)
H7	university	1 (PT)#	Years 3 to 5 (P.E.)
H*1	university	22 (FT)	Headteacher
H*2	university	4 (FT)	Deputy Headteacher
H*3	university	6 (FT)	Year 5 (Math. & Science)

These teachers worked part-time in another school

Table 5.3: Characteristics of the sample of teachers interviewed in LF (Pelotas, 1995).

Teacher	Training	Years in school (Full-time/Part-time)	Position
L1	secondary	20 (PT)#	Year 4 (Hist. & Geo.)
L2	no specific training	17 (FT)	Year 4 (Port. & Math.) (and Pre-school)
L3	no specific training	12 (PT)	Year 2
L4	university	5 (FT)	Years 3 to 5 (P.E.)
L5	university (incomp.)	5 (FT)	Year 1
L6	university	5 (FT)	Ped. Coord. (Year 2)
L*1	university	5 (FT)	Headteacher
L*2	university	3 (FT)	Deputy Headteacher
L*3	university	7 (PT)	Year 5 (Science)
L*4	university	4 (PT)#	Years 6 to 8 (Math.)

These teachers worked part-time in another school

The interviews were carried out in the schools, using the modified schedule presented in Annex 5. Instrument 2 was offered to teachers at the end of the interviews. Most

comparison between the pupils of the two schools. A sample of these can be observed in Annex 10.

interviews took place in private rooms. However, a few had to be carried out in rooms where other people circulated, when a more adequate space was not available. The interviews were tape-recorded and later transcribed by the author of this thesis.

The final portion of the interview was not recorded for one teacher from **HF**, due to failure in the tape-recorder.

As there were no classes of Years 6 to 8 in **HF**, data from the interview of the teacher who worked with such classes in **LF** were eliminated from the analyses. The researcher considered that such a teacher was different from the group who worked with Years 1 to 5⁸.

Interviews with families:

A group of 20 families were selected for the interviews. They were families of the children from the Pelotas cohort who were identified in **HF**'s and **LF**'s files. Nonetheless, there were difficulties in locating a number of such families. The available family addresses dated from 1984 (third follow-up of the longitudinal study) or from 1988 or 1989 (when most children started school) and a large number was outdated. The new addresses were not found for several families.

The children who were still attending the schools in 1995 were easier to locate and constituted the majority of the interviewed samples (five in **HF** and eight in **LF**). The rest of the samples were completed with those families of cohort children who could be located. The samples included three pupils who had never repeated a grade or dropped out of school (two from **HF** and one from **LF**).

Table 5.4 illustrates the distribution of children and families according to the main risk factors for academic failure identified in the correlation study. Although the selection process was not random, the two groups were similar, except in terms "maternal skin colour" and "occupation of the head of the family". More children in the **HF** sample had non-white mothers and non-qualified workers as heads of families. There were more semi-qualified workers in the **LF** sample.

⁸ Teachers who work with Years 6 to 8 only teach specific subjects and spend less time with each class than teachers who work with Years 1 to 5.

Table 5.4: Characteristics of the samples of pupils and families interviewed in HF and LF (Pelotas, 1982, 1995).

Pupil's and families' characteristics	HF (n=10)	LF (n=10)
Maternal skin colour		
White	4	9
Others	6	1
Gender		
Male	7	6
Female	3	4
Maternal schooling		
0 to Year 2	1	2
Years 3 to 5	5	6
Years 6 to 8	3	1
More than Year 8	1	1
Family monthly income (minimum wages)		
<1 MW	2	3
1.1 – 3 MW	6	5
3.1 – 6 MW	2	2
Occupation of the head of the family		
Non-manual	1	0
Manual semi-qualified	2	6
Manual non-qualified/outside the econom. active population	7	4
Pupil's academic history		
Has failed	8	9
Never failed	2	1

The interviews with the families were not conducted exactly as planned. Only eight interviews were tape-recorded: a number of interviewees appeared to be disturbed by the recording process, although initially agreeing to it. Therefore, in twelve of the interviews, notes were taken during the process.

The pupils were not interviewed on their own, as planned. The first attempts indicated that the interviews would not provide useful data as pupils tended to be very quiet, avoiding both answering the questions and committing themselves to an opinion about their schools. Some pupils participated in the families' interviews, when present at the occasion of the visit (six pupils from **HF** and five from **LF**).

In most cases the member of the family to be interviewed was the pupil's mother (7 in each school). Three grandmothers, two fathers and one sister were interviewed in the rest of the cases.

Classroom observations:

A total of 50 general classroom observations were carried out by the researcher in **HF** and **LF**. Teachers were approached in two different ways to be asked permission for the observations: the researcher either contacted the teacher just before she/he entered the classroom (at the start of the school day or after a break), or interrupted a lesson and asked permission to come in. Although the latter approach could be disruptive, it was considered necessary as there was an interest in observing the lessons at different times of the day. The surprise element was also considered important: if teachers were asked a day or more in advance, they might prepare a special lesson rather than carry on with what was already planned. However, it is probable that the researcher's presence in class induced changes in the lessons.

The observations lasted approximately 45 minutes and notes were taken during the sessions. The main focus was teachers' instructional and discipline-control behaviours.

Twenty-eight observations were carried out in **HF** and 22 in **LF**. An attempt was made to observe at least one lesson per teacher in each school, including classes of Years 5, 6, 7 and 8, in order to obtain a more general picture of the schools. The aim was not completely achieved: there were refusals and lack of opportunity to observe a few teachers, while others, the most welcoming, were observed on more than one occasion. When data was analyzed, however, it became clear that the lessons carried out in classes of Years 5 to 8 were very different from those of Years 1 to 4 and could

not be grouped together. Also, there were no classes of Years 6 to 8 in **HF** and this could again affect comparability.

The reported findings were thus based on 17 observations from **HF** and 13 from **LF**. As most teachers do a “double shift”⁹ in **HF**, some were observed twice in this school.

The observations were of regular classroom activities and were carried out in a random order. The researcher, however, also carried out a total of 16 classroom observations where tests or other evaluation tasks were being given to pupils: 8 in **HF** and 4 in **LF**. For this type of observation, the researcher asked to be invited by the teachers whenever they were going to carry out an evaluative activity.

Although the teachers had previously agreed to be observed, there was some resistance to the observations, mostly in **LF**. A Year 2 teacher declared that she would not be observed and others, at different times, refused entrance to the researcher, claiming the pupils were restless on that day or that the lesson was not to be disturbed. Only four teachers previously indicated that they were going to give children a test in **LF**, although the researcher often asked them to do that. The acceptance appeared to be better in **HF**: there were no clear refusals. However, many teachers in this school apologized for not having prepared the lesson or for the bad behaviour of their pupils during the observation. Such a situation did not happen in **LF**.

Informal observations:

The researcher spent mornings and afternoons in the schools and observed all types of activities, including meals, playtime and meetings. Informal conversations were also held with staff and children. These informal activities were regarded as important both to establish a friendly relationship with staff and children and to try and capture features of the schools’ culture which, although not foreseen in the initial design, might prove to be important for the understanding of the differences between the institutions.

⁹ Some teachers worked both mornings and afternoons in the same school, teaching a different group of children in each shift.

Documentary analysis:

Documents of three types were analyzed: school files, achievement tests and pupil's essays.

- School files:

The schools files were consulted to collect data on teachers' training, length of time they had been working in the school, and their addresses. Data on pupils' birthdays, academic history (the occurrence of grade retention or drop out) and on their parent's level of education and occupation were also collected from the files. The data on children and families were collected by schools' clerks, following the suggestion of the Headteachers¹⁰.

Data from the school files presented problems due to the poor quality of school records, as will be explained. When a child is registered in a school, a form has to be filled in with information that includes name of child, birthday, gender, name of parents and their age, profession, and schooling level¹¹. The forms were not filled in a uniform manner in the two schools. Forms of parents who had stopped studying when they were still attending *Primeiro Grau*, for instance, were either filled in with "*Primeiro Grau Incompleto*" (Primary Incomplete) or with the exact grade they last attended, in the section concerning parental schooling. To overcome the problems, data were grouped into broad categories in an attempt to minimize the effect of the imprecise information¹².

The completion of forms also lacked rigour with respect to the information on parents' occupations. The files, for example, contained expressions like "vendor", "general services" or "self-employed". Such expressions included a range of professions or types of activity and were difficult to categorize. For this reason, data

¹⁰ As the introduction of a strange person in the schools' offices is usually disruptive and problematic, the author of this thesis agreed to pay one of the school clerks in each school to carry out the work during their free time.

¹¹ Unfortunately, the form does not include data on ethnicity, which is an important variable for the present study.

¹² From the previous phases of the longitudinal study, it was known that people in Pelotas tended to specify the exact grade they have completed when they have left school early (before Year 5). People also tended to say they had a "*Primeiro Grau/Incompleto*" education when they have left school in the final grades of *Primeiro Grau*. Therefore, parents' schooling level was categorized as follows: none; Years 1 to 5 of *Primeiro Grau*; Years 6 to 8 of *Primeiro Grau* (including people who have completed it); Years 1 to 3 of *Segundo Grau* (complete and incomplete); and university degree (complete and incomplete).

on profession/occupation had to be discarded as the researcher considered them to be unreliable.

The degree of overall completeness of the forms was another aspect to be taken into account, although it varied from one institution to another. The number of incomplete forms was larger in **HF** than in **LF**, as will be discussed later when the description of the pupils and their families is presented.

- Tests:

Samples of written tests were obtained from the teachers. The tests were examined with the aim of capturing any aspect which would reflect differences in the schools' cultures. Several teachers complied with the request and handed in copies of the tests they had recently given to children. There were seven tests from **LF** and nine from **HF**.

- Pupil's essays:

As it was not possible to interview the pupils, it was decided that another strategy to collect their opinions about the schools would be adopted. The researcher asked the teachers to ask children attending Years 3, 4 and 5 to write an essay describing their schools. Seven teachers in **HF** complied with the request (including one student teacher) and two in **LF**. One of **LF**'s teachers only handed over the essays of two children from her class.

As the purpose of examining the essays was to compare the opinions of children attending the two schools, it was only possible to analyze the work of two Year 4 classes. There were 26 essays from **LF**'s Year 4 class and 15 from **HF**'s.

Next, the data analysis process will be described.

5.3.2 Data analyses:

As mentioned earlier, Table 5.1 (p. 136) illustrates the general plan that guided data collection and, later, data analyses. The analyses were carried out according to the guidelines provided by Miles and Huberman (1994): after the interviews were transcribed, the data underwent a process of reduction, that included selection,

transformation, simplification, and abstraction (Miles and Huberman, 1994, p. 10).

The first activity carried out during the data analysis process was the writing of a general description of each school, focusing on physical features, characteristics of staff, pupils and their families. The descriptions were based on documentary analysis and on formal and informal observations.

The rest of the data were analyzed according to two levels: at the first level of analysis, data were classified according to theory-driven categories: Bernstein's regulative/instructional dichotomy. At the second level of analysis, the specific contents within the regulative and instructional categories were examined and other categories were devised. Such categories were grounded on the data and therefore descriptive.

To compare the data from each school, frequency counts (and their corresponding percentages of the totals) for the categories were conducted and plotted in graphs. The differences in percentages, however, were not tested for statistical significance. Since the numbers of responses in each category were generally small, the use of a statistical test (the Chi-squared, for instance) was inappropriate. The percentages were examined in an attempt to find trends or patterns in each school.

Thirty per cent of the data units produced during the fieldwork (seven teacher interviews, six family interviews, ten classroom observations and thirteen pupil essays) were re-coded by second raters¹³ and reliability tests¹⁴ were carried out.

The reliability of the findings was also checked through the descriptions of the two schools, written at the end of the fieldwork (Annexes 8 and 9), and fed back to each school for appraisal. These descriptions were considered to be accurate by the staff in both schools and by the student teachers (and their supervisor) doing their practice in

¹³ Data from the observations were checked by one rater and the rest of the data by another.

¹⁴ After data was coded by the researcher, the raters carried out their coding based on the written criteria provided. There were 17 items for the teacher interviews, three for the pupil essays, two for the family interviews and two for the observations. An intercoder reliability of 100% (Miles and Huberman 1994, p. 64) was obtained for the classroom observations, the pupil essays and the family interviews. For the teacher interviews, the initial intercoder reliability was 69.7%. After the researcher and the second coder further discussed the criteria and the latter carried out a new coding, the reliability increased to 91.6%. The maximum number of disagreements per interview was, in the end, three in the total of 17 items.

HF¹⁵. Such opinions indicated that the descriptions could, therefore, be considered reliable.

The research findings will be presented next. However, following a different pattern from that used to present the results from the quantitative study, the findings from the case studies will be discussed as soon as they are introduced. It is important to explain that the literature that was reviewed before the data collection was not sufficient to account for the understanding and interpretation of the findings. New sources – which are cited when appropriate - had to be sought to contribute to such understanding and interpretation.

The main differences between the two schools are summarized in Table 5.5. The findings, divided into sections according to the general and specific dimensions that guided the data collection and analysis, will be presented in the following manner. The section which describes the schools' contexts is part of this chapter; the sections that relate to the answers of the research questions will be presented in Chapter 6.

5.3.3 Findings from the study:

The purpose of the research was explained to the schools' staff in terms of its interest in capturing different institutional cultures and their determinants. No comments about the academic performance of the schools were made. The author of this thesis considered that this would bias the information provided by the persons involved in the research: teachers might feel they were being judged for the academic performance of their school (mainly in **HF**).

The account of the findings starts with the description of the schools' contexts.

¹⁵ Staff in the two schools were brief in the analyses of the documents. There were no strong responses to the descriptions.

Table 5.5: Summary of the differences encountered between HF and LF (Pelotas, 1995).

GENERAL DIMENSIONS	SPECIFIC DIMENSIONS	HF	LF
School Context	Physical features	- worse state of conservation - no pre-school classes	- better state of conservation - pre-school classes
	Staff	- more "double shift" - more teachers working in 2 schools - more teachers with <i>Segundo Grau</i> training	- more part time teachers - more teachers with university degree - more teachers with no training
	Pupils and their families	- smaller classes - parents: higher level of education - 10% incomplete records (low socio-economic children) - higher percentage of black and mixed colour children	- larger classes - parents: lower level of education - 1% of incomplete records - lower percentage of black and mixed colour children
Theories of instruction	Causes of academic failure	- regulative predominance	- small instructional tendency
	Model of the acquirer	- (same)	- (same)
	Model of the transmitter	- slight regulative tendency	- slight instructional tendency
Pedagogic practice	Perceived:		
	- teaching new contents	- slightly teacher-centered	- slight pupil participation
	- disciplinary measures	- (same) (difficulties mentioned)	- (same)
	- evaluation of pupils	- instructional tendency	- regulative tendency
	Acted:		
	- instructional behaviour	- "fixation" exercises	- new contents more frequent
	- discipline-control behaviour	- (same)	- (same)
- evaluative behaviour	- more chances	- less chances	
Teachers' perceptions of pupils and their families	- needy	- not so needy	
Evaluations of school	Teachers' evaluation of the schools	- worse; regulative qualities mentioned	- better; instructional qualities mentioned
	Teachers' evaluations of relationships among staff	- equal balance between good and difficult	- predominantly good
	Teachers' suggestion for improvements	- spontaneous: regulative aspects - building: repairs - teaching: (same) - schooling of working class children: regulative measures (separation, more schooling)	- spontaneous: material aspects - building: expansion - teaching (same) - schooling of working class children: regulative measures (social worker, counselor)
	Pupils' evaluations of the schools	- regulative qualities - less positive (shorter and less "academic" essays)	- instructional qualities - more positive (longer and more "academic" essays)
Families' evaluations of the schools	- (same)	- (same)	

The schools' contexts:

The description of the schools' contexts includes aspects of their physical environment, and the characteristics of their staff, pupils and their families.

- The schools' physical environment:

HF was founded in 1924 and was one of the first three municipal schools of Pelotas. It had classes of Years 1 to 5 and was in the group of the so-called "*Primeiro Grau Incompleto*" [Primary Incomplete] schools under municipal administration. The school also offered *Primeiro Grau* night classes for adults.

The day classes were distributed in two shifts: the older children attended school in the morning (Years 5, 4 and 3), although there was one class of Year 3 in the afternoon. The younger children attended school in the afternoon (Years 1 and 2).

HF was located in a corner of two main roads where traffic was constant: many buses and lorries circulated in the area and the noise level was high throughout the day. Across the street from **HF** a big, new, and modern-looking building could be seen. It belonged to a school, administered by the state authority¹⁶. There was a police station next-door to **HF**.

A 5 feet wall surrounded **HF**'s grounds. The school could be seen from the street and gave the impression of being old, rundown and disorganized. It was painted pale pink (like all the municipal schools), and the paint was dirty and mouldy in many places.

HF was composed of an ensemble of older and newer buildings: there was the original school site - an old house - and another building which looked as if it had been gaining different extensions through the years. There were marked differences between these different parts in terms of age and style. The newer buildings had a two

¹⁶ This school led a special project devised by the State Secretariat of Education to cater for 1,200 low socio-economic pupils, including "street children". In these type of schools, known as CIEPs, ("Centros Integrados de Educação Pública" [Integrated Centres for Public Education]), children are supposed to spend mornings and afternoons and have all sorts of professional training besides regular academic instruction. According to **HF**'s Headteacher, the referred CIEP was not running on its full capacity in 1995. She reported that the educational authorities from both the state and the municipality wanted to merge the CIEP and **HF** but the community refused to accept that, and protested. She added that, although the other school was new and very well equipped, families resisted enrolling their children there because they did not want them mixed with the "street children" (sic). **HF**'s Headteacher told the researcher that, in 1995, there were only 180 children enrolled in this new school.

storey section and the first floor was occupied by a library, a common staff room and a small office. A kitchen, a small snack bar, a dining room, and a dental office¹⁷ were located on the ground floor. These rooms in the ground floor looked as if they had been recently redecorated, contrasting with the rest of the school buildings. The toilets, especially the boys', were in a bad state of conservation and were not kept clean. There were separate toilets for the teachers.

The library was also used for teachers' meetings. There was a cabinet with glass doors in the little hall that led to the school's office. Animals preserved in jars and boxes with rocks and dried plants were kept in this cabinet for Science classes.

There were nine classrooms in **HF**. Their walls were dirty and mouldy, and most had pictures and children's work pasted on them. Some windows had no glass panels and some door locks were broken. There were holes in some of the classrooms' floors and the blackboards were rough and had areas useless areas for writing. Two classrooms were divided by a partition which could be removed to create a larger room, used for meetings and parties. There was, however, no acoustic isolation between the two classrooms and the noise from one could be easily heard in the other.

There were several small and unpaved open areas in-between the buildings which were used as playgrounds and "sports fields".

LF was founded in 1959 and remained as a "*Primeiro Grau Incompleto*" [Primary Incomplete] school (Years 1 to 4) until 1986, when it started to develop into a "*Primeiro Grau Completo*" [Primary Complete] (Years 1 to 8) school. The first group to complete the whole of *Primeiro Grau* in **LF** graduated in 1988.

LF also offered night classes of *Primeiro Grau* for adults and the distribution of pupils in the day shifts was similar to that of **HF**: Years 5 to 8 in the morning and Years 1 to 4 in the afternoon. **LF** also had two classes of pre-school (one in the morning and one in the afternoon).

The school was located two blocks away from one of the main roads in the borough.

¹⁷ The Municipal Secretariat of Health and Welfare installed a very basic dental office in a few schools and sent dentists and dental students every fortnight to treat the children there. There was no dental office in **LF**.

A bus line ran through the paved road in front of the school. Other roads around the area were not paved and traffic there was calm.

A tall wire mesh fence with two gates surrounded **LF**. This school was also painted pale pink, as **HF**, but **LF** looked better kept than the former school, although the latter also had broken window panels.

In contrast to the impression caused by **HF**, **LF** looked as if it was specifically built to be a school. It was composed of a group of buildings: an L-shaped and a rectangular brick constructions were distributed around an unpaved playground/sports field, occupying three sides of an imaginary square. A wooden building with two additional classrooms and a wooden hut completed the square. Each building had a row of classrooms and an open corridor which ran parallel to them. The wooden hut was occupied by a family who acted as caretakers for the school. Between the fence where the main gate was located and the buildings, there was another relatively large unpaved area which was also used as sports field and playground.

There were thirteen classrooms, a small office for the administrative staff, a teachers' common room, a teachers' toilet, a large room which housed the kitchen, a dining-room and a snack bar in **LF**. Children's toilets, as in **HF**, were not kept clean and needed repairs. The inside of **LF** looked again better preserved than that of **HF**: the walls were not dirty and the floors were also in a better state of conservation.

The classrooms occupied by the younger children had posters and pupils' work pasted on the walls. There was no special room for the library in **LF**. The school's books were kept on shelves in the staff room. The material for Science classes - jars containing dead animals and box with rocks and dried plants - were also kept on these shelves.

As was the case with the two schools investigated during the pilot study, **HF** and **LF** presented marked differences in terms of appearance. Both schools with lower rates of failure (**LF** and **LFp**) were better kept than the schools with higher failure rates (**HF** and **HFp**), in spite of having equal access to resources from the Secretariat of Education to invest in their infra-structure. The popular practice of promoting fund-

raising events (like parties, raffles or cake sales) in Pelotas were reported in the four schools investigated, although no comparisons were made to evaluate the success of such activities in each institution.

The physical features of the schools allow hypothesizing that in the low failure rate schools more effort was devoted to improve the physical appearance of their buildings. Such an attitude was possibly an indication of greater degree of pride in the institutions and greater degree of concern for offering pupils a pleasant and adequate environment which would contribute to create a good learning environment.

It can be expected that the appearance of the schools investigated could have an effect on pupils' academic performance. As was described in the Elton Report (Department of Education and Science and the Welsh Office 1989, p. 195) with respect to children's behaviour: the better kept institutions were observed to have the least disciplinary problems. Pupils in **LF** and **LFp** could interpret the effort to keep the school tidy and pleasant as a sign that the staff was interested in creating the best possible environment for learning. Such behaviour on the part of the staff could be interpreted by the children as a sign that teachers believed that their pupils were capable of having a successful schooling process. In the run-down schools, like **HF** and **HFp**, children could interpret the poor environmental conditions as a sign that the pupils were not worth investing in, as they were not expected to achieve much in educational terms. This perception could thus produce a defeatist attitude towards learning on the pupils.

The findings from the schools effectiveness research reviewed earlier (Sammons et al., 1995, p. 8) also indicate that there is a relationship between the attractiveness of the school environment and the effectiveness of school, confirming the hypothesis that this association was present in **HF** and **LF**.

Next, the characteristics of the staff who worked in the two schools will be presented.

- Schools' staff:

The information about the staff was collected through the schools' files, the interviews and the informal conversations. The information about the numbers and

other specific features of the teachers was presented when the procedures for sampling the teachers to be interviewed were described. The following description will include more details about the teachers and information on the rest of the staff.

Number of teachers and other staff:

Besides the teachers described earlier, there were two other teachers who worked as secretaries, an office boy and seven female cleaners/cooks working in **HF**. In addition to the office boy, there was only one other male in the school - a Physical Education teacher. There was also only one black teacher and, at the time of the fieldwork, three student teachers were carrying out their teaching practice in **HF**¹⁸.

The school had a Pedagogic Coordinator for the first time during the first semester of 1995. This woman, however, stayed in **HF** only for a few months. According to the teachers' reports, she asked to be transferred to another school as she felt she could not do a proper job in the school. The Pedagogic Coordinator tried to introduce changes in teachers' work and this was not accepted. A few teachers, nevertheless, commented that they were sorry to see her leave as they approved of what she was trying to do.

HF's Headteacher had just been re-elected and was to administer the school for three more years (her second mandate).

In **LF**, apart from the teachers/specialists mentioned earlier, there were a pre-school teacher (the other pre-school class was taught by a teacher who also worked with Year 4), a teacher who was in charge of the library and a teacher who worked as a secretary. There were two other secretaries, one office girl and six other women who worked as cleaners or cooks. Five teachers who worked in the afternoon, with the younger children, also worked in the morning shift with the older.

The Pedagogic Coordinator and the Counselor had started working in such positions on the second semester of 1995, when the newly elected Head and Deputy Headteachers were inaugurated. According to the staff's account, it was the first time the school had such specialists.

¹⁸ These students were also being trained at the same school where the author of this thesis works as a lecturer.

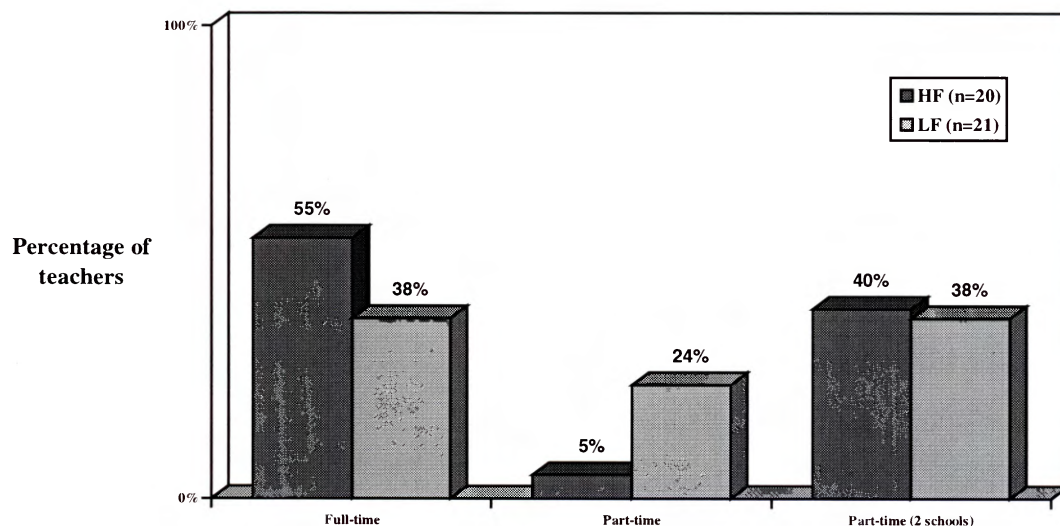
Besides the Headteacher, there were two other males working in the school: a Physical Education teacher, who worked with the older pupils and a student-teacher who taught Mathematics to Years 6 to 8. There were 3 black teachers in the school.

The comparisons between the profiles of the teachers working in **HF** and **LF** include only the teachers who worked with classes of Years 1 to 4, which were the focus of the investigation.

Teachers' employment profiles:

Figure 5.1 illustrates the teachers' full-time/part-time employment profile for the two schools.

Figure 5.1: Teachers' full-time/part-time employment profiles in HF and LF (Pelotas, 1995).



Apart from the Head and the Deputy Headteachers - who are obliged to work full-time in the same school - a teacher can only do "double shift" in a school either if the Headteacher gives her/him permission or if the teacher runs for the post twice and gets two contracts (which is unlikely).

It is important to observe that, although the Headteacher from **HF** complained about the teachers in her school not being motivated for change or innovations and for using outdated teaching methods, she allowed nine (45%) class teachers to carry out "double

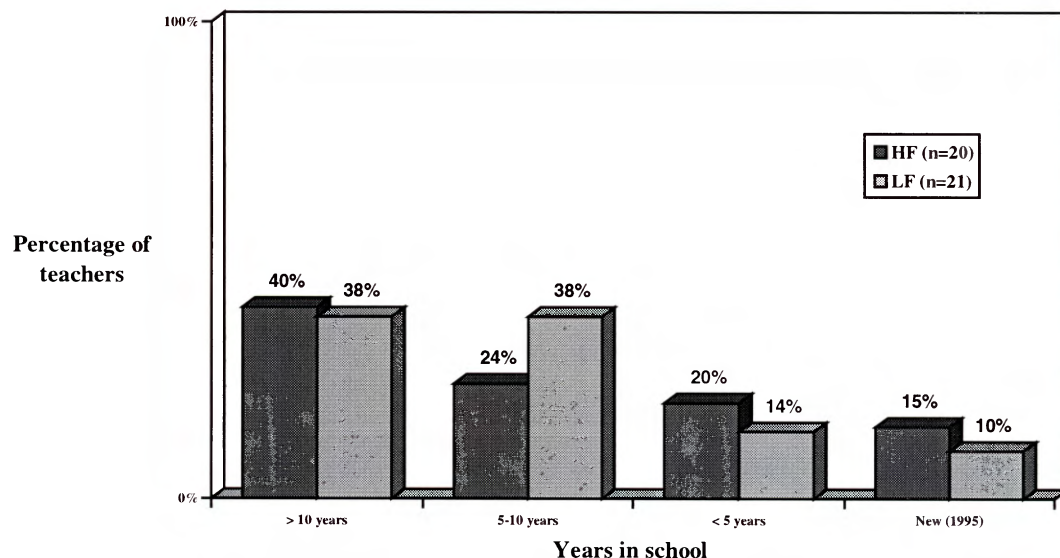
shifts” in her school. The Headteacher reported that her decision was a result of her perception of the economic hardship the teachers were going through and the consequent need to increase their earnings.

In **LF**, apart from the Headteacher, the Deputy Head and the Pedagogic Coordinator, five teachers (24%) carried out “double shifts” in the school.

The percentage of teachers who worked in two different schools was similar in **HF** and **LF**. More teachers in **LF** worked part-time just in this school, as compared with **HF**.

The comparison of teachers from **HF** and **LF** in terms of the period of time they have been working in the schools is shown in Figure 5.2. The distributions of teachers in **HF** and **LF** are fairly similar, except for the group who had been working in the schools between five and ten years. The number of teachers in this group is greater in **LF** than in **HF**.

Figure 5.2: Period of time teachers have been working in HF and LF (Pelotas, 1995).



According to the Secretariat of Education’s policy, teachers are generally placed in schools which are located near their homes. Therefore, the majority of the teachers

lived in the same borough where the schools were located. Only six teachers in **HF** and four in **LF** did not live in the vicinity of their schools.

The type of training of the teachers is shown in Figure 5.3. However, before the information depicted in this figure is examined, a brief explanation about *Primeiro Grau* teachers in Brazil is necessary.

Teachers who work with classes of Years 1 to 4 either have a *Segundo Grau* (Secondary) level training course or a university degree. The former is a specialized alternative to traditional *Segundo Grau* education and only allows graduates to teach classes up to Year 4. In the universities, teachers can also be trained to work with classes of Years 1 to 4 or can specialize in different subjects. However, a person with specific university training in History or Mathematics, for instance, can also work with classes of Years 1 to 4.

The majority of teachers in **LF** had university level degrees. In **HF** there were equal proportions of teachers who had taken university courses or who had only secondary education. The teachers included in the group labeled “No training” did not have any training as teachers¹⁹, although some may have had some kind of in-service training. This group was larger in **LF**.

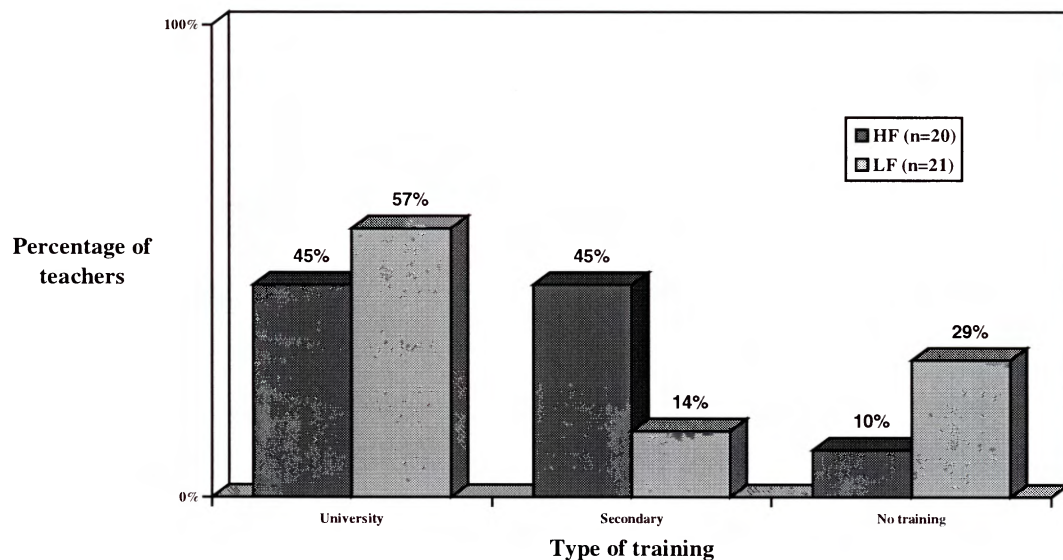
Summarizing the differences in teachers’ profiles in the two schools, it can be pointed out that:

- more teachers in **LF** worked only part-time, meaning, perhaps, that they had a smaller work load than their colleagues who worked full-time, although this idea cannot be confirmed.
- there was a considerable difference in terms of the number of teachers doing “double shifts” in the two schools: more teachers in **HF** worked in this school all day.
- the number of teachers working in the school for more than five years was slightly greater in **LF** (76%) than in **HF** (64%), indicating that more teachers in this school

¹⁹ Brazilian legislation allows for people with no specific training to be hired as teachers for Years 1 to 4 when there are no better qualified persons available for the job - as generally happens in rural areas. As many teachers in both schools started to work outside the town, the ones that had no training were probably hired when there were no teachers available and were later transferred to urban schools.

have been working there for a longer period of time. This aspect could also be contributing to the lower levels of failure in **LF**, although the difference between the schools is not large. According to the review of the international and Brazilian research carried out by Brandão et al. (1983, p. 65), schools with a more permanent staff are more successful than the others.

Figure 5.3: Type of teacher training in HF and LF (Pelotas, 1995).



- **LF** had more teachers with university degrees. However, this school also has a larger number of teachers with no specific training than **HF**. Although the review by Brandão et al. (1983, p. 65, pp. 70-3) also indicated that higher levels of teacher training are associated with lower levels of academic failure, it is difficult to compare the two schools in such terms.

Finally, the characteristic of the pupils who attended the two schools and their families will be presented.

- The pupils and their families:

The pupils who were attending the two schools will be described in terms of their total numbers, their distribution into classes and their academic performance. The pupil's

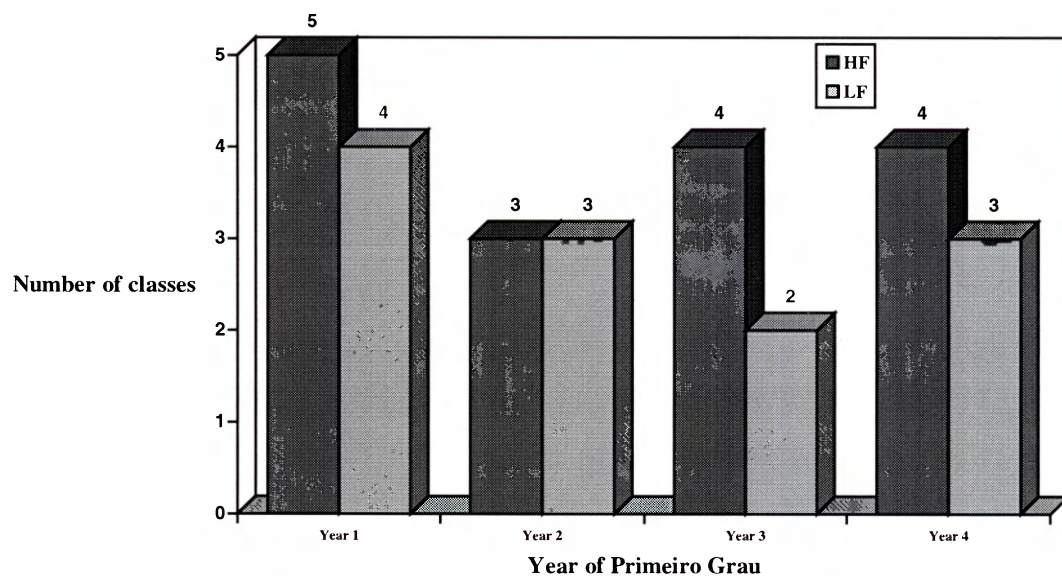
parents will be described in terms of their level of formal education.

Number of pupils and their distribution in classes:

There were 461 pupils enrolled in the day shifts of **HF** in 1995. They were distributed in classes of Years 1 to 5 and there were 401 children attending classes of Years 1, 2, 3 and 4. In **LF**, the total number of pupils in the day shifts was 780, including classes of pre-school and Years 1 to 8. The number of children attending Years 1 to 4 was 358 in this school.

Figure 5.4 shows the number of classes of Years 1 to 4 in the two schools. Children were distributed among 16 classes in **HF** and 12 in **LF**. The average number of children per class was smaller in **HF** (25.1) than in **LF** (29.8).

Figure 5.4: Number of classes by Year of *Primeiro Grau* in HF and LF (Pelotas, 1995).



Although the findings from other researchers indicated that larger classes are associated with better achievement, the cut-off point above which the improvement occurs is 40 pupils (Davie, Butler and Goldstein, 1972, pp. 120-38; Brandão et al., 1983, pp. 61-4). Therefore, it seems that the better performance of pupils in **LF** cannot be attributed to the slightly bigger size of its classes.

The academic performance of pupils:

The two schools differed in terms of the performance of their pupils. The rates of failure, i.e., the percentages of children who had repeated a grade or dropped out of school, at least once, for **HF** and **LF** are illustrated in Table 5.6.

Table 5.6: Academic performance of children attending HF and LF (Pelotas, 1995).

Academic performance	HF n (%)	LF n (%)
Never failed	230 (57)	323 (90)
Have failed	171 (43)	35 (10)
Total	401 (100)	358 (100)

χ^2 test $p < 0.0001$

The difference between the percentage of children who had never failed in the two schools was large. Forty-three percent of children attending Years 1 to 4 in **HF**, in 1995, had failed during their schooling history. This percentage was 10% for the children attending **LF**. The difference in the rates of academic failure between the two schools was highly significant in a Chi-squared test.

As the percentage of failure was extremely low for **LF**, the researcher decided to check this information through an analysis of the age/grade distortion of children in each school²⁰.

The differing academic performances in the two schools were also reflected on the age range of pupils enrolled in each grade. The adequate ages to attend Years 1 to 4 for

²⁰ Although staff were not told that the study was also investigating the academic performance of the schools, besides their cultures, the fact that data was collected on the failing episodes of each pupil indicated that academic performance was being examined. The staff knew that the researcher had access to the data from the Secretariat of Education on the failure rates for each school and the better performance of **LF** seems to be confirmed by such data.

pupils who had never failed were the following:

Year 1: 6 or 7 years of age

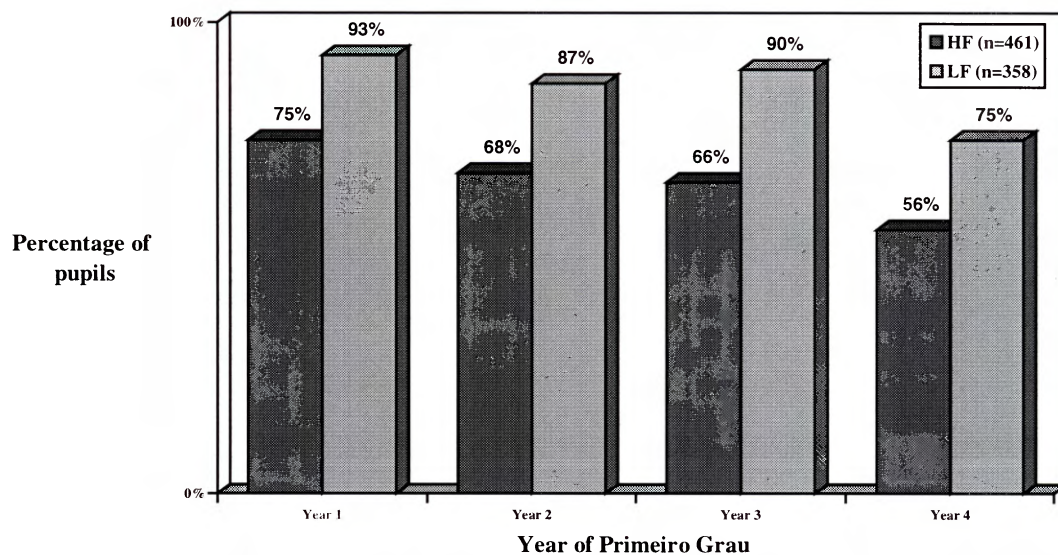
Year 2: 7 or 8 years of age

Year 3: 8 or 9 years of age

Year 4: 9 or 10 years of age

Figure 5.5 depicts the proportions of children within the adequate age range for each Year of *Primeiro Grau* in **HF** and **LF**. The proportions were consistently smaller for **HF** as compared with **LF**.

Figure 5.5: Children of adequate age for Year of *Primeiro Grau* attending HF and LF (Pelotas, 1995).



Since a number of Brazilian children start school late²¹, the proportion of children older than the appropriate age who had never failed was examined for each school. This was 9% in both schools, indicating that the differences in age distribution between the two schools was not due to a larger number of late admissions in **HF**.

Level of schooling of pupils' parents:

²¹ According to Ferraro (1995, p. 26), in 1980, 73.3% of the seven years old children were attending school in the state of Rio Grande do Sul. As such a percentage includes rural children it is possible to suppose that it would be higher for the urban population.

The level of formal education of children's parents was another aspect utilized for the comparison of the two schools. There were differences between **HF** and **LF** in this respect.

Table 5.7 illustrates the distribution of pupil's fathers according to their level of schooling. The data indicates highly significant differences - on Chi-squared tests - between the schools.

Table 5.7: Schooling of fathers of children attending Years 1 to 4 in HF and LF (Pelotas, 1995).

Grades completed	HF n (%)	LF n (%)
None	10 (3)	6 (2)
Years 1 to 5 (<i>Primeiro Grau</i>)	45 (14)	141 (43)
Years 6 to 8 (<i>Primeiro Grau</i>)	197 (63)	140 (43)
Years 1 to 3 (<i>Segundo Grau</i>)	57 (18)	28 (9)
University degree (complete or incomplete)	5 (2)	11 (3)
Totals	314 [#]	326 [@]

χ^2 tests $p < 0.0001$

[#] 47 pupils with no father + 40 with no information

[@] 28 pupils with no father + 4 with no information

The groups of fathers with no schooling (illiterates) were small and similar in both schools. The majority of fathers, in **HF** and **LF**, belonged to the group who had completed Years 6, 7 or 8 of *Primeiro Grau*. However, the percentages of fathers in this group were larger in **HF** than in **LF**. A higher percentage was also observed for the group who had completed Years 1, 2 or 3 of *Segundo Grau* in **HF**. The reverse could be observed in relation to the group who had completed up to Year 5 of *Primeiro Grau*. For fathers who had attended university (having completed their

courses or not) the percentages were small and similar.

Adding the percentages of fathers who had attended at least Year 6 of *Primeiro Grau*, it can be observed that the total for **HF** (83%) is higher than the total for **LF** (55%).

In Table 5.7, the total number of fathers is smaller than the total numbers of pupils attending Years 1 to 4 in each school. The reason for this is that some of the forms in the schools' files only contained information on the child's mother and the space assigned to the father were left blank. Therefore, it was impossible to know the level of schooling of a number of fathers. Among these, there were cases in which the father was dead, the fact being registered on the file. For most cases, however, it was impossible to know whether the missing father was dead, separated from the mother, or whether the mother was single from the start. In the first instance the case was recorded as "no father", otherwise, it was registered as a "missing" case.

As the number of families without a father and the number of "missing" information on paternal schooling were higher in **HF** as compared with **LF**, a statistical comparison between these data for the two schools was carried out.

Table 5.8 shows that the proportions of children with no father in the two schools were the same. However, the number of children with incomplete records in **HF** was significantly higher than in **LF** - on a Chi-squared test.

Table 5.8: Children who had no father or had missing information on paternal schooling in HF and LF (Pelotas, 1995).

Situation	HF n (%)	LF n (%)	p*
No father	47 (12)	28 (8)	0.7231
Missing information	40 (10)	4 (1)	0.0000

* χ^2 tests

According to **HF**'s staff involved in the registration process, it is not mandatory to

have complete records on family characteristics for each pupil, although the registration forms include a space to collect such information when children first enter school. Staff reported that they try to complete the forms in spite of the difficulties in obtaining information about the parents of children who come for registration with a relative or a friend. Such persons often do not have information about of the schooling of the child's parents and staff reported that this happened mostly to children of the poorer families.

From the explanations given by the staff, it is possible to suppose that the fathers with missing information on schooling belonged to the groups of lower levels of formal education, since their probability of being poor is higher. However, even if these fathers did not have low levels of schooling, the advantage of **HF** over **LF** in terms of fathers' level of schooling would remain unchanged.

Table 5.9 shows the distribution of maternal schooling for **HF** and **LF**. The two schools were significantly different in this aspect on a Chi-squared test. The distribution of maternal schooling presented a similar pattern to that of paternal schooling: the groups of illiterate mothers and of mothers with university degrees were similar in the two schools. **HF** presented higher percentages for the groups of mothers who had attended Years 6 to 8 of *Primeiro Grau* and Years 1 to 3 of *Segundo Grau*. Adding the percentages of mothers who had attended at least Year 6 of *Primeiro Grau*, the totals were 78% for **HF** and 59% for **LF**.

The proportion of pupils who did not have a mother was similar in both schools and the proportion of mothers who had missing information on schooling was also significantly different (Chi-squared test) for **HF** as compared with **LF** (Table 5.10), as happened in relation to paternal schooling.

It can again be argued that even if there were no missing information on the schooling of mothers in **HF**, the tendency for this school to have children with higher levels of maternal schooling would not be affected. The percentages of children with mothers who had completed at least Year 6 of *Primeiro Grau* would still be higher in **HF** than in **LF**.

Table 5.9: Schooling of mothers of children attending Years 1 to 4 in HF and LF (Pelotas, 1995).

Grades completed	HF n (%)	LF n (%)
None	11 (3)	10 (3)
Years 1 to 5 (<i>Primeiro Grau</i>)	66 (19)	135 (38)
Years 6 to 8 (<i>Primeiro Grau</i>)	226 (63)	160 (45)
Years 1 to 3 (<i>Segundo Grau</i>)	46 (13)	40 (11)
University degree (complete or incomplete)	8 (2)	8 (2)
Totals	357 [#]	353 [@]

χ^2 tests $p < 0.0001$

2 pupils with no mother + 43 with no information

@ 4 pupils with no mother + 1 with no information

Table 5.10: Children who had no mother or had missing information on maternal schooling in HF and LF (Pelotas, 1995).

Situation	HF n (%)	LF n (%)	p*
No mother	2 (0.5)	4 (1)	0.3367
Missing information	42 (11)	1 (0.3)	0.0000

* χ^2 test

The differences encountered between the levels of schooling of parents in the two schools were striking and unexpected, given the results of the correlation study of the Pelotas cohort. The literature reviewed in Chapter 2 also indicated that parental

schooling was one of the main predictors of academic achievement - the parents with the higher educational level having the most successful children. The findings from the case studies, however, suggest that such an association did not hold for the two schools which were investigated. This is an indication that other factors were affecting the achievement of children in the investigation. Such factors, related to the schools' cultures, will be presented next, in Chapter 6.

Chapter 6:

The Case Studies: Part Two

6.1 Introduction:

The purpose of this chapter is to describe the findings from the case studies, which were directed to answering the research questions. The findings are presented according to the plan for data collection and analysis depicted in Table 5.1 (p. 136). Such findings, as mentioned earlier, have been summarized in Table 5.5 (p. 148). The chapter describes the data related to the theories of instruction and pedagogic practices that characterized each school. Data related to the evaluations of the schools carried out by teachers, pupils and their families are also presented. The chapter ends with a summary of the findings and a discussion of the differences found between the two schools.

It is important to explain that new theoretical information, that was not included in Chapter 3, was introduced in this chapter. The theories that served as basis for the fieldwork were not able to account for the differences encountered in the two schools.

6.2 Findings related to the research questions:

The findings related to the research questions start with an account of the theory of instruction, emphasized in each school.

6.2.1 Theories of instruction:

As was explained earlier and illustrated in Table 5.1, the theories of instruction of each school were investigated through teachers' ideas on the causes of academic failure, and through teachers' models of a "good" pupil teacher (acquirer) and a "good" teacher (transmitter).

Causes of academic failure:

Teachers' conceptions about the causes of academic failure were investigated through a specific question on the topic during the interviews (Annex 4).

The answers to this question were complemented by the answers to another question

about reasons for children being “good” or “bad” pupils. The information on the latter questions was also used to check the consistency of the answers to the first question (triangulation). No discrepancies were noticed between the two answers and their contents were analyzed together¹.

Although the question on failure specified that the concept included both grade repetition and drop out, the majority of teachers referred mainly to the former, which is, as stated before, the most important problem faced by the Brazilian educational system (Ribeiro, 1990, p.13; Verhine and Melo, 1988, p. 563). Only two teachers in **HF** and one in **LF** mentioned drop out in their answers. All three teachers thought that children abandon school because they need to work to increase family income. One of the teachers added that, if a child is constantly repeating grades, parents end up thinking she/he will not succeed in the long run and will be better off working than studying. This causes parents to stop sending the child to school.

The question on failure was asked in a non-personalized manner, i. e., as a general topic without direct reference to the failing rates of the teacher’s own school. The researcher considered that teachers would express their ideas in a more relaxed manner if they talked about the issue in a general rather than in a personalized way.

At the first level of analysis, teachers were classified into one of three categories derived from Bernstein’s theory - Regulative, Instructional or Mixed - according to the types of answers they produced.

Teachers classified as Regulative mentioned only aspects of social order as causes of academic failure: lack of interest on the part of pupils, families and teachers or emotional instability in the families.

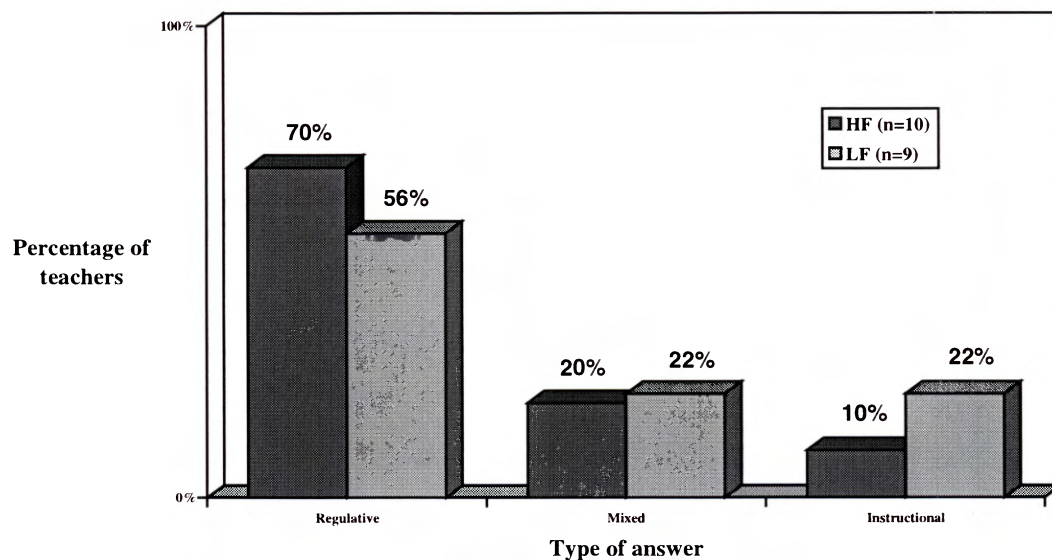
Teachers classified as Instructional referred only to technical aspects of schooling: teaching methods or problems of the educational system as a whole.

The Mixed category included answers that included both regulative and instructional aspects together, independent of the number of times each aspect was mentioned.

¹ When the same topic was mentioned in more than one answer by the same teacher it was counted only once in the frequency counts that were carried out in the second level data analysis, which created data-grounded groups.

Figure 6.1 illustrates the distribution of teachers in the two schools according to the characteristics of their answers concerning the causes of academic failure of children attending *Primeiro Grau*. Examples of the teachers' answers that were classified in the three categories will be presented later, after the results of the second level of the analysis are revealed.

Figure 6.1: Causes of academic failure according to teachers from HF and LF (Pelotas, 1995).



The analysis of Figure 6.1 indicates a high degree of similarity between the two schools in terms of the emphasis on regulative causes for academic failure, at the first level of analysis. However, a slight regulative predominance can be noticed in **HF** and a slight instructional predominance can be noticed in **LF**.

As the categories were broad and the answers were not uniform, the researcher considered it important to investigate whether the teachers in the two schools presented differences in terms of the specific contents they emphasized within each category - the second level of analysis.

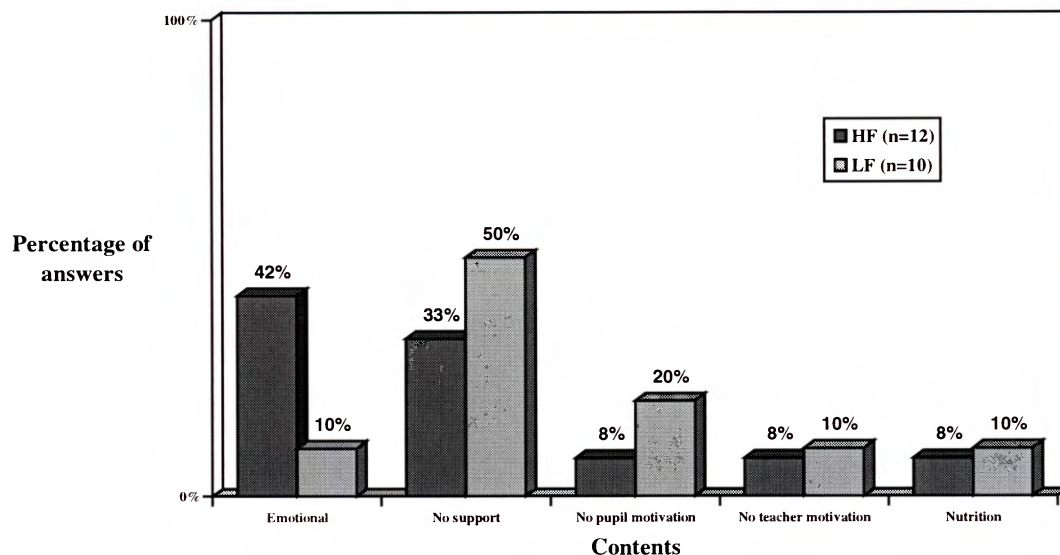
A number of teachers gave more than one reason for the academic failure of pupils in each school. Therefore, at this level, the analysis was centred on percentages of answers classified into each content topic rather than on percentages of teachers that

produced the answers.

The examination of all the answers that included regulative aspects (Regulative and Mixed categories) produced four main content groups (Figure 6.2): lack of a stable emotional environment in the family (“Emotional”), family lack of interest or support (No support), lack of motivation on the part of the pupil (“No pupil motivation”), and lack of motivation on the part of the teacher (“No teacher motivation”). The additional content group “Nutrition”, as will be explained later, was also included in the group of regulative answers.

According to Figure 6.2, the content group “Emotional” was mentioned more often in **HF** than in **LF**. The following extracts illustrate the type of answers classified in this group.

Figure 6.2: Causes of academic failure according to teachers from HF and LF: regulative contents (Pelotas, 1995).



H2, for instance, had several stories to tell about her pupils. She expressed concern about the life difficulties of children and about their future. The next lengthy extract from her interview aims at reproducing the character of her narratives, which also characterized the interviews of other teachers in **HF**:

Family problems influence a great deal, I think, the life of children, their studies. The parents split up. Each one goes a different direction. One child stays with the father, the other stays with the mother. The father doesn't want him to go to school, the mother is not interested in him going. They often take children out of school to beg in the streets, like the case of a girl I have. She is in the shopping mall, begging. A child! The other day I said to the Headteacher: Do something! Go to the Secretariat of Education and see if they go to these people's house! Because these mothers, they are more shameless than the children are. Take children out of school to beg! And there she is: a little girl, 6 or 7 years of age, begging in the streets! It is a pity! One of these days somebody abuses that child. And the boy is there too. Sometimes the parents are guilty of such things, right? Of children not learning or... often it is their needs also... I have one whose father beats the mother a lot and there is no food. There is none! The father doesn't work, doesn't want to work, and they say that he constantly beats the mother and the child sees it. He [the child] is badly fed and becomes rebellious. He comes to school and there is no way that... he doesn't know a thing! He is one of those who do nothing in class. It is him and that blond one that wanders around the class. He doesn't have this kind of problem but he is one of the group. I think that he doesn't have enough maturity to be in Year 1. He comes to class and all he wants is to play, play, and play! He hides other pupil's toys, he hides their erasers, their pencils, their notebooks and laughs. He hides himself in the toilet with other pupils' objects. The mother tells me that he is like this at home as well. I called her to have a chat. At home, he hides his sisters' school material when they are about to leave for school. They look for their things and cry. He laughs. He doesn't get his books out of his bag. He spends all day like this. And the other one, whose father beats the mother, is the same. Now he wants to beat up everybody in class. Anything can provoke him and make him want to hit the others. **H2**

H4, following the same line, said:

I think there are many causes, starting from children having deranged families, right? When they come to school their heads are already speeding up. Then it becomes difficult to concentrate on a Math's problem, on a calculation, because of the emotional side. It interferes. **H4**

And later she added:

The child doesn't find any support to be calm. So, I think that all these things interfere. You get to know several life stories and you end up saying: Wow! so young and has already gone through so many things! **H4**

The answers classified in the "No support" group stressed that children fail because their families are not interested in their schooling, do not motivate them for the academic work and do not to provide them with help. The topic also included the idea of families seeing schools only as crèches and not as places for learning. The following examples illustrate the "No support" group:

I think it can only be economic, because you see, the mother works, the father works, the child often stays at home, alone. Sometimes, in the evening, there is no one to look at his or her notebooks or ask the child... right? When they arrive, they are tired, and many work until late at night. Look, it is economic. It is. And education itself is failing because of this. **H3**

I think that often it is the needs, the difficulties of life, the crisis. Parents are often working...so much so that, sometimes, when a teacher is absent and we have to send pupils home the parents get angry, because... Where is he going to stay today? There is no place for him to stay! So, they are not interested in knowing whether the child is working well, whether he understands, whether he is doing well. What good will it do? They are interested in having a place for the child to stay, like a crèche, right? He comes here and is looked after. They know that the child is in school during the whole morning, he is not in the streets. **L6**

The “No pupil motivation” and the “No teacher motivation” type of contents were mentioned by a few teachers in each school.

The “No pupil motivation” answers considered that academic failure is caused by lack of motivation for learning and studying on the part of pupils. This category also included the difficulties faced by working children and the fact that they rebel against school. An example of this type of content can be observed in the words of **LF**'s Headteacher:

It is the lack of motivation on the part of the pupil. The pupils come to school, they come and stay there, seated. They bother to wake up early and come here to stay, doing nothing. If I don't force them.... the most I can do is to force them to copy. But during the explanations they don't pay attention and they also don't ask, if they don't understand. They wouldn't pay attention or copy anything if left on their own, right? So, I don't know. I can't even say why they come to the classroom. **L*1**

The “No teacher motivation” answers stated that failure is caused by lack of interest on the part of teachers, who do not try hard enough to do a good job. **HF**'s Headteacher, for instance, said:

Look, I'm going to say it in a low voice so nobody will hear me. I think that one of the causes of failure is the lack of interest on the part of the teacher. I think this is one of the causes. Because the teacher who is really interested he does! He does something, he finds a way, he looks for a different way to teach and...does something! I would classify this as one of the main causes. **H*1**

The analysis of the four main content categories within the Regulative group revealed

an interesting fact. When regulative and instructional aspects were considered in a continuum, the “No support”, “No pupil motivation”, and “No teacher motivation” types of answers were considered to be closer to the instructional end of the continuum than the “Emotional” answers. The former three content groups include aspects related to school. They are focused on social order features - people’s attitudes - nevertheless, such features are more related to the acquisition of skills and their interrelationships than the group of “Emotional” answers. This latter type of answers implies that children fail because their homes do not provide them with a sound emotional environment and are, thus, closer to the regulative end of the continuum.

Analyzing the data in these terms, **HF** seems to present a stronger regulative tendency than **LF**.

The answers that attributed failure to children’s learning impairment due to malnutrition (“Nutrition”) were placed within the Regulative category. Although not equivalent to the other content topics in the category - as it refers to children’s physical aspects – malnutrition is related to family socio-economic background. Therefore, it was considered to bear a closer relation to the Regulative than to the Instructional categories.

“Nutrition” was mentioned by one teacher in each school as a cause of academic failure. The quotation that follows is an example of this type of answer:

Lack of food, I think that they are quiet children, not active like the other children. I don’t know whether it is lack of vitamins, of certain fruit, of food. They get paralyzed. It either paralyzes or lowers their level of activity a bit. They have intellectual capacity and all... **L3**

The inclusion of nutritional aspects as explanations for failure reflects a tendency, observed in Brazil and pointed out by the empirical work of Davico (1990, p. 112), to stress the importance of such an aspect. The findings from the case studies, however, suggest that malnutrition was not considered important by the majority of teachers in the two schools.

In analyzing the contents of instructional answers within both the Instructional and the Mixed categories, the following pattern was found: in **HF** failure was related to

teachers' academic behaviour ("Teacher") and in **LF** failure was related to the school or the educational system ("School or system").

Each group of content was present in one school and absent in the other. In **HF**, the instructional answers referred to the incompetence of teachers as individuals, even though the focus was on their academic behaviour ("Teacher"). Teachers were accused of being boring or of using inadequate methods. H*3 and H7, for example, gave answers that were classified in this content group:

...and in school the teachers don't offer them anything better. They are boring! **H*3**

I think it is the way teachers work in Year 1. **H7**

In **LF**, the instructional answers implied a wider and "politicized" view of academic failure ("School or system"), considering that the schools or the whole educational system were not prepared or were inadequate to educate working class children, as the following examples indicate:

The school doesn't offer to this kind of pupil what he expects. A child who lives in the streets, has wishes that are different from those of a child who has everything at home, right? It is different! **L5**

It is the educational system itself. The system itself! Our system is not a good system. The evaluation is flawed, the contents are also not very adequate... a series of things. **L2**

When the content groups within the Instructional category were analyzed in terms of the regulative-instructional continuum, it could again be observed that the teachers in **LF** tended to present a more marked instructional tendency in their ideas on failure than teachers in **HF**. The answers given in **LF** were more related to educational and non-individualized issues than the answers in **HF** - that still focused on attitudes of persons. The type of answers that included an analysis of the school or the educational system as causes of academic failure in children, although not widespread in **LF**, indicate the presence, in this school, of an important distinction from the predominant pedagogic discourse in Brazil and other Latin American countries (Mello 1985, pp.

91-100; Avalos, 1986, pp. 147-9; Verhine and Melo, 1988, p. 561; Patto, 1990, p. 121; Davico, 1990, p. 111; Gama et al. 1991, pp. 356-84; Penin, 1994, p. 114). This predominant discourse, totally reproduced in **HF**, tends to stress a view of failure centred on pupils and families, ignoring the social and economic roots of the phenomenon.

The four teachers in **LF** that mentioned the schools or the educational system as the causes of academic failure, demonstrated to have a certain degree of understanding of the multiple roles of education. However, one of these teachers, L1, had difficulties in explaining how schools influence academic failure. Her answer gave the impression that she could perceive that there was something there, although she could not quite grasp what it was. The vagueness of this teacher's answer could be an indication that the tendency to consider the schools or the educational system as responsible for children's failure is not well established and widespread in **LF**. The following dialogue with the interviewer (I) illustrates L1's position:

L1: Ah! School failure...I think it is... in this case one is to blame... it would be the scho... ol. It is to blame...I think the family is to blame, right?

I: Explain that a little bit more... why do you blame school? Why do you blame the family?

L1: The family doesn't care, we call the father, call the mother, and they never come to school! They only come at the end of the year to find out whether the child has been promoted. There is no worry about finding out whether the child is really learning, right? And in relation to school...I don't know! I think that it must be to blame as well, right? Because the child spends time here, right?... I don't know... I cannot explain what it is...I try to do my job (laughs) within my possibilities, right?... I don't know...

In an attempt to summarize the trends in the ideas about the causes of academic failure in the two schools, it can be stated that teachers in **HF** presented an understanding that emphasized regulative aspects. The understanding of the phenomenon by teachers in **LF** presented a tendency to give importance to instructional aspects as well. In the two schools, however, the emphasis was placed on children's and families' background characteristics as the causes of failure.

Such findings of the main study confirm the tendency observed in the pilot study: **HFp**'s teachers stressed regulative aspects and **LFp**'s teachers emphasized

instructional aspects in addition to the regulative aspects, that were, nevertheless, the most frequently mentioned.

The features of the understanding of academic failure that predominated in **HF** and **HFp** resemble those of the schools Rosenholtz (1991, pp. 84-5) called “learning impoverished”. In such schools children’s backgrounds were often mentioned when discussing their behaviour and learning problems. According to Rosenholtz (1991, pp. 32-5), teachers that worked in “learning impoverished” schools were generally isolated, i. e., did not discuss educational matters or plan joint activities and carried out routinized activities that were not evaluated. Such teachers found the possibility of blaming children and families (rather than the inadequacies of their own practice) for educational problems to be a relief.

After the examination of teachers’ conceptions about the causes of academic failure, the model of the acquirer in the teaching/learning process was investigated.

Model of the acquirer:

Teachers were asked to describe the characteristics of a “good” and a “bad” pupil, during the interviews. “Good” is the adjective that is most commonly used to label the pupils that teachers are keen to have in class, although they do not necessarily classify as “bad” the pupils they are not so keen to teach. As the latter adjective indicates the opposite of the former, it was considered by the researcher to be the most adequate to impart the right meaning to the question being asked. The two adjectives were indefinite enough to allow teachers the freedom to point out either moral or personality aspects on the one hand or skills and academic behaviours on the other, without directing their answers to any of them.

Several teachers (in the two schools) complained about the inappropriateness of the label “bad” and the reasons for the use of such a word were explained by the researcher. After the explanations teachers seemed to accept the adjective and their answers seemed to provide the information required by the question.

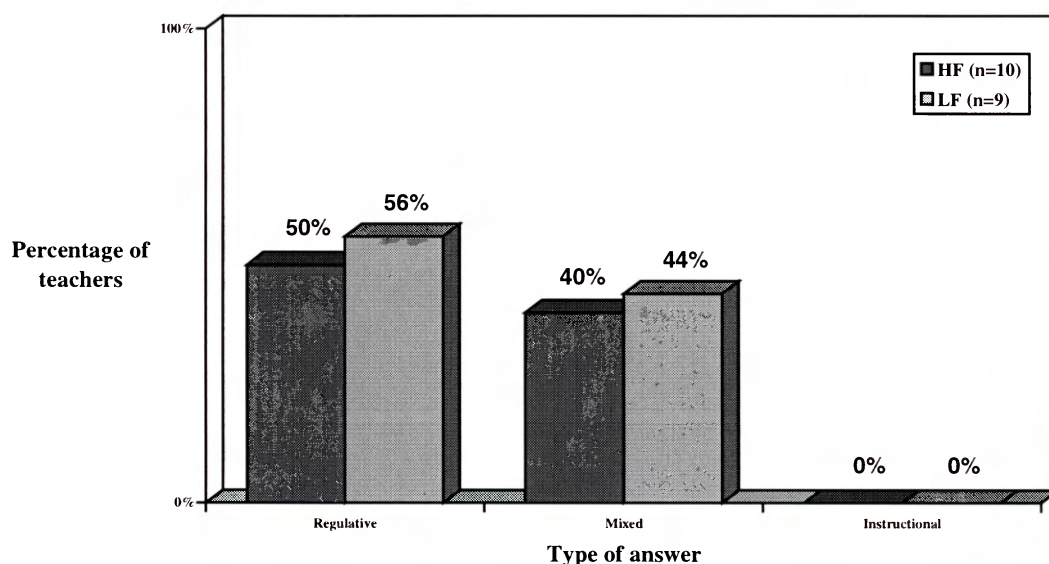
In the analysis of teachers’ answers, emphasis was placed upon the description of the “good” pupil. As expected, the description of the “bad” pupil was the opposite of the

former and served to confirm and complement it.

Teachers' answers were classified in terms of regulative and instructional features at the first level of the analysis. The answers that included moral attitudes and behaviours and personality traits were classified as Regulative. The answers that included skills and academic attitudes and behaviours (relating to learning performance) were classified as Instructional. Each teacher was assigned to one of the categories - Regulative, Instructional or Mixed - according to the content of her/his answer. The group of teachers classified as mixed gave answers that contained both regulative and instructional aspects.

Figure 6.3 shows the distribution of teachers in each school according to the three categories. No teachers were classified into the Instructional category, as there were no purely instructional answers. The frequencies of the two other categories - Mixed and Regulative - were very similar, indicating an overall resemblance in the description of the "good" pupil in the two schools. One teacher from **HF** did not answer the question.

Figure 6.3: Characteristics of a "good" pupil according to teachers from HF and LF (Pelotas, 1995).



When considering the specific contents of teachers' answers (taking the Regulative

and Mixed categories together) at the second level of analysis, it can be noticed that all, except one teacher from **LF**, described the “good” pupil as interested and participative, although individual teachers added other aspects to such characteristics.

The following quotations exemplify the similarity of teachers’ answers in both **HF** and **LF**:

I think that it is the one that is interested, that makes an effort. A good pupil listens, doesn’t interrupt you, and asks questions.

Nothing pleases the bad pupils. You give them something to do and they don’t get motivated, give something else and it was not what they wanted! They demand freedom but if you give them freedom they only take advantage of it. **H5**

I think that a good pupil comes to school with the aim of learning. His notebooks are updated, he copies the contents all right, tries to learn, right? Tries to participate in groups. And there are also other factors, like a good behaviour. **H6**

The good pupil is not the one that gets a ten. I think that it is the one that doesn’t cause trouble, right? in terms of discipline. Because the marks don’t mean much. The pupil can be excellent, work, pay attention and ask questions but he might not be able to get a good mark.

The bad is the one that comes to disturb. There are pupils that come just to disturb! They are not interested in learning, they play rough in the break time, they hurt each other. **L*1**

A good pupil is the one who is interested, dedicated, who participates. It is the pupil who shows that he knows what he wants in the classroom. The bad pupil is the one who doesn’t care, who comes to school and... Sometimes I’m tempted to ask them: What are you doing here? **L*3**

It is important to add that the image of the “good” pupil that was predominant in both **HF** and **LF** was mainly characterized by her/his compliance with teachers’ pedagogic practice, revealing aspects of strong framing in the two schools. Teachers in both schools tended to see the teachers as the main orchestrators of the schooling process and children as simply receptive and accepting.

The analysis of the models of the acquirer in **HF** and **LF** indicate no differences between the two schools, again confirming the results of the pilot study. The predominance of regulative features in the descriptions of the “good” pupil are in agreement with findings from the studies presented in the book edited by Avalos (1986, pp. 133-56), cited earlier, that reports on studies carried out in Bolivia, Chile, Venezuela and Colombia.

Model of the transmitter:

The data utilized to examine the model of the transmitter emphasized in each school was gathered through asking teachers to define a “good” and a “bad” teacher. Teachers did not react to this request in the same manner they had reacted to the demand for a definition of a “good” and a “bad” pupil. Teachers did not complain about the adjective “bad” as they did when it was applied to pupils. Either the matter was sufficiently discussed in the previous question or they felt more at ease when placing a label of “bad” on themselves or their colleagues than when labeling the children.

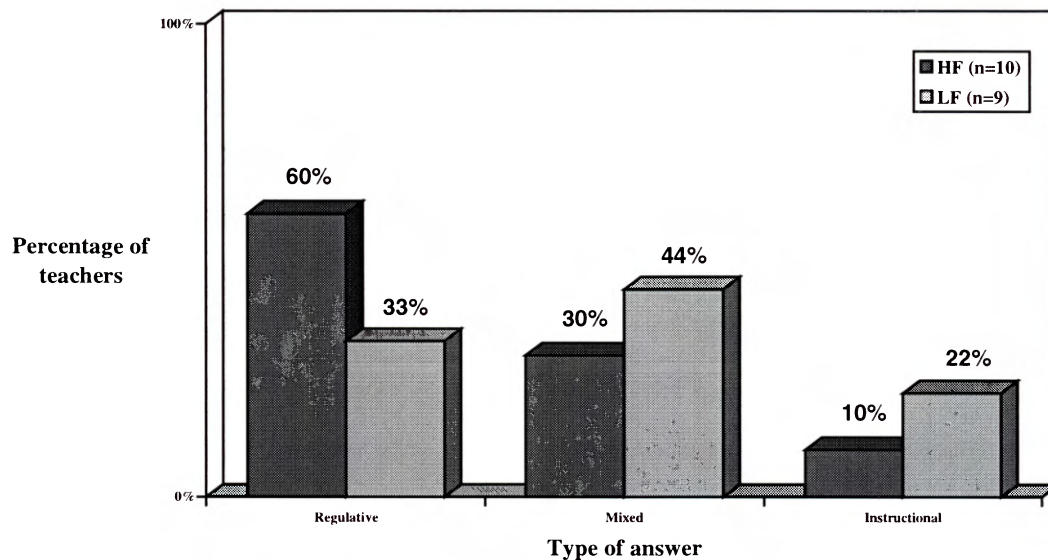
As with the answers related to the “good” pupil, emphasis was placed in the description of the “good” teacher. The characteristics of the “bad” teacher were used to complement and test for the consistency of the former.

Teachers’ answers were analyzed in the same manner as the descriptions of the “good” pupil. Teachers were classified into Regulative, Mixed and Instructional categories, according to their answers, at the first level of analysis. The Regulative category included answers that referred to attitudes and behaviour or personality traits concerned with the manner in which teachers related to their pupils. The Instructional category included aspects of teacher’s skills and behaviour that related to teaching itself. The Mixed category included both regulative and instructional aspects.

Figure 6.4 illustrates the characteristics of the transmitter that were predominant in each school. Regulative answers were the most common in the two schools. However, the purely regulative answers were more frequent in **HF** and there was a slight tendency for instructional answers to be more frequent in **LF**, considering the Mixed

and the Instructional categories together.

Figure 6.4: Characteristics of a “good” teacher according to teachers from HF and LF (Pelotas, 1995).



Nine teachers in **HF** (90%) mentioned regulative characteristics to define a “good” teacher (Regulative and Mixed categories taken together). The percentage was 74% (seven teachers) for **LF**. A total of six teachers in **LF** (66%) mentioned instructional aspects in their answers (taking the Instructional and the Mixed categories together). The percentage was 40% (four teachers) for **HF**.

The following quotations are examples of the purely regulative answers:

I think that the good teacher is the one that, first of all, the one that knows the pupil. He knows that the pupil comes from that specific family, he knows the pupil’s history, and he knows what the pupil needs, what he can do for the pupil. He integrates himself in the pupil’s life and tries. He is constantly attentive to all of pupil’s reactions, to any change and is always betting that the pupil will succeed, always believing that the pupil is going to improve, always giving incentive!

The bad teacher is essentially the one that doesn’t believe, the one that humiliates the child. It is the one that is prejudiced against the child. He places himself in a pedestal and says: I’m the teacher! You are the pupils! I’m here to teach! You are here to learn! If the pupils don’t learn, they teach a second time. If the pupils still don’t learn, that is though luck! **H*1**

I think that, more than anything, he has to be charismatic, right? to bring out the good that there is in the pupils. I think that he has to be a friend of his pupils.

Now, the bad teacher, I think that he is like a dictator, that only gives orders and doesn't leave space for a more human relationship to be established. Only imposes things. I don't know, I think that if one is dealing with human beings, one has to pay attention to this aspect and not just be worried about imparting content or about pupils passing or failing. Besides the lesson, I think that one has to transmit something else to them. I don't know! I think one has to try to show them a little what life is all about! I think one can do little, but many times one serves as a model to them, for their lives. Unfortunately one's time is short but at home they don't have it, right? **H4**

The next quotations are examples of Mixed category answers:

I think that a good teacher is the one who knows the contents he has to teach, that can handle a class, that captivates the pupil, that tries to do different things, that motivates the pupil. And if I have to define a bad teacher, I would say that it is the one that is not worried a bit about the pupils. **L*2**

I think it is the one that teaches the contents, not in a strict form, because sometimes it is impossible because of the lack of materials, lack of this and that... and, most of all, is a friend to the children! It is not because I'm the teacher that you have to shut up, that you have to sit down. **L3**

The following quotation is from the interview of one of the teachers that gave a purely instructional answer. She worked in **LF**.

A good teacher... I don't know, I think that a good teacher is the one that works according to pupil's realities and not based on the work someone did in Rio de Janeiro or São Paulo. He does it from what his pupil... based on his pupil's needs, right? Of course there are things one is obliged to teach, but there are things that children bring from home that enhances one's lesson, one's work.

And the bad teacher, for me, is that one that doesn't care about what the pupil is thinking and only worries about what he brought to the classroom, about what he has to teach, about what comes from the Secretariat of Education. And the poor pupil has to fit within that mould otherwise he is not considered to be a good pupil. **L5**

When the answers within the Regulative category were analyzed, differences in content (second level of analysis) were also observed between **HF** and **LF**. There was a tendency for **HF**'s teachers to describe the qualities of a "good" teacher in terms being emotionally supportive to pupils, as both the quotation from the Headteacher

(H*1) and from H4, presented above, illustrate. The value placed in knowing children's life histories and in enhancing their self-esteem in **HF** reflected the tendency observed in the answers about the causes of academic failure in this school: to focus on children's emotional life. Although mentioning characteristics like being friendly, sensitive to difficulties, fair, dedicated, and motivating, the teachers in **LF** did not stress emotional support to the pupil as the most important characteristic of the "good" teacher.

The overall pattern of the descriptions of the "good" teacher, as in the case of the description of the "good" pupil, indicated the presence of strong framing characteristics in the two schools. All except L5 (one of the three teachers that were classified into the Instructional category presented the transmitter as the controller of the schooling process, both in academic and social terms. This tendency was observed in the pilot study's schools and in the research reported by Avalos (1986, p. 133-56).

L5 was the only teacher that attributed importance to the attitude of valuing the contributions of the pupils to the schooling process.

After this account of aspects of the theories of instruction that predominated in the two schools, some features of their pedagogic practices will be presented.

6.2.2 The pedagogic practices:

The description of teachers' pedagogic practices is divided in two parts. The first part is an account of teachers' own perceptions of their practices, investigated through the interviews and centred on the way they taught new contents, disciplined and evaluated their pupils. The second part includes a description of the same aspects of teachers' practices as observed by the researcher in the classrooms. Included in the pedagogic practice dimension - as considered to be both one of its causes and consequences - is the perception that teachers had of pupils and their families.

Teachers' descriptions of their practice:

- Teaching new contents:

During the interviews teachers were asked to explain how they introduced new

content topics to their pupils. As the answers were specifically related to instructional aspects, the initial classification in Regulative or Instructional categories, carried out in relation to other interview topics, was not applicable. The answers were examined in terms of their specific contents (second level of analysis), and aimed at capturing trends that could characterize the schools.

Teachers' descriptions of their methods for introducing new contents were varied and included several different aspects. Nevertheless, one main feature distinguished the answers from the two schools: the degree of pupil participation in the process - an aspect of framing.

Teachers' answers were classified in one of the following groups: "Teacher-centred" and "Interaction".

The teachers' answers classified in the "Teacher-centred" group described the introduction of new contents through writing them on the blackboard. Such an approach indicates a tendency for teachers to be the main actors in the process and to rely mostly on their own knowledge and on what they had previously prepared for the lessons. The approach defines pupils as passive receivers of knowledge, indicating strong framing characteristics. The approach also reflects a conception of learning as a simple accumulation of information received from outside.

The next quotations illustrate the "Teacher-centred" type of answers:

I tell them: Today I'm going to teach this and that. I write the title on the blackboard and then I start. I really like to teach little rules first, right? If I am teaching division, I tell them to do this first, then that. I really like to teach them little rules. And after I teach the rules, I give an example and from the example I start explaining the new content. **H2**

Well, I write it on the board, then, if I can, I work with concrete materials. If I can't, I explain the content several times, I send them to the board to see if they understood... what they didn't understand... why they didn't understand... One by one. Then, when they all have understood, I give them exercises. **H1**

First I give the content, right? Orally. And then I write it on the board and

carry out activities related to it. **L2**

The answers classified in the “Interaction” group indicated an expectation, on the part of teachers, for their pupils to be active when they are teaching new contents. It would be an exaggeration, however, to label such an approach as pupil-centred or to interpret its presence as a clear indication of weak framing. Teachers were still in the command of the process in the descriptions they produced of their conducts. Teachers mentioned that they carried out dialogues with pupils, exploring what they knew about the topic first. Then teachers related the topic to children’s lives and interests or carried out exercises or practical activities, before systematizing the theoretical aspects to be taught. Although this approach to teaching cannot be considered to be clearly interactionist (in terms of promoting pupils’ initiative to build their own knowledge from teachers’ inputs) it is possible to say that it includes the idea that the learner is not a simple receiver of information.

L6, the Pedagogic Coordinator, who used to be a regular class teacher until the previous year said:

I used to work, as much as I could, within their reality. I used to ask them to bring things from home and worked, as much as I could, based on those things. I sometimes altered the contents established by the Secretariat. Before, we had to follow the contents strictly, but now they are giving us this freedom. If you feel you have to alter things, you go ahead and do it. If you think that there are things that are necessary for their lives, you introduce them. **L6**

Other examples are the statements from L1 and H5:

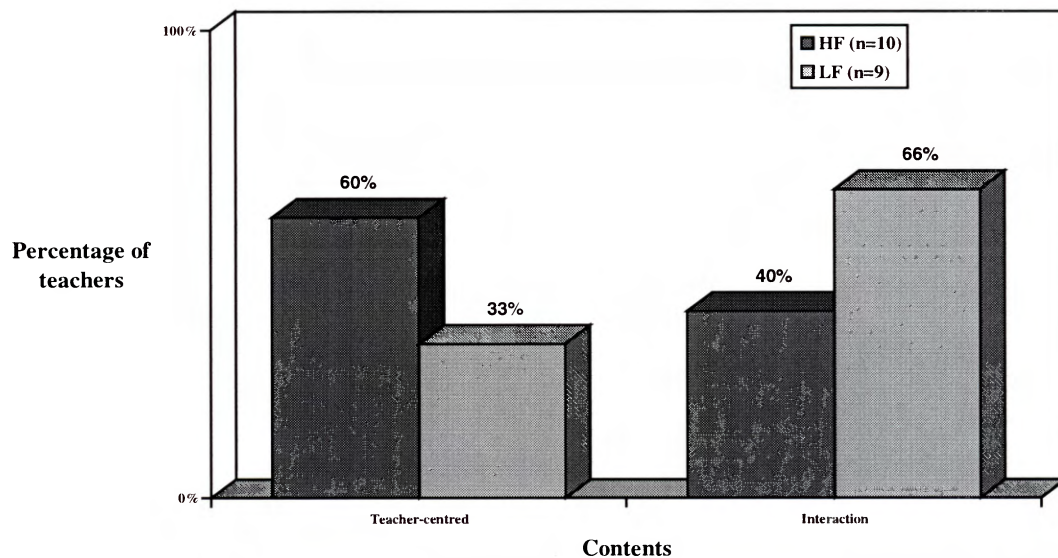
I revise the previous contents and start the next one. I ask them for suggestions, find out what they know about the topic I’m going to work on, right? I ask a question. For instance, we are about to start working on the “Proclamation of the Republic”. I’ll ask them: What is proclamation? What are we going to celebrate soon? When is it going to be celebrated? Have you ever heard about it? and from there I will start to introduce the content. **L1**

I start asking them, to have some kind of estimate of what they think about it, to find out if they have seen something related to it. Each one brings something new... or I ask them to bring newspaper cutouts or something... I find out what they know, where they are, to carry on. **H5**

The distribution of the answers of teachers from **HF** and **LF** according to these two

approaches to teaching new contents is illustrated in Figure 6.5. The differences indicate a small tendency for teachers that worked in **HF** to be teacher-centred in their approach to the teaching new contents. The teachers in **LF** showed a small tendency for including pupil participation in this activity.

Figure 6.5: Reported approaches to teaching new contents by teachers in HF and LF (Pelotas, 1995).



It is interesting that most teachers in both schools investigated during the pilot study reported using an “Interaction” type of approach to the teaching of new contents, contrasting with the findings of the main study.

- Disciplining the pupils:

Another question put to the teachers during the interviews was about their methods of dealing with pupil discipline. The data collected through this question were not classified according to the instructional/regulative dimension as the question itself was related to regulative aspects. The analysis was thus only centred upon the specific contents of teachers’ answers (second level).

The answers were organized in five groups. The first group included the answers that referred to talking to the pupils as a method of disciplining them (“Talks”). Some of the teachers that gave this kind of answer also emphasized that they preferred to deal

with disciplinary problems themselves, rather than asking for external help. A typical answer within the “Talks” group can be illustrated by the words of H1:

I can manage discipline. You know, even with my voice problem. I have problems with my vocal cords and sometimes I lose my voice. But I manage! I don't have to yell. I can't yell. But I look at them, I talk to them, seriously sometimes, or I wait until everybody calms down and I explain that there are times to play and times to study. **H1**

The second group of answers referred to sending pupils to the Headteacher or the school Counselor to deal with the problem of poor discipline when the teachers could not manage the problem in the classroom, through talking with the children. Answers in this group (“Out of class”) can be exemplified by the following quotation:

When I feel that I don't have the condition to.. when I feel saturated, I ask the Headteacher for help and the pupils are taken out of class. I tell them I am here to teach and not to fight with anybody. **L*3**

The third group of answers included the idea of establishing rules for the behaviour of pupils (“Rules”) as the next quotation illustrates:

I always try to establish rules since the beginning of the year so there is no problem of being contradictory. When the year starts it is like in the army: I tell them that I like this and I don't like that. I can be more flexible with some groups, but I have to be rigid with others. **H*3**

The fourth group included the idea of calling children's parents to solve disciplinary problems (“Parents”):

I ask the mother to come to school. When someone doesn't copy anything, does nothing, is not interested, doesn't come to school, I call the mother to talk. **H2**

The fifth group included the idea of giving pupils' marks for good behaviour (“Marks”):

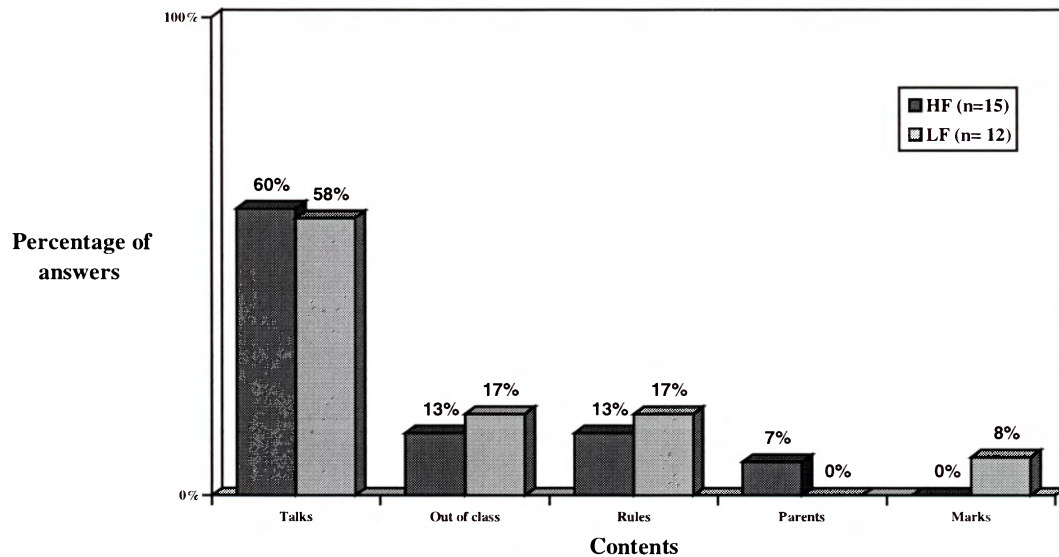
First I talk to them, right? I write down the names because I always give them half a point in their final average for the ones that behave themselves. I tell them I do not give them this mark, it is them who conquer it. **L*3**

Figure 6.6 illustrates the contents of the answers given by teachers about to their discipline-control practices.

“Talks” was the most frequent group of answers in the two schools, showing the same

tendency found in the pilot study.

Figure 6.6: Reported approaches to discipline-control of pupils by teachers from HF and LF (Pelotas, 1995).



The general tendency for the management of discipline by teachers in **HF** and **LF** appears to be similar inasmuch as they emphasized the “talking” feature of their approach. However, it is difficult to know whether teachers’ behaviours were, in fact, the same. Through the following quotation it can be observed that “talking to pupils” could be either carried out as a monologue - strong framing - or as a dialogue - weak framing. The following quotations illustrate these two tendencies. **H3**’s words depicts the monologue and **H7**’s the dialogue.

Sometimes, when I can’t take it anymore, when the situation is extreme. When I have asked, talked, and talked again... There are moments that I can’t take it anymore and then I ask them to leave. **H3**

There are certain days in which there is no possibility of giving a lesson. Things go on and on, they fight here and there, we reach no understanding. Well, the responsibility of this class is not only mine! One has to make it happen! and I’m not going to make it happen by yelling. We all go back to the classroom and we discuss this, right? For certain groups, there is a need to establish rules in order to allow the lesson to take place. We discuss the things that could not be done in class. **H7**

Since the majority of the teachers did not explain what they meant by “talking”, the data from this question must be examined with care. The question did not provide adequate evidence to compare the two schools in terms of framing. It was not possible to establish the extent of pupil participation in the negotiation of discipline. It is important, however, to add that four teachers from **HF** declared that discipline was a difficult matter for them, while no teacher in **LF** mentioned that.

- Evaluating pupils' performance:

During the interviews, teachers were asked to explain how they evaluated their pupils. After the analysis of their answers, teachers were assigned to one of two categories: Instructional - only included the assessment of pupil's performance, i. e., the results obtained through tests and other academic assignments; and Mixed - besides the marks in tests and essays, included pupil's moral attitudes and behaviour (mentioned spontaneously by the teachers).

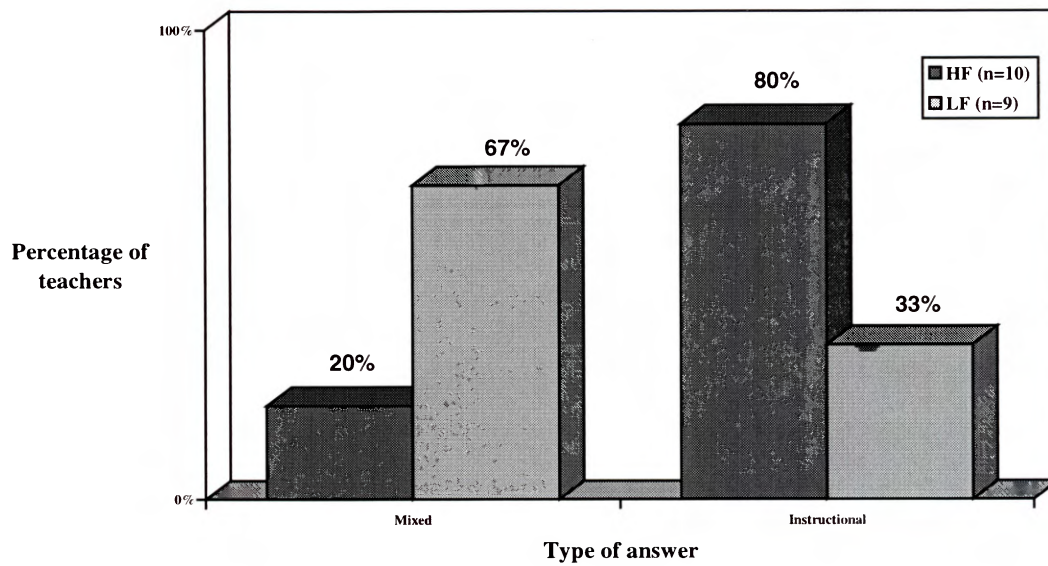
Figure 6.7 shows that most teachers from **HF** were included in the Instructional category. **HF** and **LF** also differed in relation to the Mixed category: in **LF**, more teachers spontaneously mentioned that they took into account moral attitudes and behaviours when evaluating pupils, in addition to their performance on academic tasks. The only teachers from **HF** that spontaneously reported including behavioural or attitudinal aspects in their evaluations of pupils were the Deputy Headteacher - who previously worked in **LF** - and the Physical Education teacher.

The following quotations illustrate the typical answers given in **LF**:

I used to give two tests. This year I am giving a test and assigning an essay. I try to value every assignment I give. I don't ask them to do things just for the sake of it. The essay is worth two and the test is worth eight. I try to evaluate the whole pupil, right? Not only the knowledge, but the participation in class as well. I give them an extra half point for that. **L*3**

I evaluate the children through several tests and tasks. I don't evaluate them through just one big exam. I can ask them to read to me, to interpret a text. I can give each task a different value. I also evaluate behaviour, attitudes, and relationships. **L2**

Figure 6.7: Reported approaches to pupil evaluation by teachers from HF and LF (Pelotas, 1995).



Teachers working in **HF** said, resembling the following quotation from H6:

First, I assign them an essay, worth two points. Then I give a test, worth eight points. Then I add them up and this is the grade for the period. I always try to do varied things. Sometimes I give two tests, sometimes I give a test in which they can consult their notebooks. This kind of test is to give them greater chances, to understand the contents better, to research better. **H6**

It is not possible to state that teachers in **HF** did not include aspects like attitudes and participation in the evaluations of their pupils. A question concerning such a feature was not directly asked. However, the fact the teachers in **LF** spontaneously reported including such aspects in their evaluations should be taken into account. It can be hypothesized that since teachers mentioned the use of broader criteria of evaluation in **LF**, they might consider this to be important.

Based on the ideas of Resnick and Nelson LeGall (1996, pp. 5-6), it can be understood that schools pursue either performance or achievement goals depending on the conception of intelligence that underlies their culture. Institutions with performance goals conceive intelligence as a fixed ability and academic success as something that can be measured through pupils' performances. Institutions with achievement goals, in contrast, conceive intelligence as a social practice, as a repertoire of skills that can be expanded according to people's efforts. Such institutions value the development of

learning abilities and other social skills and are, according to Resnick and Nelson LeGall, more likely to promote the academic success of their pupils.

The emphasis on broader criteria for pupil evaluation observed in **LF**'s teachers, might be an indication that this school pursues achievement goals. This aspect of **LF**'s culture therefore, might be contributing to the greater academic success of their pupils.

It is interesting to point out that 6 teachers in **HF** (60%) mentioned giving several little tests or assignments to increase the chances of pupils to get good marks in their evaluations, as the next quotations exemplify:

If we give them more assignments, it is easier to pass. So we started doing that. Now I give them little assignments. **H2**

Unfortunately, the tests have not yet been abolished! To make things easier, I give them assignments to be marked almost every day. **H4**

This tendency observed in **HF** is important inasmuch as it goes against the possible hypothesis, raised after the pilot study, that the higher rates of academic failure in **HF** were a result of its teachers being stricter in the evaluations of their pupils. No teachers in **LF** stressed such a point.

After teachers' accounts concerning the three areas of their classroom behaviour, a description of their actual behaviour will be presented.

Teachers' actual practices² :

The descriptions of teachers' classroom behaviours are based on the observations and include instructional, discipline-control and evaluative practices.

- Instructional practices:

The classroom observations were examined as a group for each school. As they were attempt to describe everything that happened in the classrooms, the observations presented the problem of lack of specific focus. Therefore, the data collected through them was difficult to use for comparisons between the two schools and had to be

² The description of the classroom settings presented in the account of the pilot study applies equally for the two schools of the main study. Teachers followed the syllabus assigned by the Secretariat of Education and there was great uniformity in the form of lessons in all the four schools.

analyzed in broad terms.

The lessons were initially classified in three main groups according to the main type of activity carried out (second level of analysis): “Exercise”, “New content”, and “Evaluation”.

The lessons in the “Exercise” group were characterized by pupils doing written exercises, which they copied from the blackboard or received from the teachers printed on sheets of paper. Teachers dealt with pupils’ doubts but the lessons were aimed at drilling the knowledge contents that were previously taught. Children worked on their own and teachers checked their performance. The following descriptions exemplify the lessons classified as “Exercise”:

A teacher from **HF**, for instance, had covered the blackboard with equations to be solved by her Year 4 pupils. Some pupils took their notebooks to be corrected by the teacher individually after finishing the exercise. The teacher told the pupils to repeat the incorrect exercises. After a while, the teacher asked pupils to write the correct answers on the blackboard. The pupils organized themselves for this activity, taking turns.

Year 1 children in **LF** worked on sheets of paper that contained simple additions and subtractions. Later they were to use syllables, written on the petals of a drawn flower, to compose words. Children went up to the teacher to have their work checked and she gave them feedback. After a snack break, the teacher resumed the work and wrote on the blackboard a series of sentences to be completed. While she wrote the sentences, the children read and completed them orally, although the exercise was supposed to be carried out in writing, individually. Pupils copied the exercise and did it. The next exercise consisted of words to be separated into syllables. The exercises were again corrected individually.

An Art lesson in **HF** (in which children did a free drawing using primary colours) and a Physical Education lesson in the same school (in which children played football and volleyball) were included in this category. There were no new inputs in such lessons and children were to drill the contents previously given without much interference from the teachers.

The next group - “New content” - was characterized by teachers imparting new information to pupils either in the form of a text to be copied from the blackboard or from a book (less frequent) with or without teacher/pupil dialogues based on the

information teachers were providing. The introduction of the new content was usually followed by a session of exercises. The next two descriptions illustrate the lessons in this group:

A Year 3 teacher in **HF** wrote a text on the blackboard for the pupils to copy. It was entitled “The Public Services” and dealt with taxes and the provision of health care and welfare to the population. The pupils spent 45 minutes copying the text and chatting amongst themselves.

In **LF** a teacher of Year 1 gave a lesson about the letter “s” when it sounds like “z” in Portuguese. The teacher chose the word “rosa” [rose] as the paradigm for the content she wanted to impart and showed a picture of a rose. She mentioned the new sound she was going to introduce and later wrote other words that contained such a sound on the board, reading them aloud with the children. Pupils were then asked to say sentences that contained the given words and the teacher wrote them down. Later, she asked the children to copy the sentences and to draw a rose. One child was chosen to draw it on the blackboard. Finally, the teacher wrote an exercise that included a series of incomplete words in which the target letter was to be used on the blackboard. Children did the exercise and the teacher individually corrected their work.

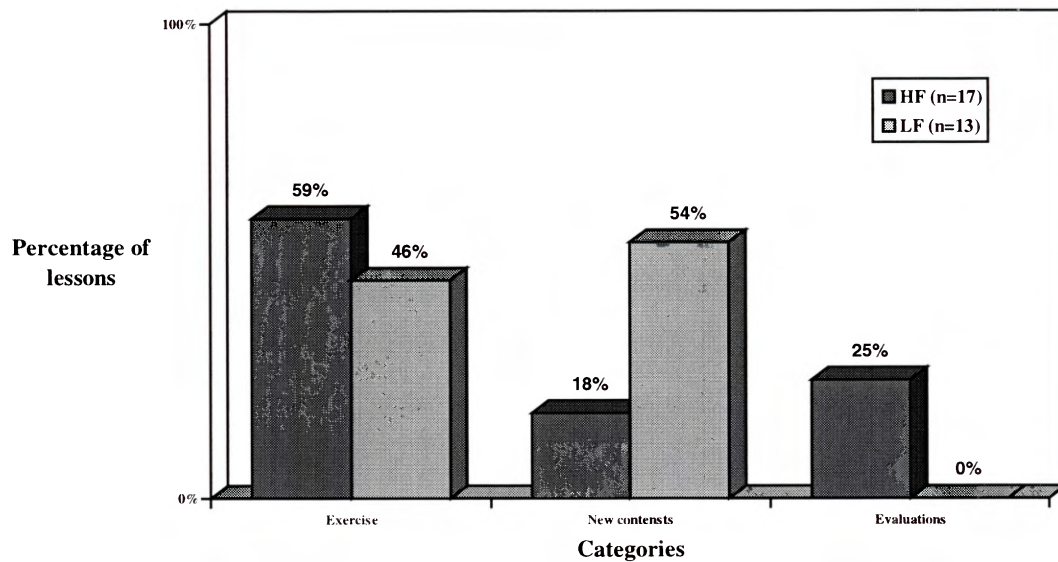
A Physical Education lesson in **HF** taught a new game to her pupils. The game was first orally explained and later the pupils went outside to play it, while the teacher gave further explanations and corrected the “mistakes”.

Children carrying out a task that was to be marked and included in their bi-monthly evaluation characterized lessons in the “Evaluation” group. The type of evaluation tasks were not the same in all the lessons, as the criterion for the lesson to be included in this group was teachers telling the pupils that the activity was to be marked. The next description is an example of this category.

A Year 3 teacher in **HF** gave children sheets of paper with Mathematics exercises, telling them the work was to be marked. Pupils started to do the exercises and several went up to the teacher to check what they had done. She explained things to several pupils, individually, and even carried out whole calculation with some. There were many exchanges among pupils in the class and some asked their colleagues to be quiet, claiming the noise was disturbing.

Figure 6.8 illustrates the distribution of lessons in the two schools according to the categories presented above.

Figure 6.8: Types of lessons in HF and LF (Pelotas, 1995).



Teachers in both schools tended to spend half of their time in class giving children exercises to apply the content they had been previously taught, although the percentage was higher for **HF**. This approach reflected a conception of learning, which considers that a decontextualized repetition of exercises serves to solidify the acquired knowledge and correct the misunderstandings. In most cases, children worked individually and were given the correct answers later. The form of the exercises appeared to be known by the children in most lessons, as, in general, they were not given explanations about what was being asked. The teachers answered the questions and gave explanations to the children individually, when necessary. In the majority of lessons, the teachers did not establish dialogues with the pupils, trying to guide their reasoning processes, asking the pupils to reveal their thinking processes or to bring out their own views or experiences. In short, for most lessons in this category, there was little work being carried out in the children's Zone of Proximal Development. It seemed that the teachers were aiming at making children repeat the exercises in order to routinize the way to carry them out and enable pupils to perform well in the tests.

There was a high percentage of "Exercise" type of lessons in **LF**. Nevertheless a

tendency for teachers to spend more time imparting new information to the pupils in this school was observed. Half of the “New content” lessons in **LF** included teacher-pupil pedagogic exchanges related to the topic under study. In **HF**, this activity took place in only one of the three lessons classified in this group. This tendency of **LF** to present a higher percentage of “New content” lessons could be an indication of greater importance being placed on equipping children with knowledge they did not possess in **LF**. Teachers in this school probably believed that it was worthwhile to invest in their pupils, to enable them to go onward in the educational system. The emphasis on carrying out exercises in **HF**, in contrast, could be an indication that teachers believed their pupils had difficulties in learning. Therefore, the process of teaching them was mostly centred on a restricted amount of knowledge that was to be drilled to make sure it was going to be assimilated. This tendency observed in **HF** is in agreement with the findings reported by Waxman and Padran (1995, p. 47) about schools attended by lower achieving pupils, mentioned in Chapter 3. Such schools tend to devote less time and emphasis on higher order thinking skills and overemphasize the repetition of contents.

The words of a teacher in **HF** (Year 4) illustrates the general posture of the teachers in relation to this aspect. This teacher had worked in **HF** for 17 years and did “double shift” in the school. She taught two classes of Year 4³. This teacher was not formally interviewed and made this comment during the observation carried out in one her lessons:

They only have to learn the essential: calculations, writing, reading, calligraphy. It is silly to teach them History, Geography and Science, so I do little of it.

Such behaviour was also described by Penin (1994, p. 130) in the Brazilian *Primeiro Grau* schools she studied: small amounts of time invested in Social Studies and Science as result of distrust in children’s capacity to profit from them.

A higher percentage of the randomly selected lessons in **HF** consisted of tests and evaluation tasks. This fact confirms the suggestion, based on the interview data, that

³ The fact that she was to retire at the end of the year could have facilitated her free expression of opinions.

teachers in this school gave children a higher number of assignments for evaluation as compared with **LF**.

- Discipline-control practices:

The data provided by the observations lead to the conclusion that teachers, in both schools, used similar strategies to deal with the disciplining of their pupils. Although the teachers seemed to aim at having a silent and attentive group of children, they generally tolerated a certain amount of conversation and movement around the class. When children were busy working, the noise level was low. However, as soon as a number had finished their work, the noise started to increase and the children began to play and interact with each other in an increasing momentum. The fast workers were never given extra work and spent long periods of time being idle.

When the noise level became high, teachers asked children to be silent. Teachers also tried to control the behaviour of the most agitated or noisy pupils by calling out their names, asking them to sit down or to turn around and face the blackboard. In a few cases, teachers threatened children with temporary exclusion from the class or with staying in the classroom during playtime, as was observed in the pilot.

One teacher from **HF** sent a boy from Year 4 to the Headteacher's office during one of the observations. He was very agitated and noisy and his behaviour was disturbing his classmates. The teacher tried to control him by asking him to stop behaving that way. The teacher finally sent him out when he got into a fight with another boy. No exclusions from the classrooms were observed in **LF**.

According to the interview data presented earlier, teachers claimed that they talked to the children when the latter presented disciplinary problems. Such data, however, did not allow for a description of the kind of "talking" those teachers reported doing. From the observation data it was possible to conclude that the "talking" in most cases meant controlling children through verbal requests for silence or for calmness rather than through negotiation of discipline, in both schools.

It is interesting to point out that there was one child in **HF**, attending a Year 3 class that spent most of his time wandering around the school premises. Teachers explained

that he refused to stay in class for long periods of time although he came to school every day. Sometimes he did his class work in the staff room or in the office, when he wanted to. His behaviour was tolerated and attributed to his personal problems⁴, demonstrating, once more, the importance attributed to family background to explain and accept children's attainment and behaviour in this school.

Data from the observations confirmed the high degree of teacher control of the classroom in the two schools (strong framing).

- Evaluation practices:

The conclusions to be drawn from the observations of the activities carried out for formal evaluations of children in both schools are limited. There were unequal numbers of observations for each school and the majority (nine) were carried out in classes of Year 4. As such observations depended on the teachers' invitations, the researcher had no control over the scheduling of the activity and depended on the good will of the teachers. Twelve observations were carried out in **HF** and four in **LF**, indicating a more open attitude to the investigation on the part of the teachers from the former school.

Most of the observations were carried out following notification of the teacher. However, a few evaluative activities in **HF** were observed during the general classroom observation (carried out at random), as reported above. This happened in four occasions.

There was a noticeable feature in the evaluation activities carried out in **LF** that was not present in **HF**: formality. In the four testing sessions that were observed in **LF**, teachers behaved differently compared with regular classroom activities: they became more solemn and demanded a graver attitude from the pupils. They gave the clear message that a special kind of activity was happening in class. This type of environment was not observed in any of the observations carried out in **HF**. The evaluation activities were carried out in a "climate" that did not differ from that established during other activities that took place in the classrooms.

⁴ According to teachers' information, the boy was adopted and his parents were lax in discipline at home.

The examination of the samples of written tests provided by the teachers, on the other hand, indicated an overall similarity between the two schools. Tests were printed on sheets of paper through the use of mimeographs with different degrees of neatness and care: some tests contained crossed out words indicating that a teacher had made a mistake when elaborating them, some displayed drawings and other “decorations” or “Good luck!” wishes printed on them, some were printed on scrap paper, others on clean sheets of paper. However, these different styles were present in both schools.

In terms of content, the tests given to children attending the same grade in **HF** and **LF** also displayed exercises of the same kind.

Teachers’ perceptions of pupils and their families:

Attention to this topic was developed by the researcher during the process of interviewing teachers for the first time. While talking about other matters, teachers constantly expressed views on the communities that their schools served. They either judged the communities on their own or made explicit comparisons with other school communities they knew.

A direct question was asked about the topic in the second interview carried out with the teachers (see Annex 4). On this later occasion, the researcher approached the teachers explaining that more information was needed on the relationship between the school and the community, to enhance the understanding of the schools’ cultures. Teachers were asked their opinion about pupils’ families. The question was phrased as not to direct their description of the school community to any specific aspect. However, if teachers’ answers did not refer to the socio-economic features of the community, they were asked to mention their opinion on this matter later.

Teachers differed in relation to the evaluation of the socio-economic level of pupils that attended their schools and their families. Teachers were classified in three groups according to the content of their answers (second level of analysis): “Low level”, that included teachers who considered that the majority of families connected to their school were very poor; “Medium level”, which included teachers that considered that the majority of families did not belong to the lowest socio-economic group, although

being relatively poor; and “Mixed”, that included the teachers that considered the community to be a mixture of families of low and medium socio-economic level.

The following quotations are from teachers classified in the “Low-level” group:

The children are poor, right? They are needy children. The majority of families are unstructured, the parents are separated or the mother have lots of children in school or even out of school. And they work all day long and there are children that stay in crèches. Some children from Year 1, for instance, used to stay all day in crèches and now they come to school. Several of the older ones take care of their younger brothers and sisters at home. Of course it happens more in certain classrooms than in others. There are classrooms in which children’s families are better organized, both parents work, they have an income. So it enables them to have a better life. But I think the majority is extremely needy! **H7**

I would say that the characteristics of our clientele is that they belong to the low-income group. It is a clientele that comes to school and presents difficulties. I think that drop out and the grade repetition are consequences of that. One notices that the majority has low income. **H6**

One notices that the economic problem is one of the biggest and is reflected in learning, right? They are children that have to work, have to take care of their brothers and sisters, or stay home alone all day. Or they have problems at home: parents that are separated, alcoholism... or the parents are illiterate and the children receive no help at home and are restricted only to the help they get from school! There are lots of needs! **H*3**

Teachers classified in the “Medium level” group stated that:

I think that most families are more or less well structured...socially, in terms of money... they are not very needy. We have a few pupils that belong to needy families but the majority doesn’t. It is a good community! I don’t know, I like it! **L4**

I would characterize this community like this: it is a community that has material possessions. One cannot consider it poor! It is middle-class. They have their own homes, their little cars, their money, and all that, in financial terms right? But culturally they are a bit low. **L*2**

I think it is very good! The community here is good! If one compares it with other schools, our pupils here are very good. Very good! And the community as well. We are well accepted in the community as teachers, and the pupils also, if I compare them with the pupils from the others schools I worked for... It is great to work here.

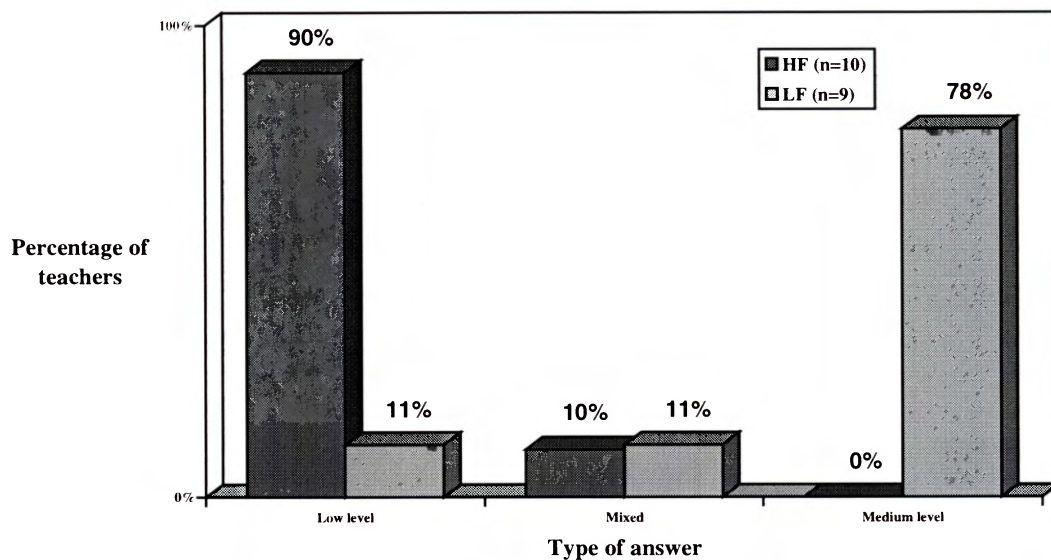
Our socio-economic level is very good too! **L2**

Teachers classified in the “Mixed” group gave the following type of answer:

Well, in relation to the income aspect, I think they are more or less even, right? There are not only children that don't have food to eat, needy children, but there are not only children that have everything. It is balanced. There is not only one income level. It is varied. This is what I have observed. **L5**

Figure 6.9 illustrates the distribution of teachers in **HF** and **LF** according to their evaluation of the communities their schools served.

Figure 6.9: Evaluation of communities by teachers from HF and LF (Pelotas, 1995-6).



Most teachers in **HF** stated that the community their school served was composed by families of low socio-economic level and most teachers in **LF** considered that the families served by their school were of middle socio-economic level. In this respect it is important to stress that such a differences in perception was not due to different degrees of exposure to the communities, as the majority of the teachers in **HF** and in **LF** lived in the communities served by their schools.

When shown the photographs of children from their schools, teachers were asked whether they thought such photographs were good illustrations of their descriptions of the pupils. Three teachers in **HF** said that the children did not look as poor and needy

in the photographs and seemed surprised by the latter. No teacher had such a reaction in **LF**.

The same tendency observed in **HF**'s teachers to focus on children's life histories when talking about academic failure was observed when teachers were asked to comment on the photographs: five teachers (50%) from this school spontaneously told facts about children's private lives, when seeing them pictured in the classrooms. Only two teachers (22%) from **LF** did the same.

The striking aspect of teachers' perceptions of the school communities is that it contrasted with the data collected in the school files about the socio-economic situation of pupils' families in **HF** and **LF**. The assessment of the socio-economic level was carried out through a proxy variable - level of schooling of parents. Nevertheless, there was an indication that the level of parental education was higher for the families of children attending **HF**. Therefore, there is a possibility that they were be wealthier than those attending **LF**, as there is a positive correlation between schooling and income.

As mentioned earlier, the incomplete records in **HF**'s files were reported to belong to children from the poorest families by the schools' staff. The percentage of incomplete records in **HF** was 10%, implying therefore, that there must be at least similar percentage of very poor families in the community this school served.

It can be hypothesized, therefore, that the contact with this group of children from very low socio-economic background influences the perception staff has of the whole student body of **HF**. Perhaps the poor state of conservation of **HF** (which can be observed through the photographs in Annex 10), also influences staff's perceptions of pupils.

Next, the evaluations of the two schools by teachers, pupils and families are going to be described.

6.2.3 Evaluations of schools:

The evaluations of the schools were examined through teachers' opinions about schools' qualities and about staff's relationships investigated during the interviews.

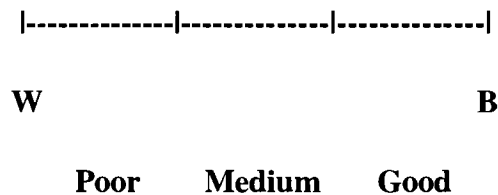
Teachers were also asked to make suggestions for the improvements of their schools. The opinions of the families about the schools were investigated during their interviews as well. Pupil's opinions were collected through their written essays.

Evaluation of schools by teachers:

As mentioned earlier, after the interview, Instrument 2 (Annex 3) was administered to teachers. They were asked to locate their schools between the two extremes of the line between the worst possible school (W) and the best possible school (B).

- Evaluation through Instrument 2:

In order to analyze the results, the lines were later divided into three portions and teachers' evaluations were examined according to the position they placed their schools. The researcher decided that if the school was placed in the third nearer the B end, it was considered to be "Good" by the teachers. Schools placed in the third closest to the W end were considered to be "Poor" by the teachers. Schools placed in the middle portion were considered "Medium" by the teachers, as shown in the next diagram.

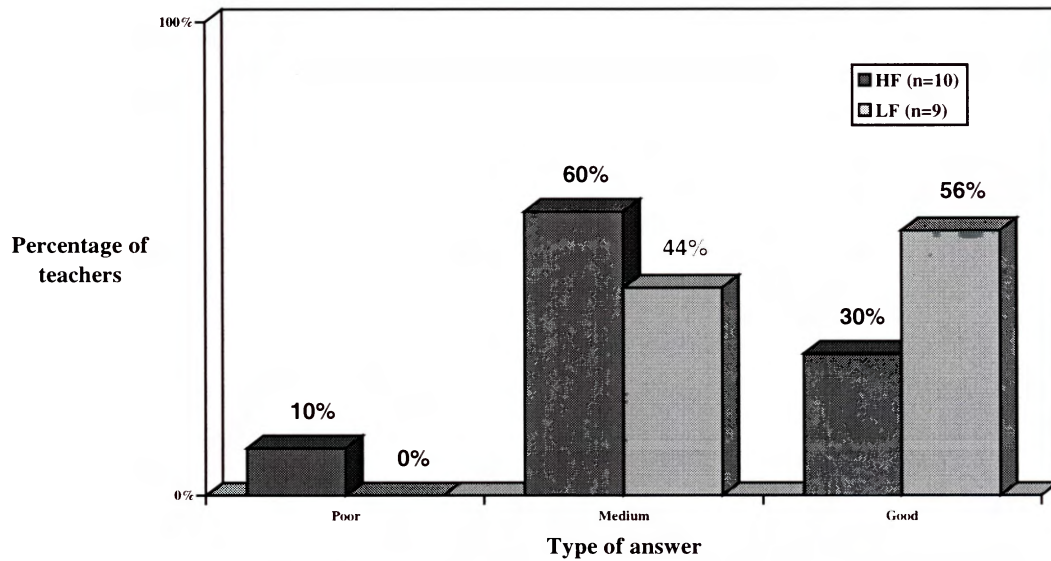


The marks made by two teachers from **LF** fell right on the line dividing the medium portion and the good portion of the line. The researcher decided to place them in the group that considered the school good, due to the content of their comments about the school. As the dividing line represented the upper limit of the medium third, it was considered that the school was nearer to being judged good than medium. All the other marks were clearly within one of the spaces. One teacher in **LF** (L*3) refused to mark the paper. However, she said that the school was very good and was included in the "Good" group.

Figure 6.10 shows that teachers in **LF** tended to make a better evaluation of their

school compared with teachers in **HF**.

Figure 6.10: Evaluation of schools by their teachers in HF and LF (Pelotas, 1995).



After the evaluation, teachers were asked to identify the schools' qualities.

- Schools' qualities:

When asked to identify the schools' good qualities that led them to place the institutions at some distance away from the W end of the evaluation line, most teachers included a series of reasons in their answers. A greater variety of qualities were mentioned in **LF** as compared with **HF**. In addition, seven teachers (70%) in **HF** criticized the school, while answering this question. Such critical comment, illustrated by the following quotation, was not observed among **LF**'s teachers, confirming the good evaluations they made of their school.

I'll have to include positive and negative things. There are teachers that have been working here for a long time. So, they use that methodology, they work in the same way they worked 20 years ago. In exactly the same way! Nothing has changed! So I think that this is a bad thing. It has to change, right? People don't accept changes. However, there is integration between the staff. They relate well. And there are teachers that are trying to improve. Some realized that times are different and are trying to change things in their classrooms.

H*2

Teachers were classified into three categories according to the main feature of their answers related to the qualities of their schools: Regulative, Instructional and Mixed (Regulative and Instructional combined).

The teachers classified as Regulative gave answers that emphasized social order aspects related to the staff and pupils. Examples of regulative answer, are illustrated by the following citations from the two Headteachers:

Well, I think the school is not of that kind that is full of problems, mostly disciplinary problems, conflict among the teachers. I've seen schools where teachers are aggressive to each other, every day someone goes to the Head to complain, or the parents go to the Secretariat to complain. I know we have to improve in a lot of respects, but what should be improved is not much. Things are in a good level! I'll judge it to be good, not excellent. **L*1**

Well, I think we have a lot of good people, this is one thing. We have people that are involved in the school, that believe that the school is capable of... that believe that the school can improve. We have an excellent group of helpers. We have excellent children! If we make an evaluation we'll see that there are lots of good people here, right? **H*1**

The answers from teachers classified as Mixed gave answers that included both regulative and instructional aspects, as illustrated next:

We have good things! Fellowship, cooperation from many...from certain colleagues, not all, right? But there is some. The Heads, in general, they understand. They help when they can. Not all of the Heads, but the majority of Heads. Since I started here, there have been five. I think this is a good school, it provides you...there are good moments for people to chat, to get updated... When one wants to take a course or asks to take a course, the school allows it. **H1**

The location of the school. I'm a suspect because I live here (laughs)! There are problems here, right? There are people that have problems, but it is still a place where people have families, have this kind of structure, right? I think this in respect to the location, right? The area here, for me, for us to have classes is not ideal, but we are still much better than lots of other schools in terms of my area, Physical Education. I think that the type of pupils we have here... they have some difficulties, but the majority have conditions to make progress. It is an average school in everything, right? I think that we have teachers that are very good. There are pupils that are outstanding in terms of writing essays, in Portuguese, right? In the Math's Olympics, we always have

pupils that get classified. In the Science Fairs⁵, we always have pupils, you know, that are outstanding. I think that there is a lot of potential and that if you take a look here, in terms of Physical Education, there are pupils that have, in terms of sports, they have a hell of a potential. You sometimes see, you see and if you start to analyze, it is incredible! **L4**

Teachers whose answers were classified as Instructional referred to the academic aspects of their school, as can be observed in the following extracts:

We try to do a good job with the pupils. Work, we are trying to improve the work. I think that is it. **H6**

It would be the teachers. Because we have excellent professionals here. The Science teachers do wonderful jobs! The Physical Education teachers too!
L*2

In Figure 6.11 the distribution of the teachers in **LF** and **HF** according to these categories can be examined. Even though the majority of teachers in **LF** included regulative aspects in their answers (Regulative and Mixed categories together), a considerable number also mentioned instructional aspects (Mixed category). In **HF**, a different tendency can be observed: a small percentage included instructional aspects in their answers (Instructional and Mixed categories together). The answers of most teachers from **HF** were classified as Regulative. One teacher from **HF** did not answer the question directly.

Examining the specific contents of the answers classified as regulative (either purely regulative or mixed), further differences can be observed between the two schools (second level of analysis). The regulative aspects mentioned were organized according to the following five groups: “Relationships”, including answers that mentioned the good relationships among staff; “Pupil”, including the answers that cited the fact that school had “good pupils”; “Effort” that mentioned the effort of some⁶ teachers to improve the school; “Good environment” that praised the good environment of school, that is liked by the pupils and is beneficial for them; and “Others” including other types of content related to the quality of the Headteacher, the meals and the state

⁵ Every year there are these kinds of Mathematics and Science competitions in town.

⁶ It is important to stress that this group referred to the effort to improve by **some** teachers rather than by all of them.

of conservation of the school. Figure 6.12 illustrates such groups.

Figure 6.11: Teachers' opinions about the qualities of their schools in HF and LF (Pelotas, 1995).

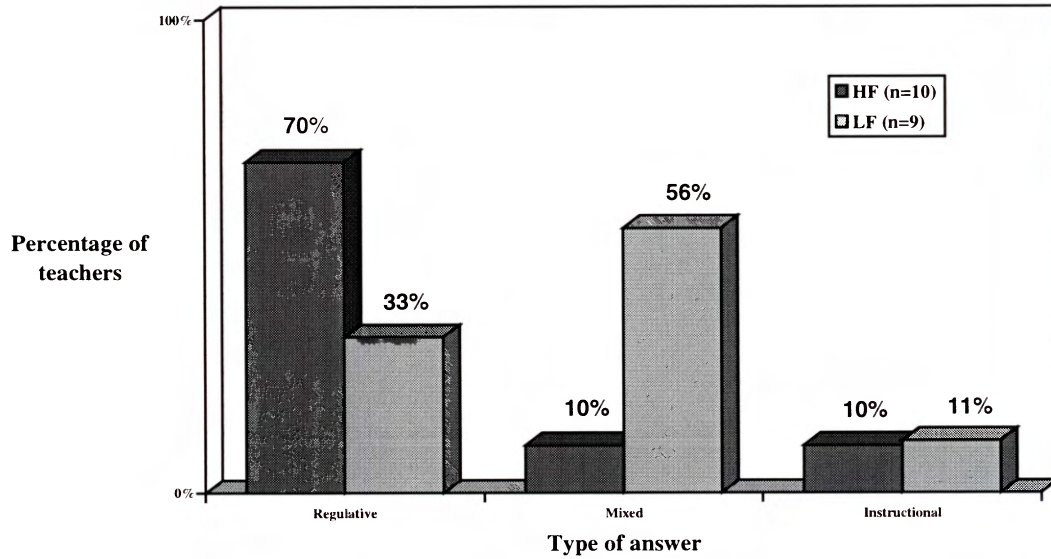
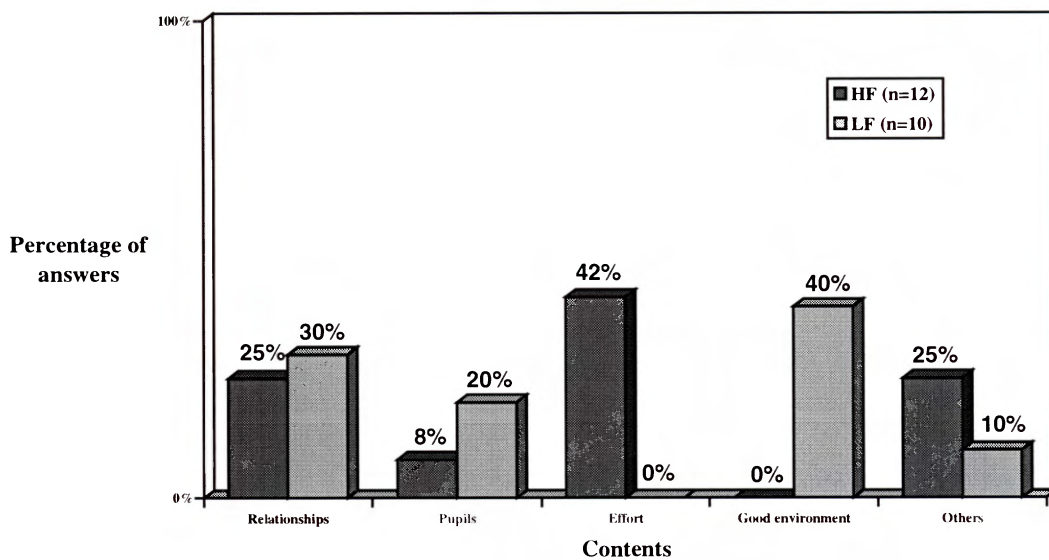


Figure 6.12: Teachers' opinions about the qualities of their schools in HF and LF: regulative contents (Pelotas, 1995).



The predominantly regulative character of **HF**'s culture can again be observed in

Figure 6.12. The emphasis on relationships and moral aspects of teachers' conducts marked the answers from **HF**'s teachers. Social order elements were also valued in **LF**. However, teachers in the latter school valued instructional aspects, like the quality of teachers and the good things the school could offer to their pupils more often. Such a tendency in **LF** reflects, once more, the good opinion that teachers had of their school and the characteristics of the "learning enriched" schools described by Rosenholtz (1991, pp. 34-5). In such schools, instructional aspects are discussed and valued by teachers.

The same characteristics described above for the main study's schools were observed in the pilot's schools: **LFp**'s teachers valued the instructional qualities of their schools although the more frequently mentioned qualities were regulative. **HFp**'s teachers were almost exclusively concerned with regulative matters.

To explore further teachers' opinions about the relationships among the staff in their schools, the answers to the question dealing with this topic will be examined before analyzing the rest of the information collected through Instrument 2, that is, the suggestions for school improvement.

- Evaluation of staff relationships by teachers:

Teachers were classified into two groups according to the type of answers they produced when asked for their opinions about the relationships among the staff in their schools: "Good" and "Difficult".

A few of the teachers classified in the group that gave answers of the "Good" type mentioned some problems in the relationships although their overall opinions were positive. The following quotations illustrate the answers of teachers classified in this group:

Look, I consider the relationships...how can I tell you? a little heterogeneous, but the majority relates very well with each other and with the Head. Very well! The relationships among the teachers are also good, right? but there is always someone that... **H6**

I think it is normal. I do not have any close relationships but I'm not

indifferent to people. I do my job. If we have something to exchange we do it. I always exchange things with Rose, because she is more accessible, right? The other two Year 1 teachers are less open. And I speak more with people I identify with and less with people I don't have affinity with. **L5**

The answers of teachers classified in the "Difficult" group stated that the relationships among teachers were either not good or complicated, as the following examples illustrate:

The relationships among the teachers are not very good. People worry too much about other people's lives instead of worrying about their work. They keep track of other people's punctuality, of what others are doing, whether the others were absent or not, this kind of silly things that, I think, leads to nothing. **H*2**

Look, I'll be honest. I don't know whether it is because this is a big school... I worked in smaller schools and the people were more united. I think they are not united here! **L6**

The relationships among teacher are a little complicated, right? I don't know... One cannot exclude personal relations from work relation, but I think that what predominates is the personal matters. People are not professional. There are groups of people like that. **H7**

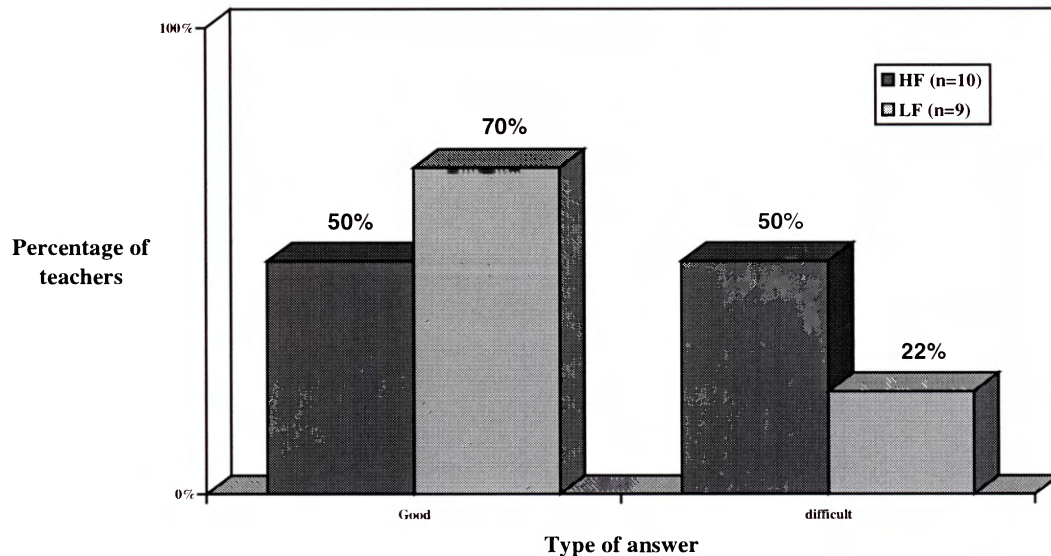
The distribution of teachers in each school according to their opinions about staff relationships can be examined in Figure 6.13. Most teachers in **LF** considered that the relationships in their school were good. For **HF**, the distribution was balanced.

Relationships among the staff seemed to be an important issue in **HF** and in **HFp**, although in the latter the recent leadership crisis might have been responsible for the emphasis on the topic. According to Rosenholtz (1991, p. 144) teachers that cannot be rewarded through the performance of their pupils tend to turn to other matters for reward - relationships with colleagues, for instance - and this is what might have happened in the high failure rate schools. Teachers in both seemed to be attentive to matters related to children's background or to personal relationships - regulative matters - rather than to instructional matters, most of the time.

Some teachers in **HF** thought that good relationships were one of the school's qualities. At the same time, there was a group that judged relationships to be difficult.

Four teachers (40%) said that there were subgroupings in this school. Two teachers (20%) complained that there was a group of people who had privileges and four teachers (40%) criticized the amount of gossiping and worrying about other people's lives that went on in HF.

Figure 6.13: Staff relationships according to teachers from HF and LF (Pelotas, 1995).



In LF, the split between the group that worked with classes up to Year 4 and the rest of the teachers was often mentioned and attributed to teachers working in different shifts and carrying out different types of work: class teaching against subject teaching. The answers to the question of relationships in LF were shorter and more direct, perhaps indicating that this was not a very relevant issue in the school's culture.

Next, teachers' suggestions for the improvement of their schools will be examined. Such suggestions include non-guided and guided opinions.

- Teachers' suggestions for improvement of the schools (non-guided):

After the teachers indicated the place their schools currently occupied on the continuum line between the best possible and the worst possible schools (Instrument 2), they were asked to indicate the place the schools had the potential to occupy if improvements were made. Next, the teachers were asked to give suggestions for the

improvement of their schools within a range of realistic possibilities. First teachers made spontaneous suggestions and later teachers were asked what could be changed in relation the following specific aspects: the building, the teaching process and the schooling of working class children - the group of pupils that present higher rates of failure.

Teachers were classified into four categories according to the types of improvements they suggested for their schools. The categories were: Instructional, Regulative, Material and Mixed.

For the Instructional category the suggestions referred solely to aspects of the instruction process itself, as exemplified in the following quotation:

I think we need someone to guide us. We are a bit loose! I think we need better pedagogic guidance. It is not that this guidance will solve all our problems, it also depends on who is doing the job and all. I think we need to meet more often and try to establish certain objectives and criteria. They don't need to be grand, aimed at becoming the best school, because for that we would need to have different teachers. I think we have lots of bad teachers! Even if we worked together it would be difficult, because there are other things involved. I don't think we shouldn't talk about amenities, buy clothes⁷, or things of this kind during break time, but if we had other occasions we could meet. I think we should meet, talk about certain things, and shake people up. It is not enough to go to a lecture or participate in a seminar about education! **H7**

Teachers that suggested improvements of a social order, either related to the teachers or to the pupils, were classified as Regulative. The answers focused on features such as relationships, discipline and positive attitudes and behaviours. The following quotations exemplify this type of answer:

Well... to finish the privileges! and treat everybody as equal, right? Because there are differences. I don't know why, but there are! To treat everyone the same way and to get everyone's opinions when a project, a reform...get everyone's opinion. Unite more, since we are not united. **H1**

I think it is related to discipline, in the playground. Sometimes the pupils occupy all the space of the school and the teachers don't have a space for themselves. Sometimes the teachers want to go to the staff room upstairs and

⁷ It is a common practice for schools to be visited by vendors during break time. They meet teachers at the staff room and display their wares.

the pupils are all there, sitting on the steps. When they are in the playground they should queue up to enter the classrooms. They have to be organized. We have to teach them. **H*3**

Teachers that mentioned solely material improvements for their schools were classified in the Material category. Their answers included suggestions for the acquisition of items like stationery and basic classroom materials for children, computers, the increase of staff salaries, and the improvements of the buildings, meals, and hygiene. The following extract illustrates such a category:

I think that the Municipality should provide better conditions for this school, and for the other schools as well. There are lots of difficulties here in relation to the school meals, to hygiene. We need more funding for that. **L2**

The teachers that were included in the Mixed category group mentioned a combination of two or even three of the other categories. In the next quotation, for instance, a combination of instructional and material aspects in the suggestions for improvements can be observed:

Well, I would start with the material part. There is a lot to be done! Reforms to the building and even build new bits, which are very difficult things! Because next year there will be lots of pupils who will be unable to get a vacancy here. So, we need to improve the physical side of the school. And to improve teacher quality as well! I cannot just blame the educational authority. I think we have to improve. I think that there are teachers who don't have the minimum conditions to be teaching. **L*1**

The following interview extract illustrates a combination of the three categories - Instructional, Regulative and Material:

I think we would need external support. We need people from outside to give us a hand. We would need people to come here to lecture, because we have tried. If there are seminars and lectures we try to make teachers participate, listen. Some took courses last year. There is a teacher here that, when she first started... My God! One day I cried so much when I went back home. I thought: My God, how can someone treat a child like that? A six years old child! The only thing the teacher did not do was to hit the child. A great emotional unbalance! And this person has changed since she did a course. But we also need material support. If we got more things, if we didn't have to fight so hard to get things, paper, matrices. We spend a lot of energy to get anything. And if we didn't have to worry about these material things we would have more time to go and look for someone to come to school to lecture, to talk to the teachers, to bring new ideas. Because no one will listen to our own people! **H*1**

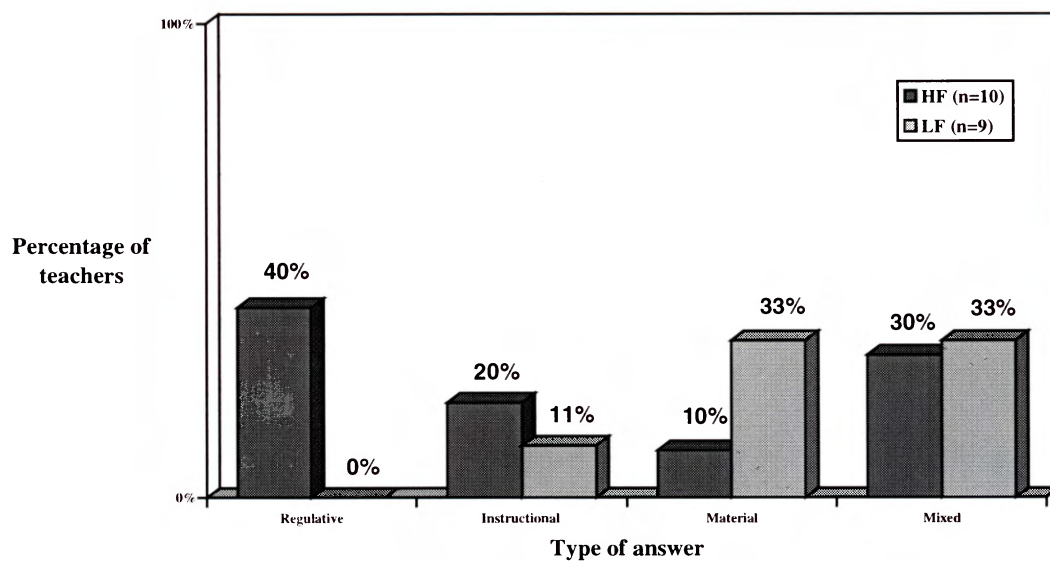
Two teachers from **LF** did not make any spontaneous suggestions for improvements,

claiming it was difficult to specify anything. Both had classified their school as good earlier and only mentioned improvements when directly asked about specific aspects. L1, for instance said:

To improve... it would be perfection. There are always things to improve, always a possibility. Perfection is difficult to achieve, right? But there is always a possibility to improve, but I don't know in what sense. **L1**

The classification of teachers according to the types of suggestions for improvement that they made can be examined in Figure 6.14. Although the number of answers from **LF** is small, a tendency to focus on material and instructional aspects can be observed in this school. In **HF**, on the other hand, there was a tendency to focus on regulative and instructional features.

Figure 6.14: Spontaneous suggestions for improvement of their schools by teachers from HF and LF (Pelotas, 1995).

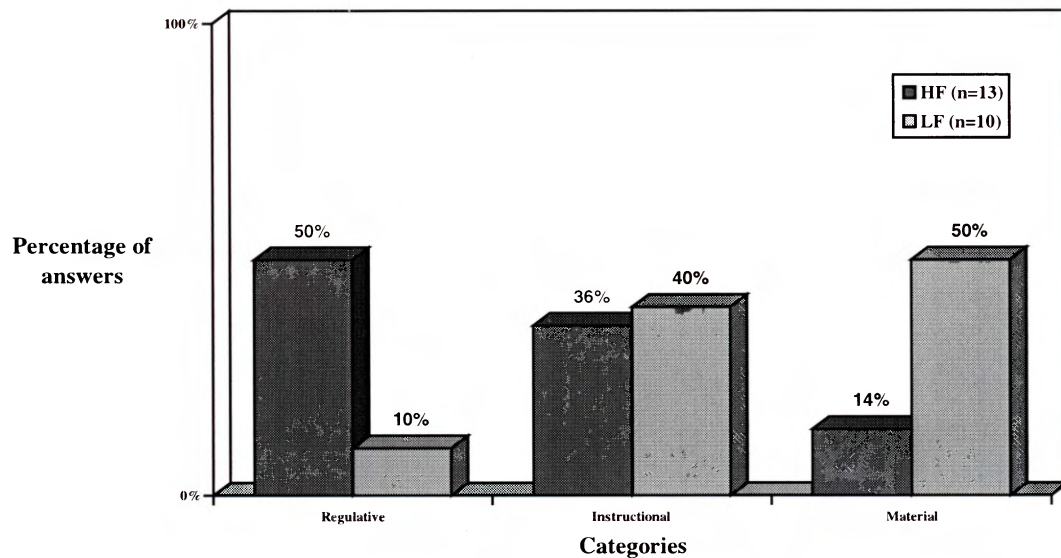


When focusing on the number of times each category was mentioned (Material, Instructional or Regulative), either mentioned by itself or in conjunction with others, the regulative tendency of **HF**'s teachers was again confirmed. Teachers stressed mainly aspects of social order and relations as needing improvement. Figure 6.15 illustrates such a tendency.

One striking finding is that, although the physical conditions of **HF** were worse than

those of **LF**, only two teachers in the former suggested material improvements in their school. The improvement of physical appearance was, nevertheless, an important aspect mentioned in **LF**, perhaps indicating again the existence of pride and care about the school on the part of its teachers.

Figure 6.15: Spontaneous suggestions for improvement of their schools by teachers from HF and LF: only Regulative, Instructional and Material categories (Pelotas, 1995).



- Teachers' suggestions for improvement in the building (guided):

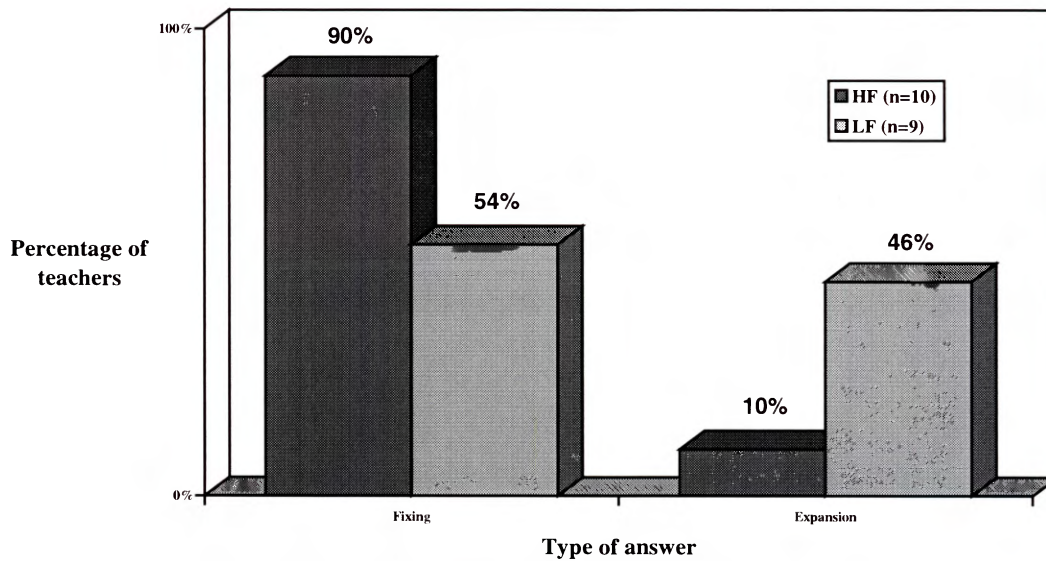
The answers to the question about possible improvements in the buildings were classified into two content groups (second level of analysis): "Fixing" and "Expansion". Figure 6.16 shows the frequencies of the two content groups in each school.

The answers classified as "Fixing" included suggestions to improve the general appearance of the schools and to fix doors, windows, floors and blackboard, as illustrated by the next quotation:

The walls in our classrooms are badly painted, they are dirty. The cleaners wash them but the dirt is ingrained and doesn't come off. So, it is fundamental to paint them. The windows also need repairing. The one in the library cannot be opened because it might fall on top of people. **H6**

I would reform the classrooms, I would paint them, because they are very dirty. I would put glass panels in the windows that don't have them, I would try to fix the drips. **H1**

Figure 6.16: Suggestions for improvement of their schools' buildings by teachers from HF and LF (Pelotas, 1995).



The answers classified as “Expansion” included suggestions for building new rooms for classrooms, for a library, and to install the video-cassette equipment, as exemplified next:

The building needs expanding, right? Because every year it is the same problem: children trying to get a place here and there are no vacancies. The administrators know that certain people need to have their children in this school. What do you do, then? So we end up with overcrowded classrooms and it becomes difficult to work. **L5**

A bigger playground is fundamental, right? Because when there are two or three Physical Education teachers in there it becomes impossible. They disturb the activities that are going on in the classrooms. We need a library urgently! We even thought about reducing the number of classrooms to organize a library in one. We need it to be in a separate room where pupils could go to when they needed. And we need a room to install the video cassette player. There is a shop that lends us videos but each time we want to show one it is a hassle: we have to take the machine back and forth and it

gets spoiled. L6

Teachers presented different patterns of answers in the two schools. A large number of teachers in LF mentioned that the school needed expanding. Their answers gave the impression that they were ambitious, wanted the school to progress, to have more space and resources. In HF, there was a different emphasis. Most teachers referred to the need to paint the school, fix windows, door handles and blackboards. Only the Deputy Headteacher mentioned the old and inadequate partition that divides the large school hall into two classrooms, as a problem to be urgently solved. The need to expand the school was expressed only by one teacher, illustrating the lack of ambition that was present in HF.

Teachers' answers concerning what could be changed to improve teaching were the following:

- Suggestions for improvement of teaching (guided):

The answers were classified according to their contents (second level of analysis) since the topic was specifically instructional. The groups that emerged from the data were the following: "Courses", "Material", "Supervision" and "Working in teams".

The group classified as "Courses" included answers that mentioned the need to improve teachers' training, mainly through courses that would enable them to be more creative and up to date⁸, as the following quotations exemplify:

I think teachers should be recycled. There are several teachers that are very old-fashioned, they don't accept changes. They say: "Things are like this and that's it!" There are courses and things, but people never want to participate. They say that they have been working like that for years, why change? H*2

⁸ The teachers that mentioned the need to improve their training, in the two schools, however, stressed the difficulties of doing courses. They complained that the Secretariat of Education did not facilitate their in-service qualification. When teachers decide to go on a short course they either have to work on Saturdays or at the end of the semester to cover the lost working days. The teachers reported that sometimes it was possible to get a substitute teacher. However, their presence was not a guarantee, as other teachers might be absent in the same days. Teachers claimed that, when they had to organize extra school days, parents and pupils became upset.

Teachers should be given the opportunity to improve their training. They should be constantly seeking new things. But on their own, they can't do much, it is difficult. The Municipality has been doing something that is very useful, at least for me, in my opinion: the seminars. Although they are short, only three days, they are excellent. The last one was wonderful! The lecturers were very good; they pointed out things that we had never realized.
L*3

The answers allocated to the group "Material" stressed the need to acquire books, and other didactic sources, as well as the need to increase teachers' salaries, to improve the teaching in their schools. The next quotations are examples of the answers classified in this group:

There is a lack of resources. What do they (*referring to the Secretariat of Education*) give you? Sheets of paper! But in restricted amounts... Chalk? I think, we are buying it ourselves. I don't think it comes from them. And that is all! I mean, how can the teacher do a good job. There is no way! No way! If we have to make a poster, we cannot afford the paper. And the pupil cannot afford it either. And I think we need more assistance in terms of didactic materials too, right? **H*3**

I think we also need material resources, which the teachers don't have. And a library, right? I think that if we had a library where they could work, research, where the pupil could read... **L4**

The group "Supervision" contained answers that expressed the need for a person to guide and supervise the teaching, as illustrated next. **LF** had a Pedagogic Coordinator. Therefore, the answers classified as "Supervision" were not present in this school.

If each teacher could teach the contents at the same pace as the other teachers working with classes of the same grade. We plan the contents together but don't teach them at the same pace, don't develop them together. But to do this we would need a coordinator, right? This would be very good for the school! **H3**

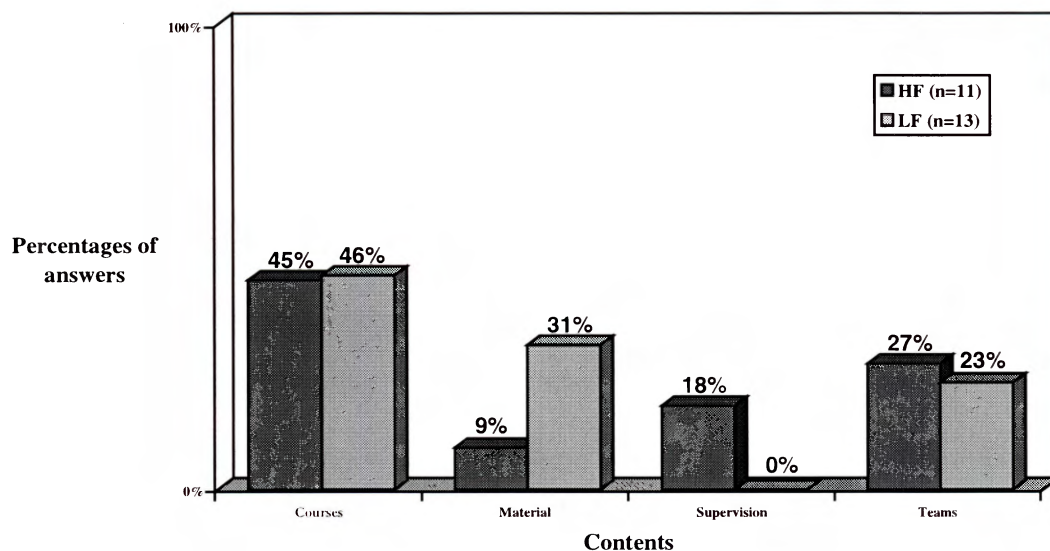
The group classified as "Working in teams" suggested that such a procedure would improve the teaching in their schools, as the next extracts (as well as the previous) illustrate:

I think that if there were more exchanges between us teachers...to carry out more varied activities, to have new ideas. If we could make only one plan and follow it, exchanging ideas. There is none of this here. Each person works for herself! **H1**

Look, I think that although we do some group work among ourselves, if we did more, if we worked in a parallel manner, with more integration in terms of teaching, of course, it would help. **L2**

Figure 6.17 illustrates the frequency of answers in the two schools. The distribution of the answers is similar in **HF** and **LF**. However, an emphasis on the wish for material improvements can also be noticed in the latter.

Figure 6.17: Suggestions for improvement of teaching in their schools by teachers from HF and LF: contents (Pelotas, 1995).



Last, teachers' suggestions for the improvement of the performance of working class children are analyzed.

- Suggestions for improvement of the performance of working class children (guided):

The last question in Instrument 2 related to improvements concerning the attainment of working class children, the most affected by grade repetition and drop out. Teachers were classified, according to their answers, into three categories at the first level of analysis: "Don't know", Regulative, and Mixed (Regulative and Instructional). Two teachers from **HF** did not answer the question.

The teachers that gave answers categorized as “Don’t know” either said they did not know what their school could do or that the question did not apply to their schools, as the next examples demonstrate:

These pupils come to school and they are not motivated. They seemed disillusioned with life. Their parents spend the whole day at work; they grow up practically alone. I don’t know what the school could do for them. I sincerely don’t know! Besides what we do in the classrooms, I don’t know what the solution is. **L*3**

It is not the case in our school! **L2**

The teachers classified into the Regulative category made suggestions related to matters of social order. The examples of answers by teachers within this category will be presented later, when the different contents included in the category are discussed.

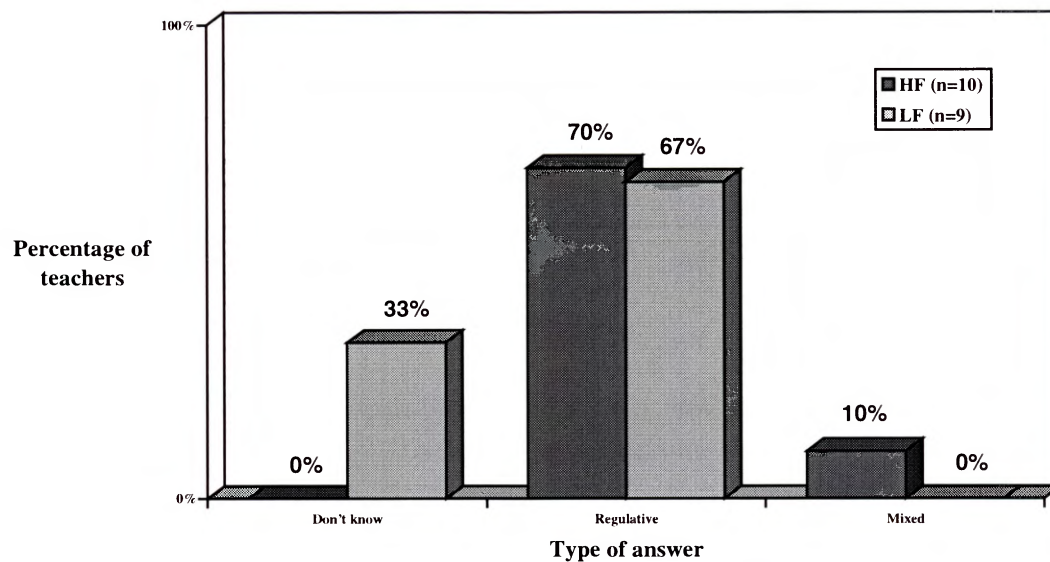
The teacher classified in the Mixed group included both regulative and instructional aspect in her answer:

I think we have to pay a lot of attention to these children! The kind of children we have in the school will drop out for any small reason. They have no support from home and they are loose. They learn things essentially in the school. Many times you give them homework and they don’t do it. They don’t have conditions to do it at home. So the school has to understand their situation and try to do its work as best way it can. It has to do a work that has good quality, so the kids can learn during the time they are in school. The school has to try to maintain the kids in it, right? We have to call the parents to come to school even if they say they don’t have the time to come or that they cannot follow the schoolwork. They have to understand how important education is for their children, even if for them it might not have been so. **H7**

Figure 6.18 illustrates the percentages of teachers classified in each category (first level of analysis) in the two schools. Teachers in both schools tended to offer suggestions of a regulative nature.

When the specific contents within the Regulative category were analyzed, three types of answers were encountered (second level of analysis): a) regulative (explicit); b) regulative (ambiguous); and c) Mixed (a combination of the two).

Figure 6.18: Suggestions for the improvement of the performance of working class children in their schools by teachers from HF and LF (Pelotas, 1995).



The group of teachers that gave “explicitly regulative” answers suggested moral and therapeutic measures to improve the performance of working class children in their schools. They mentioned that parents’ mentality or attitudes should be changed. Some teachers recommended that the children and their families should be referred to counselors or social workers for help. The following quotations exemplify the group:

Look, the school is not equipped for that! We have our counselor and she deals with this question, but I think we needed a bigger team, because we are only dealing with the most salient cases. What about the others who are not so salient? **L*2**

I think that we should go to these children’s homes - maybe people from the Secretariat should go - to find out what is the story of those children and bring them back to school. We should make the parents bring them back! *(she again told several other stories of different pupils that were taken out of school by their parents and sent to beg in the streets).* **H2**

The answers classified as “ambiguously regulative” included aspects of teaching methods or other academic measures to improve the performance of working class children. Teachers’ suggestions, however, revealed that their solutions for “failing” children were not directed to improving children’s academic performance. In fact, they had a moral, socializing character. The suggestions were aimed at keeping the “failing” children happy and busy in schools, separating them from other, more

successful, children. Another idea contained in these answers was keeping the “failing” children for longer hours in school so they could acquire the same values and skills teachers perceived in other children. The suggestions were not directed to improving teaching methods or other truly academic procedures. They indicated a disbelief in academic measures as solutions for the improvement of working class children’s performance.

The following quotations illustrate the answers of teachers classified in this group:

I think that the teachers that work with them should modify the type of work they do, try to make it more attractive, more interesting, and less tiring. Bring different things to school. At least they would be distracted and stop thinking about their problems, right? **H*3**

One can make things easier by preparing the teachers well, right? Having a good team. I think that helps! Someone that works well, a good Physical Education teacher, an Art teacher that develops their creativity, that can provide them with leisure. Some of those families don’t even have money to go out. Some people think that Physical Education only serves to fill in schooling time, so teachers can have some free time or something. I don’t think so. These children don’t play. **H5**

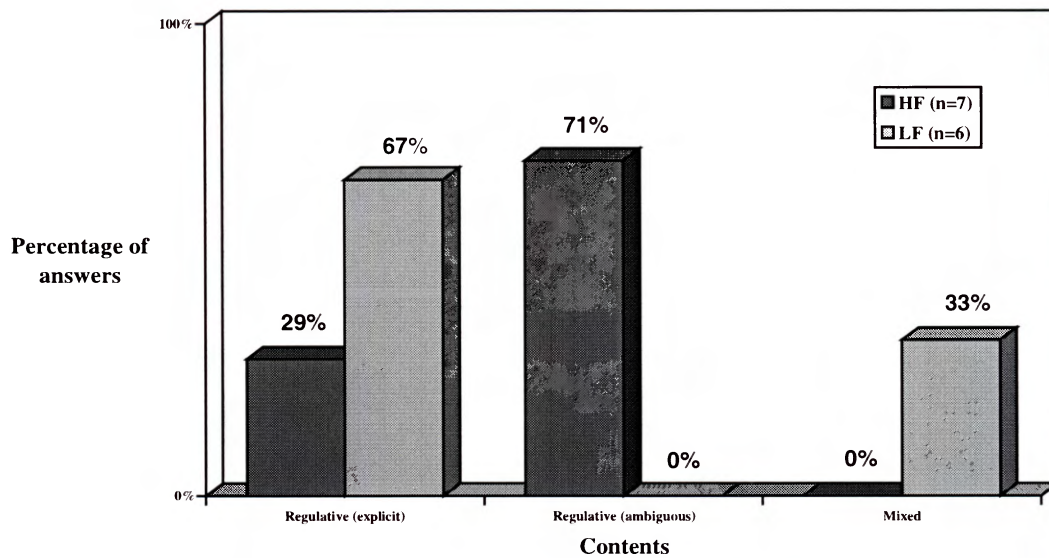
The ones that are repeating many times, I think that a selection should be made and one teacher, who is willing to, should be assigned to the group that is presenting more difficulties, right? I think that this could be a good thing. It would be good for the others as well, since the classes would be more homogeneous, and not so mixed. **H3**

The next quotation is from a teacher that gave a mixed answer, including both “explicitly regulative” and “ambiguously regulative” aspects:

Well, I don’t know. If these children could have some special attention during a certain period of time. It doesn’t have to be a special class, but they could have a teacher to help them with their difficulties. It doesn’t have to be one teacher for each subject; it would be good if they could have a teacher to help them in all subjects, to answer their questions. I think that the Counselor that started working here this year...it is a wonderful thing! They need her a lot. They are always holding our hands, hugging us, we can’t even move because they lack attention and love from their families! **L4**

Figure 6.19 illustrates the distribution of teachers from **HF** and **LF** according to the contents of their suggestions for improvement of working class children's performance, within the Regulative category (second level of analysis).

Figure 6.19: Suggestions for the improvement the performance of working class children in their schools by teachers from HF and LF: regulative contents (Pelotas, 1995).



The answers from **LF**'s teachers emphasized therapeutic measures, probably as a consequence of teachers' perceptions of the community: if there was a small number of really needy children in the school, they were to be handled individually, by the counselor or by social workers. Therefore, academic (instructional) measures did not seem to be needed.

As the rates of failure were high in **HF**, and the teachers perceived the community as needy, they seemed to consider the necessity of large scale measures, involving the school and not only the individuals. However, the emphasis on the organization of special classes and on longer hours of schooling (compensatory education) for the children that presented poor attainment, revealed that most teachers did not question their teaching methods in this school. Their instructional measures were not truly academic and indicate the presence of a degree of prejudice against poor children. A discredit with respect to the learning potential of the economically and socially

deprived children was revealed by teachers' suggestions. Such children were to be separated in special classes to learn what they could and not hinder the performance of other children.

Evaluation of schools by their pupils:

The evaluations carried out by pupils were inferred through the essays they wrote describing their schools.

The contents of the essays were initially analyzed according to the regulative/instructional aspects. Children that described their schools in terms of physical aspects or mentioned teachers' and colleagues moral characteristics were classified in the Regulative category, illustrated by the following extracts⁹:

My school is a bit small and nice. I have many colleagues to chat to. My teachers are good. My school is near my house. It has 13 classrooms and they have just fitted new doors, redecorated the toilets, built a new fence and put a gate in the school. There are 28 or 30 pupils in each class. My school's name is...(LF)

Today my school is much more better. It has many more things. My school, besides being great, is excellent. The Headteacher is nice. I see my school as very good today. I like to study in this school. I have to respect the school because it is good to study in it. I like this school very much. (HF)

The Instructional category included answers that mentioned aspects of the teaching or academic qualities of the schools even if regulative aspects accompanied them. The following quotations illustrate the category:

My school is big and beautiful. It has 13 rooms and classes from pre-school up to Year 8. The teachers are very good, especially Y. The name of my school is....

My school has a dinning room and a small snack bar. Do you know that the meals from the dinning room and from the snack bar are very good? My school is selling a tracksuit to the pupils and teachers with its name on it. My school teaches the subjects very well and in my classroom there are 28 colleagues that are my good friends. (LF)

I learned to read and write in this school. There are several teachers, a dinning room and toilets. I like this school very much and I never want to

⁹ Pupils' mistakes have been kept when reproducing their essays.

leave it because it is nice, I have lots of friends and there are lots of classrooms. I like to study in it. With the monitor watching the playground, there are no fights or arguments. The teachers, we think they are nice.

I am already attending Year 4 and all the teachers that I have had were demanding and always gave homework. I like the school the way it is. That's why I want to stay in it. (LF)

The majority of essays in both schools only contained regulative aspects. However, 31% (8) of the pupils in LF mentioned instructional aspects in the descriptions of their school. No pupils mentioned such aspects in HF.

When analyzing the essays in terms of transmitting a positive image of the school, it was observed that 73% (19) of the pupils in LF's class included only positive aspects about the school in their essays. In HF's essays, the proportion was smaller: 40% (6) of pupils only included positive aspects about the school.

The types of criticisms presented by the pupils also varied from one school to the other. In LF, children complained about hygiene, especially in the toilets. In HF the majority of complaints were related to the level of violence in the playground and to the need for improving the building and the hygiene of the school, as the next quotations demonstrate:

I consider my school as very good. The pupils fight and scream at playtime. I think that if I had to change schools I would, but I would stop studying. My school needs lots of changes, like buying a record player, painting, paving the playground, fixing the toilets, etc. If I were to dictate all the changes I would not have enough space in this sheet of paper. (HF)

My school is nice and I have many friends and my teachers are great, including the Physical Education and the Portuguese teachers. But there are things that I don't like, for instance, the toilets are very dirty, the milk is too sweet and the playgrounds are dirty although the cleaners keep sweeping it. (LF)

The more positive attitude of pupils from LF towards their school is also revealed through the number of essays that contained comments about the staff being good and about the warm feelings that pupils had towards teachers, Head and Deputy Headteachers, cleaners, cooks and monitor. Eighty-nine per cent (23) of the essays from LF contained some sort of compliment to the staff, as opposed to 33% (5) in

HF.

There were differences in appearance of essays from the two schools, although it is not possible to say that they illustrate the standard features of children's production in each school. The essays produced in **LF** were written in ink, on sheets of paper of the same size (pages of notebooks). The essays produced in **HF** were written either in pencil or pen, on pieces of paper of different sizes and shapes. There were more drawings and colourful decorations on the works by children from **HF**, perhaps indicating a more relaxed attitude towards schoolwork.

The average number of words in the essays from **LF** was 111.5. This average was 69.1 in **HF**. It is possible to hypothesize that children in **LF** were socialized into a culture that demanded longer essays, or more effort being put into work. However, the samples of essays were limited and the conclusions drawn from their analysis must be tentatively treated.

Finally, the opinions of the children's families about the schools will be presented.

Evaluation of schools by pupils' families:

The evaluations of schools by pupils' families, carried out during the interviews, were classified according to three groups of contents: "Good", "Good with complaints" and "Complaints" (second level of analysis).

The people classified into the "Good" group either used this adjective to describe the school or said explicitly that they had no complaints to make about it, though sometimes with a sharp edge:

The school is good. It's the children that are not interested! One can't complain about the school. (**HF**)

But a typical answer was "I have no complaints about the school".

The families that said the school was good, in spite of presenting complaints about individual teachers, were classified into the "Good with complaints" group. The next statements from two mothers, illustrate the category. Both started saying they had nothing to complain about the school. However, later they added:

The teacher didn't explain things! (LF)

He didn't like the teachers. He kept repeating. Sometimes there are teachers that pick on the repeaters.(HF)

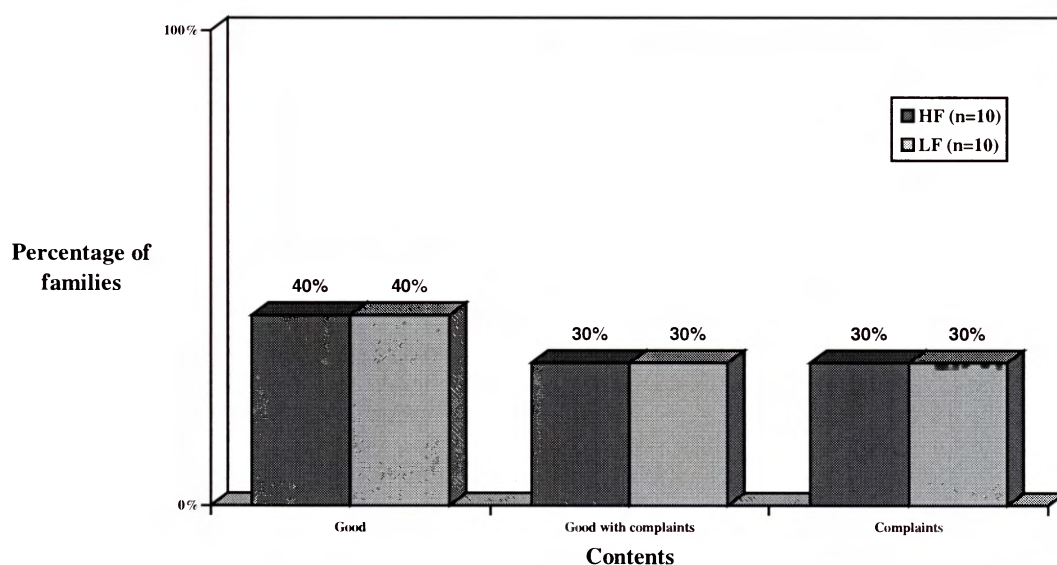
People classified in the "Complaints" group only presented complaints about the institutions, as the next quotations exemplify:

They don't care about the children in that school. The way they teach is not good. My other daughter improved when she moved to another school. (HF)

They are not making the children work. If the child doesn't want to study that is all right with them. If they want to go to sleep they can. They have to ask more from children. (LF)

As can be observed, answers from the families were short and simple. The distribution of families according to the type of answers they provided can be seen in Figure 6.20. It shows that there were no variations between the two schools in relation to the evaluation families made of them: most families thought the schools were good, in spite of the complaints in relation to individual teacher that were presented by some.

Figure 6.20: Evaluations of HF and LF by pupils' families (Pelotas, 1995).



Family members were also asked to express their opinions on the reasons why their children had failed (whenever it applied). The question was used as a means to confirm families' opinions about the schools by finding out whether or not they blamed the institutions for the academic failure of their children. There were no inconsistencies.

Families' answers were classified into four groups, according to their predominant contents: "Personal difficulties/diseases", "Lack of interest", "School problems" and "Mixed" (School problems and personal difficulties).

The numbers of answers to this question are smaller than the total number of people interviewed as three children did not fail and one mother from **HF** did not answer the question.

The "Personal difficulties/diseases" group included the answers that mentioned nervousness, impediments caused by diseases or specific learning difficulties as reasons for children's failure. The following quotations illustrate the category:

I'll tell you what. He repeats because in the middle of the year he becomes very nervous, and this doesn't let him attend the classes. We try to force him, but he doesn't want to go to school anymore. After being absent for a month, it is impossible to continue, right? (**LF**)

He was weak (*in terms of learning*), but he will pass this year! (**LF**)

He is very nervous. He has difficulties to learn, just like me! (**LF**)

The group "Lack of interest" included the idea that the child had failed because she/he did not pay enough attention or was not interested in school, as demonstrated in the next examples:

He's not at all interested! He is not interested in learning; he only wants to play! (**HF**)

He was a good pupil, but he is not making an effort at the moment, he doesn't pay attention. He gathers with a bunch of other boys and they don't

pay attention. (LF)

The “School problem” group included causes that were related to the schools and not to individual children, as shown in the following extract:

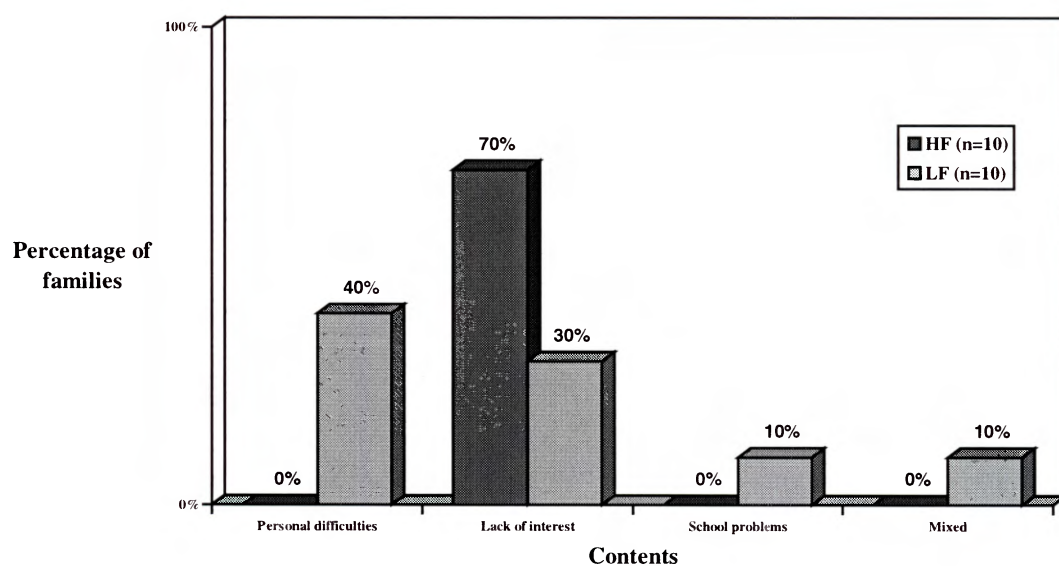
The teachers did not push him hard enough! (LF)

The family included in the “Mixed” group attributed the causes of their child’s failure both school and to personal problems:

He was weak (*in terms of learning*). He joined a group of rogues and then the teachers started picking on him. (LF)

Figure 6.21 illustrates the distribution of families according to their answers to the question on the causes for the academic failure of their children. The majority of answers in both schools were related to regulative aspects: the failure was attributed to individual problems or moral attitudes. However, there was a tendency for HF’s families to blame their children for lack of interest. Such a tendency can be seen as an indication of the families’ beliefs that failure is a matter of choice on the part of pupils, a question that involves their moral attitudes.

Figure 6.21: Families’ perceptions of the causes of academic failure of their children from HF and LF (Pelotas, 1995).



The families in **HF** did not “pathologize” the failure of their children, bringing up diseases and learning difficulties as its causes, as some of the families in **LF** did. Two families from **LF** attributed their children’s failure to school causes (one classified in the “School problems” group and one in the “Mixed” group). However, such school causes had a “regulative nature”, i. e., they were more related to teachers’ attitudes towards the children than to teachers’ academic performances. No families from **HF** thought that their children failed as consequence of inadequate schooling.

The book by Avalos (1986, p. 123) on other countries in Latin America claimed that parents generally present three main causes for their children’s failure: lack of interest on the part of teachers, parents inability to help their children and children’s learning or emotional difficulties. The findings from this thesis present a degree of similarity with those reported by Avalos, although the attribution of failure to pupils’ lack of interest did not appear to be significant in that report.

Before an attempt is made to explain the differences in academic performance between **HF** and **LF** through the differences encountered in their cultures, a summary of the investigation’s findings will be presented. The summary was organized according to the plan that guided data collection and analysis. Such a summary, however, will also include new information from the informal observations carried out by the researcher. As will be noticed, the study’s initial hypotheses were confirmed only partially. The findings indicate that the differences between **HF** and **LF** were centered upon aspects that were not initially expected to characterize the schools.

6.3 Summary of the main findings and discussion:

Alex, a young man from the 1982 Pelotas cohort, expressed the following opinion about **HF**:

It feels like home there!

The boy’s statement complemented by the words of the teacher named H7, presented earlier, can be considered as a summary description of **HF**’s culture. This teacher argued that people in school were “not professional”, meaning that they did not assume their teaching roles seriously.

The student teachers that were carrying out their practice in **HF** made similar comments about the predominantly “social culture” of this school as opposed to the more “instructional cultures” they found in other schools. The pupils’ essays describing their school were also centred around matters of relationships, moral character of people or physical appearance, and hardly mentioned any academic aspect of the institution. In **LF**, pupils mentioned such instructional aspects more frequently.

Data from different sources confirmed the researcher’s impressions about the characteristics of **HF**. The welcoming and cozy atmosphere, the importance given to personal matters and the concerns about relationships were so salient in this school that its “home” qualities, as defined by Alex, were easily identifiable. It felt as if the academic matters were secondary there.

One cannot deny that a caring environment - where good relationships are established - is an important element to create satisfaction and good working conditions for the staff and good learning conditions for the children. However, it seems that the aims of imparting knowledge and developing cognitive skills - which are essential objectives of schooling - are lost if such regulative aspects become the main focus of school’s attention.

As Connell et al. pointed out,

The school is not a *family*, and its functioning can be compromised if it begins to operate too much like one (Connell et al., 1982, p. 148 - emphasis in the original)

And later

if relations among all the parties are too cozy, the technical performance of the school can suffer, as pressure from parents for academic achievement wanes (Connell et al., 1982, p. 149).

Another aspect that demonstrated a degree of indifference to instructional matters in **HF** was the prioritization of teachers’ economic welfare over the quality of instruction pupils were receiving. The fact that classes were interrupted at any time to have children taken to the canteen to have their meals is another point to be mentioned in this respect. Meal times were not precisely established and the order of eating was random among the classes. The interruptions happened even when pupils were doing

written tests, indicating a priority of administrative over academic activities in this school. It is understandable that pupils had to take turns at the canteen, since there was not enough space to feed all of them at the same time. Nevertheless, no effort seemed to be made to plan the times of meals for each group in order to allow teachers to carry out their activities without being disturbed.

The degree of improvisation that was allowed to one Art teacher in **HF** can also be considered a symptom of low emphasis on instructional aspects. This teacher declared herself as “not trained in the subject”, and explained that she volunteered to take the post “just to help”. This teacher would give assignments to the children - like making a “free drawing using primary colours” and let the pupils spend about an hour working on a task that seemed to be worthless in cognitive terms. After one of such lesson, the teacher apologized to the researcher saying:

I have to fill in the time somehow!

Although this kind of behaviour was observed in only one teacher, the fact that this situation was allowed to happen in the school is an indication that it might be considered acceptable. The example fits well with the impression that academic matters were not the most important objectives in **HF**. This teacher had no guidance from her colleagues or from the administration and one can suppose that staff was aware that she had no training and was improvising. Perhaps Art was also not considered an important subject in **HF**, as seemed to be the case with History, Geography or Science. Besides the Year 4 teacher’s statement about the small importance of such subjects for the type of pupils that attended **HF**, comments made by a student teacher indicated that this same position was adopted by the teacher whose class she had taken over. Both these **HF** teachers had been working in the school for over 15 years and had two classes each. Their contribution to the academic performance of the school was, therefore, large.

There were claims about the need for courses or for teachers’ updating and supervision in **HF**. However, the recent experience with the Pedagogic Coordinator, the reported rejection of her instructional suggestions, was perhaps an indication that such demands were not something truly ingrained in the schools’ general culture,

something that the school as a whole was prepared to invest in. This lack of a real interest in innovations or in improving schools' instructional practices could be the result of teachers' distrust in their pupils' capacity to have long-term academic success. It could be hypothesized that the reported need for courses was more related to the wish for variety and novelty than to the wish to change the quality of teaching in order to decrease the failing rates of the school. The emphasis on repetition of contents through endless exercises was also an indication of the distrust of pupils' learning abilities.

The picture of **HF** painted above is focused on the predominance of regulative aspects of its culture, that is, on the emphasis of matters of social order that characterized this school. In this respect, **HF** was different from **LF** where such an emphasis was not perceived.

This type of difference between the two schools was not initially hypothesized. The privileging of instructional and regulative characteristics in the schools' cultures was not expected to have the importance it later was demonstrated to have for explaining the differences in performance between **HF** and **LF**. This importance only became evident during the data analyses.

The differences in terms of the privileging of the instructional or the regulative discourses were also noticed in relation to the explanations for academic failure given by the teachers from the two schools.

Contrary to the expectations, teachers in **LF** attributed importance to extra-school aspects in the determination of academic failure of pupils as much as teachers in **HF**. There was no clear predominance of school-related explanations in the former school and their suggestions for the improvement of the performance of "failing" children were of a therapeutic nature. Nevertheless, when the content of teachers' opinions about the causes of failure were analyzed according to the regulative/instructional continuum, the regulative aspects were predominant in **HF** and the instructional aspects in **LF**. In **HF**, there were suggestions of segregation and compensatory education for the "failing" children.

The definitions of learning were not directly explored. However, the models of the acquirer and the transmitter predominant in each school, plus the information collected through the observations, indicated that such definitions were probably very similar in **HF** and **LF**: the conception of teaching/learning as a transmission/reception process was the predominant view in the two schools. The pupils were expected to be passive and interested absorbers of the knowledge imparted by the teacher in both institutions.

There was a small difference in terms of the model of the transmitter predominant in each school. Teachers from **LF** presented a tendency to include instructional aspects when describing the “good” teacher, as compared to **HF**’s teachers. In this school, aspects like the role of the teacher as a provider of emotional support to pupils was stressed. Although seen as the dominant figure in the process in both schools, the “ideal teacher” in **HF** presented stronger regulative characteristics.

The findings related to the pedagogic practices of each school also indicated only small differences between the two schools. The teaching methods were similar and based on the simple transmission of knowledge. Nevertheless, in **LF**, more teachers reported taking into account pupils’ previous knowledge and opinions before introducing a new topic, as compared to **HF**. This is an indication of weak framing in **LF** and an indication of a degree of importance given to the “voice” of the pupil in this school. This fact, however, was not noticeable during the classroom observations.

Another difference was that teachers in **HF** tended to emphasize the drilling of the knowledge transmitted rather than the teaching of new topics. In **LF**, in contrast, there were more episodes of teaching of new topics, a probable indication that teachers believed that children could move forward and did not have to keep repeating the old contents in order to learn.

Teachers’ accounts of their disciplinary methods were similar in both schools. Teachers’ disciplinary behaviour were also similar, although in **HF** a larger number of teachers commented that disciplining the children was a problem.

A regulative tendency could be observed in **LF** and an instructional tendency in **HF**

concerning teachers' descriptions of their evaluative practices. Pupils were reported to be evaluated more globally in the former school (inclusion of their social behaviour) and to rely on pure academic performance in the latter. It was both claimed and observed that more chances in terms of evaluations were given to pupils in **HF** than in **LF**, in spite of the poor results of children in the first.

No hypothesis was written about the perception teachers would have in relation to the communities their schools served. However, the differences in such perceptions were very marked and important for the understanding of the cultures of the two schools. Teachers in **HF** tended to regard their school community as very poor and needy while teachers in **LF** tended to evaluate their community as not so poor.

The researcher expected the schools to be equivalent in terms of their pupil intake as the selection process had aimed at such equivalence. However, there were differences in this respect. The differences, nonetheless, did not match the perceptions of teachers about the communities. There were indications that the communities served by the schools were dissimilar in terms of parental education. Parents of children attending **HF** had higher levels of schooling as compared to parents of children attending **LF**.

The possible presence of a group of very poor children in **HF**¹⁰ could have induced teachers to generalize their characteristics to the whole of **HF**'s pupils. Teachers in **HF** believed that the main causes of academic failure in children were emotional unbalance and lack of support on the part of their parents - consequences of poverty. Those teachers also perceived the community served by **HF** as poor. Therefore, it can be expected that they would see their pupils as lacking adequate emotional balance or adequate support from their families necessary to succeed academically. If the teachers thought that failing was the inevitable fate of poor children, teachers might not make an effort to enable the pupils to learn more than a necessary minimum. Hence the emphasis they placed on caring for the children. Teachers in **HF** thought that they were bound to prevent children from being left on the streets and to provide

¹⁰ Such presence was hypothesized, as explained earlier, through the percentage of incomplete records in the school file, that were claimed by the staff, to belong to the poorest children. However, it is not possible to say that all the very poor children had incomplete records or that all the incomplete records belonged to the poor children.

them with the models for “adequate social behaviour” that they lacked at home. Providing knowledge or developing their higher mental functions seemed to be secondary in **HF**.

The underlying idea that there was little that could be done to prevent their pupils from failing was probably the cause for the openness to the investigation on the part of **HF**'s teachers. The presence of the researcher was not felt to be threatening. Teachers did not question the worth and the degree of appropriateness of their own professional performance in this school. These were perhaps indications that teachers considered that the problems in the school were not due to their performance and that, therefore, there was nothing to be criticized about their practice.

The hypotheses predicted that staff in **LF** would be more satisfied with their school than the staff in **HF** and such a prediction was confirmed. More teachers in **LF** also considered that the relationships among staff were good as compared to **HF**.

Teachers in **LF** demonstrated a wish that the school should grow, while teachers in **HF** did not mention such a wish. The physical aspect of the schools seemed to reflect the fact that staff in **LF** were more proud of their school and thus took better care of it¹¹. Such a tendency contrasted with the attitudes of teachers in **HF**. Although a larger number of teachers did a “double shift” in **HF** and in spite of the “home-like” atmosphere in this school, teachers did not seem to be proud of it or want to improve it beyond the obvious repairs that were needed.

The main character of **HF**'s culture was again exposed through the qualities of the school mentioned by its teachers. Such qualities, as well as the spontaneous suggestions for improvements in the school, were mainly regulative, stressing care and relationships. The qualities of **LF** mentioned by its teachers related to its instructional aspects and the improvements suggested related to the material features of the school.

The culture of **LF** could be classified as more “professional”, more instruction-centred

¹¹ Teachers' pride could be inferred, for instance, through the sale of T-shirts bearing the logo of the school, the reports on the results achieved in local schools' competitions, the physical appearance of the building or the plans for expansion due to community demands.

than that of **HF**. However, the greater emphasis upon instruction was not the result of a clear conscious effort to make schooling possible and successful for working class children. There was no understanding of the role of schools as agents of social reproduction in **LF**. There was no thinking of Bernstein's "unthinkable", that is, that working class children are as able to reach the higher levels of the educational system as middle class children can. The staff in **LF** still explained academic failure through poverty and lack of formal education of children's families: staff believed that poor families are not able to provide children with the proper incentive and help in schooling matters. However, as teachers did not perceive the community their school served as very poor or needy, they did not think that the great majority of their pupils were destined to fail. The staff believed that the majority of children were able to achieve higher levels of education, as they were considered to belong to middle socio-economic levels.

This perception of the community in **LF** could be attributed to the fact that this school also had classes of Years 6, 7 and 8. Since on general research evidence there is a process of socio-economic selection of children as they progress in *Primeiro Grau*, it is possible to suppose that the families of youths attending such grades had a higher socio-economic status than the children attending Years 1, 2, 3, 4 and 5¹². The presence of these wealthier youths in this school could affect the perception that the teachers had of the whole school population. Such a process was similar to that occurring in **HF**, where the presence of the group of very poor children possibly affected staff's perception of the community.

Contrary to the researcher's expectations, the families' evaluations of the schools were equivalent and mainly positive. Families attributed their children's failing episodes to children's own difficulties or lack of interest.

It could be argued that the different ethnic distribution in the two schools – suggested by the data from the cohort children enrolled in them¹³ – could influence the schools'

¹² In fact, the data on the schooling of parents of the children attending the two schools indicated that parents of children that attended the last grades of *Primeiro Grau* in **LF** presented a higher educational level than the parents of children that attended the first grades of *Primeiro Grau*. As explained earlier, the author of this thesis hypothesized that, in general, people with a higher educational level also have a higher income level.

¹³ The data on cohort children identified in the two schools suggested that there were 21% children of black or

performances. Nevertheless, the researcher considered that such difference, if real, was not large enough to explain the contrasting failure rates between the two schools.

It could be also argued that the existence of pre-school classes in **LF** was not a reasonable explanation for the great differences in the performances of the two schools. The exposure to pre-school experience has been claimed to exert a positive effect on the academic performance of primary school children (Brandão et al., 1983, pp. 61-4; Daniels, 1995, p.163). However, less than half of the children starting Year 1 do have the chance to attend pre-school classes in **LF**, as there are only two such classes in the school.

The purpose of the case studies was to explore the institutional processes related to academic failure. The “cultural” differences encountered between the two schools seemed to be important to explain the phenomenon: regulative aspects of schooling were privileged in **HF** and there was a greater emphasis on instructional aspects in **LF**¹⁴, defining the different kinds of codes for the process of cultural transmission within each institution.

According to Bernstein, the regulative and the instructional discourses of a school regulate the specialization of meanings that shape the identities of teachers and pupils. Such a process of identity shaping is carried out through the establishment of recognition rules (that determine what is “thinkable” and what is “unthinkable”) and realization rules (that establish the norms of the adequate discourse and the adequate behaviour). Bernstein also explained that the regulative discourse (which establishes the rules of social order in schools) tends to be disguised behind the common knowledge that the role of schools is simply to transmit knowledge and to develop cognitive skills. The socializing function of schools and their power as a relay of ideological messages - which are part of the mechanism through which society reproduces its current *status quo* - generally stay in the background. The awareness of such mechanisms is not in the interest of social stability. If scrutinized, the

mixed-colour mothers in **HF** (Table 4.4, p. 124) as opposed to 3% in **LF**. However, as discussed earlier, data from the cohort children cannot be generalized to the schools. The photographs of the children in classes of Years 1 to 4 in **HF** and **LF** (see Annex 10 for a sample), do not confirm the existence of differences in ethnic terms, although the data from this latter source should be considered with caution.

¹⁴ It would be an exaggeration to say that an “instructional culture” predominated in this school.

reproductive function of the pedagogic device can produce doubting, can provoke instability and possibly induce change. The “unthinkable”, can become conscious and hence dangerous. Therefore, the regulative function of schools is maintained unnoticed and is difficult to be captured, as it happened during the case studies in this thesis.

In **HF**, matters of social order were stressed but such an emphasis was not readily perceivable. The emphasis was manifested in a subtle manner. Only after a careful examination, using the guide of Bernstein’s model as a magnifying glass, the domination of the regulative discourse in this school could be revealed: it relayed the message that working class children were not to achieve higher levels of schooling. The pedagogic discourse of a class society was being recited in **HF**, according to the expectations for a neighbourhood school serving a low-income community.

Socio-cultural psychology claims that human mind and human actions are shaped by the meanings people construct through their encounters with the world. This theory also claims that human thinking and action are always situated in a cultural setting and in the mutually interacting intentional states of the participants (Bruner, 1990, p. 2, p. 19). The identities of children in **HF** as “non-academics” were shaped by the on-going message they received from the school culture: the main point of coming to school was to be protected from the hazards of staying in the streets. Children were not expected to learn much and therefore they did not learn. They did not even learn the minimum to be promoted to the next grades.

The destiny of working class children was carried, in **HF**, through a narrative of grade repetition, of low achievement and of an overall low level of education. Such a narrative created the meanings that permeated the institutional climate and that, consequently, shaped children’s consciousness.

Finally, for the explanation for the behaviour of teachers and pupils in **HF** - their tendency to create a culture that leads to “instructional defeat” - some concepts from activity theory will be used. Such a theory, developed by Leontiev¹⁵, has been

¹⁵ According to Minick (1997, p. 124), the development of activity theory, carried out by Vygotsky’s students and colleagues after Vygotsky’s death, was an attempt to expand the master’s ideas on a psychology that unified mind and behaviour. Activity theory allows for the overcoming of the limitations of both initial Vygotskian and

incorporated to the initial theoretical background used in the second part of this thesis, as explained earlier. Since this background was not able to account for the differences encountered in the two schools, there was a need to expand it. Therefore, before this discussion about the differences in academic performance between the two schools comes to an end, a small digression is necessary to introduce some new ideas that have helped to understand such differences.

Activity theory suggests that the organization of systems of activity¹⁶ at the societal level establishes important parameters that determine the manner in which an individual or groups of individuals carry out and master a particular type of goal-oriented action (Wertsch, Minick and Arns, 1984, p. 171). Such a position contrasts with the individualistic perspective that explains behaviour in terms of cognitive, affective and values differences and that would explain the differences between the performance of the two schools through the differences between their pupils' characteristics. In this latter perspective, social and cultural factors are seen as affecting behaviour. However, they are not considered as essential in the development of behaviour.

In the perspective of the activity theory, activity systems are considered to be the basic units of analysis of both individual and collective behaviour (Wertsch, Minick and Arns, 1984, p. 153; Russel 1997, p. 4; Leontiev, 1981, pp. 209-14) and such systems must be analyzed according to their leading activity.

Leontiev argued that activities could be examined at three different levels: 1) the level of the general activity and its motivational force (the motive); 2) the level of the goal-directed actions that are carried out to satisfy the motives (the goal); and 3) the level of the means whereby an action is carried out (operations) (Leontiev 1981, pp. 209-14; Wertsch, Minick and Arns, 1984, pp. 154-8; Glassman, 1996, pp. 323-6).

According to the activity theory, different motives can be fulfilled through the same

Bakhtinian approaches by shifting the focus from the level of analysis of dyads to the level of analysis of the collectives (Russel, 1997, p. 2).

¹⁶ Russel defined an activity system as any ongoing, object-directed, historically-conditioned, dialectically structured, tool-mediated human interaction: a family, a religious organization, an advocacy group, a political movement, a course of study, a school, a discipline, a research laboratory, a profession and so on (Russel, 1997, p. 4).

type of actions (Wertsch, Minick and Arns 1984, pp. 155-6), and it can be hypothesized that this is what happened in the two schools. Both **HF** and **LF** had the explicit goal of teaching contents and developing children's cognitive skills. Both schools carried out actions that fulfilled this goal through the means of similar operations (similar teaching methods). Nevertheless, the predominant motive of schooling in **HF** seemed to be socialization while in **LF** the motive of teachings and learning presented a higher degree of importance.

Wertsch, Minick and Arns (1984, p. 155) argued that the overriding motive of formal schooling is learning, defined in terms of academic tasks. This statement, however, fails to account for the weight of the other role of schooling described by Bernstein (1996, pp. 39-53), that of relay of social and ideological messages and shaper of consciousness. The latter role is so important that it demands an expansion of the definition of the motive of schooling proposed by Wertsch, Minick and Arns, through the inclusion of the motive of socialization. The case studies of the Pelotas schools make a case for such an inclusion suggesting that, for some schools, socialization motive can be the overriding motive, affecting pupils' academic performance.

Chapter 7:

Conclusion

The purpose of this chapter is to present a summary of the thesis and discuss its contribution to the understanding of academic failure.

The thesis started with an investigation of the correlations between children and family variables and academic failure in a birth cohort from the city of Pelotas in Southern Brazil. Later, a qualitative investigation of the intra-school processes associated with failure in two *Primeiro Grau* schools from the same city was undertaken.

The quantitative study provided epidemiological information on the risk of academic failure among the children from the 1982 Pelotas cohort that attended urban schools. The study also indicated the relative magnitude of the influence of each of the identified risk factors on failure. The findings from this study showed similar results to those of other correlation studies carried out in Brazil and internationally: associations between socio-economic, ethnic and biological variables and educational outcomes in children.

The literature reviewed indicated that there are two types of correlation studies: those that focus only on extra-school and those that include intra-school variables in their analyses. Both types present weaknesses.

Studies that treat personal and family background as the main determinants of academic achievement also leave schools as “black boxes”. The sources of academic achievement inside the educational systems remain opaque. The second type highlights the importance of intra-school variables, which is an advantage in relation to the first type¹. The difficulty that such studies present rests in their correlational approach. Correlation studies are restricted to the specification of an array of variables associated with academic failure or success and thus have some limitations if they anticipate the formulation of policies for educational improvement.

¹ The attempt made in this thesis to include intra-school variables in the correlation study had the purpose of overcoming the limitations of an investigation restricted to the role of extra-school factors on failure.

Findings from correlation studies focused on personal and family background characteristics, for instance, generally indicate the need for changes in the social and economic fields. They also suggest the need for a more egalitarian wealth distribution, as the effect of socio-economic variables on achievement - within such terms of analysis - is highly significant. Therefore, such studies are usually unable to define clearly the policies that should be implemented within the educational systems, although they have influenced programmes of “compensatory education”, such as the Headstart, in the USA in the 1960s and 1970s. Such studies - logically – imply a greater *amount* of schooling to “culturally deprived” children rather than changes *in the processes* of schooling.

The literature on educational failure in Latin American countries has such limitations. The suggestions for policies put forward by the researchers working within the correlational paradigm were limited and vague. Psacharopoulos and Yang, for instance, in the conclusion of their paper on the determinants of attainment among Venezuelan school children, did not even attempt to make any direct suggestions about policies following the results of their work. At the end of their paper, the authors wrote that:

Although parent education is not a policy variable, it underlines the importance of parental education as a contributor to educational attainment from generation to generation... the educational level of the present generation will facilitate the task of having a more educated population in the generations to come (Psacharopoulos and Yang, 1991, p. 294).

The “common-sense” of the proposal is clear: the importance of the educational level of one generation in the determination of the educational level of the next. Nevertheless, there is no specific suggestion on how such an improvement might be established. Their correlational investigation was not delicate enough for such purposes. The analyses and recommendations of Ilon and Mook are equally vague, after their investigation of the educational outcomes of Peruvian rural children. Their review of personal and family backgrounds and educational failure resulted in the following policy recommendation:

governments should review their educational policies and consider changes that are likely to have their greatest impact on “marginal” subgroups of the

population (Ilon and Mook, 1991, p. 445).

The recommendation was again “common-sense” and rather general due to the nature of the research findings that supported it.

In the case of the correlation studies that include intra-school variables, the difficulties associated with suggesting policy measures for educational improvement are equally problematic. The suggestions that spring from school effectiveness research, for example, are usually restricted to a list of intra-institutional factors to be incorporated into school practice. This line of research includes the assumption that schools are similar, exist in a social and cultural vacuum and can adopt standard measures for improvement - such as increasing parental involvement or emphasizing structured instruction (Scheerens and Bosker, 1997, p. 100) - as if these are universally applicable. The school effectiveness recommendations are usually broad and lack detailed descriptions of the processes associated with them (Scheerens, 1993, pp. 21-3, Angus, 1993, pp. 340-4, Proudford and Baker, 1995, pp. 88-91). The characteristics of the pupil and of the community served by the school, the interactive relationships between school, culture and society are not taken into account in such recommendations. The next general presupposition being that educational problems can be solved through technical means (Angus, 1993, pp. 342-3, Elliot, 1996, pp. 214-21).

Overall, then, it is suggested that the findings from correlation studies (of both extra-school and intra-school variables) are weak in their contribution to the understanding of the “how” and the “why” of contrasting academic performance in children. Hence the need for research capable of exploring the intra-school *processes* associated with academic success and failure in a more detailed and descriptive manner.

Such an endeavour demands a methodology capable of revealing the meanings of human behaviour: the qualitative approach. This approach was the one chosen for the second part of this thesis which contained the case studies of two *Primeiro Grau* schools that had different rates of academic failure (high and low).

To get to the case studies, the initial correlation study in this thesis was useful for mapping academic failure in the children from the Pelotas cohort. The findings from

the correlation study provided guidelines for the selection of the schools to be case-studied. The identification of the most important risk factors for failure – visible in the initial correlation analyses – permitted the selection of two schools that were similar in their risk factors. The procedure allowed the researcher to study the processes responsible for the contrasting academic performance of two schools in a “less contaminated” way, that is, with the effect of identified risk factors on the performance of the two schools, specified, balanced and controlled, within routine methodological difficulties.

The qualitative investigation focused on the analysis of socio-institutional effects on academic performance. This investigation was based on the theoretical approach of scholars who stressed the importance of social and cultural contexts for human development and behaviour (Vygotsky, 1987, 1978, Leontiev, 1981, Bakhtin, 1981, 1986, Wertsch, 1991, Minick, 1985, Lave, 1988, Cole and Engeström, 1997). The investigation was thus aimed at the empirical investigation of the importance of school processes on the academic performance of pupils. The investigation also addressed the need for more empirical testing of Bernstein’s ideas about the pedagogic device and its functions, an approach which was integrated with the Vygotskian and Post-Vygotskian theories.

The qualitative investigation stressed the relationships between motives of the schooling activity, the structuring of pedagogic discourses and pupils’ academic performance. The description of schools’ privileging discourses was used as a means to understand the schools’ coding principles. Such principles are not simply ways to distinguish between the culture of organizations. The importance of such principles lies in the fact that they function as consciousness and identity shaping devices for teachers and pupils.

The findings from the qualitative study indicated that intra-school processes exert an influence on the academic performance of children. More specifically, the information provided by the case studies tend to confirm the following theoretical ideas about the relationships between school aspects and academic attainment, already present in the literature reviewed:

- individual and collective modes of thinking and acting evolve as parts of activity systems (human interaction system) which, in their turn, are influenced by motives, goals and beliefs established at a societal level (Leontiev, 1981, Wertsch, Minick and Arns, 1984).
- schools are a means of specialization of meanings, capable of shaping pupils' identities and consciousness and not simply institutions that are concerned with the development of skills and the imparting of knowledge (Bernstein, 1996);
- schools are not uniform in their psychological effects (Ivic, 1989, Daniels, 1995, 1996, Morais et al., 1995), i. e., different school cultures produce different discourses and different educational outcomes in children;
- schools can also have harmful as well as beneficial effects on their pupils (Ivic, 1989).

The case studies suggest that the differences in the rates of academic failure between the two Pelotas' schools - fairly similar in other respects - were due to differences in specific aspects of the culture of these schools. The culture created by the school that had a high failure rate among its pupils had a predominately regulative character, that is, it privileged matters of social order and placed less importance on the instructional aspects of schooling.

The research findings suggest that the privileging of the socialization motive of schooling in HF resulted from the staff's evaluation of the community served by their school. Staff perceived this community as very poor and needy. Staff also believed that poverty and its consequences caused academic failure (a common idea among teachers in Brazil). Therefore, staff expected that their pupils would not be academically successful, and imparted that message to the pupils through the school's culture. The objectives that prevailed in this school were: teaching pupils the most basic skills, socializing pupils into the behaviour and value norms of the society, and protecting the pupils from the hazards of being left on the streets. Having access to the systematic knowledge accumulated by society or to the more abstract principles that organize such knowledge, and routine progress through the educational system were

not important motives for schooling in **HF**. The academic performance of children attending **HF** reflected such meanings for schooling that predominated in this institution: 43% of the pupils had repeated a grade or dropped out of school at least once. And this rate was not a cause for special worry by staff.

As claimed by the socio-cultural line of research and by Bernstein, different meanings produce different kinds of consciousness, and such meanings are closely associated with the social context. In **HF**, the meanings of schooling created were directed to aspects of social order to the detriment of academic aspects (instructional discourse). The meanings of schooling in **HF** were related to the reproduction of class relations – a pattern in the schooling of working class children in a class-divided society such as the Brazilian².

However, nor were staff in **LF** deliberately trying to change the schooling patterns of working class children that prevail in the Brazilian society by taking these children's interests and values into account. Staff in **LF** were not purposefully thinking the “unthinkable” or making explicit the contradictions between the publicized governmental interest in providing high levels of schooling for the population and the actual lack of interest and investment to create such a reality³ - as was hypothesized would happen at the beginning of the investigation. Although the failure rates for this school were low, no challenging of the dominant narrative for the educational fate of working class pupils was observed in **LF**. Staff, in this school, were not even fully aware of such a narrative, which legitimates low levels of schooling for the working class population.

Interestingly, and contrary to the earlier expectations in the thesis, the pedagogic practice in the two schools presented a high degree of similarity. The difference was that staff in **LF** expected their pupils (who were not considered to be “poor”) to succeed academically, although staff still stressed the association between poverty and

² Such an idea is present in the work of several Brazilian researchers such as Mello (1985) Patto (1990) Frigotto (1993, 1996) and Silva and Gentili (1996).

³ According to Helene (1994, p. 24), Brazil spends 3.9% of its gross national product in primary and secondary education. Countries such as Norway, France or Canada spend respectively 7.9%, 5.5% and 7.4%, in spite of having more efficient educational systems as compared to Brazil.

failure. The expectations of pupil success in **LF** created a culture that emphasized instructional aspects more than in **HF**.

At the end of this thesis three main points can be pulled out for discussion: the importance of investigating aspects of the culture of schools - especially the motives for schooling - for the understanding of their academic outcomes; the difficulties involved in such investigations; and the implications of the findings of this thesis for the training of *Primeiro Grau* teachers.

It was the difference between the institutions' cultures that were found to result in a high percentage of failure in **HF** and in a low percentage of failure in **LF**. It was through the identification of the motives for schooling that predominated in each institution that the differences between the performances of the two schools could be explained. The differences between the schools, on the criteria of children's and families' background variables, had been reduced to a minimum through the selection of similar institutions in such respects. Therefore, the process of identifying the features of the school culture responsible for the differences in performance was facilitated. The identification of the predominant motives for the activity of schooling, however, is not an easy task. Different motives can be fulfilled through similar actions and operations. Motives are not easily visible and have to be inferred from aspects of the culture of institutions. In this thesis, motives were inferred through examination of the predominant discourses in each institution.

The investigation of the predominant discourse in a school, nevertheless, is also difficult to investigate: the embedding of the visible instructional discourse of education in the regulative discourse of social order is generally kept concealed, as explained by Bernstein (1996). Schools create a mythological discourse to disconnect the process of schooling from the social class hierarchies external to the school. However, as the task of the regulative discourse is to socialize people into such a hierarchy, this discourse remains only partially visible in the schooling process.

The findings from this thesis indicate that a school culture that is geared to instruction rather than just to the socialization and care of pupils is more successful in allowing pupils to succeed in their schooling processes for longer periods of time. This is

important. Protecting children from multiple failures (and consequently abandoning school) is a valuable accomplishment. Academic failure involves great wastage of economic and human resources and is harmful to children's personalities. The findings from the qualitative study indicate the importance of the school culture for the academic achievement of children.

Nevertheless, more research is necessary to provide a fuller understanding of the way in which different motives are generated and expressed in different contexts. It is also far from clear how to affect schools' culture, which requires delicate and locally tailored actions and cannot be accomplished by top-down, standardized, mechanistic policy proposals - such as those put forward by the school effectiveness line of research.

This investigation suggests that one way to affect schools' culture could be to invest in the way teachers are trained for their jobs. This training is currently based on technical aspects and the author of this thesis believes it should also include critical and political matters. In this sense, this thesis echoes the suggestions made by several Brazilian researchers such as Mello (1981, pp. 143-7), Penin (1994, p. 107), and Frigotto (1996, pp. 91-7) concerning the training of teachers. Besides the inclusion of critical and political elements in their training (both pre-service and in-service), future and current teachers need to be aware of research findings that indicate the importance of intra-school factors in the production of educational failure. Teachers in Brazil seem to still be heavily socialized into the culture created by the results of the early investigations on academic failure that emphasize the importance of extra-school factors. Such results are convenient to teachers inasmuch as they do not demand them to be critical about their practices or try to organize a schooling process that can make a difference to the poorer layers of the Brazilian population.

There is a need for teachers to be able to analyze academic failure in all its potential determinants to be able to devise their solutions to the problem and this requires a critical attitude, a political alertness to the social role of schooling and knowledge of contemporary cultural research.

The understanding of the different potentials that are present in different types of

schooling might lead teachers to recognize the importance of fully developing an instructional culture in their schools. Such a culture would have the potential to develop pupils' skills and to enable pupils to share the knowledge produced by the society. Such a culture would allow for working on the zone of proximal development of the school, as defined by Engeström (1987) and Lave and Wenger (1991), that is, on the area where cooperative action for social change is possible. If teachers were more aware of the ways in which children are positioned in different forms of pedagogic practices, they would be able to create a different educational narrative for the working class children. They would be in a position to create a local pedagogic discourse that challenged the official pedagogic discourse. Teachers might be able to create a more democratic and inclusive educational system in Brazil.

This thesis proposes less emphasis on policy proposals of a technical nature, derived from the discourse of variables; and more research-based understanding of the culture of schools – the arenas in which teachers must be empowered to reflect and act guided by their training.

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Annex 1:

List of variables included in the logistic regression analysis

ETHNIC

Skin colour of child's mother (measured at birth - 1982): based on each interviewer's judgement. There was no specific criterion to define the groups.

Categories: White
Others

GENDER

Child's gender (measured at birth - 1982)

Categories: Male
Female

AGE

Age of mother at the time of child's birth (measured at birth – 1982)

Categories: < 21 years of age
21 to 35 years of age
>35 years of age

SIBLINGS

Number of child's siblings (measured at the 3rd follow-up - 1986): reported by interviewee

Categories: No siblings
1 or 2 siblings
3 siblings
4 or more siblings

CROWDING

Number of people per bedroom in child's home (measured at the 3rd follow-up - 1986)

Categories: < 4 people per bedroom
4 or more people per bedroom

MOTHER

Presence of child's mother at home (measured in 3rd follow-up - 1986): reported information on whether mother was doing any paid work outside the home or whether she stayed at home (doing paid work or not)

Categories: Working outside the home
Staying at home (doing paid work or not)

INCOME

Monthly income of child's family (measured at birth - 1982): total income, reported by the person interviewed, measured in number of minimum wages (MW).

Categories: < 1 MW
1.1 to 3.0 MW
3.1 to 6.0 MW
> 6 MW

OCCUP

Occupation of the head of child's family (measured in 3rd follow-up - 1986): reported type of working activity carried out. The head of the family was defined as the person who had the highest income.

Categories: Proprietors, administrators (owners and administrators of private sector) and professionals (with a University degree)
Non-manual workers (clerks, teachers, other workers with *Segundo Grau* training)
Manual qualified workers (technicians in electricity or electronics, lab workers, with *Segundo Grau* training)
Manual semi-qualified workers (drivers, masons, carpenters, shoemakers, machine operators, nurse assistants, shop assistants)

Manual non-qualified (cleaners, street cleaners, house servants, building-site workers, peasants)

Outside the economically active population (unemployed, students)

MOTHSCHOO

Schooling of child's mother (measured at birth - 1982): number of academic grades mother reported having completed.

Categories: 0 to Year 2 of *Primeiro Grau*
 Years 3 to 5 of *Primeiro Grau*
 Years 6 of *Primeiro Grau* or

CONSTRUCT

Type of building of child's dwelling (measured in 3rd follow-up - 1986): interviewer description of the family dwelling in terms of predominant type of building materials.

Categories: Apartment buildings (brick and concrete)
 Brick
 Mixed (part wood part bricks)
 Irregular wood (different types of wood)
 Irregular brick
 Shack (all kinds of materials - improvised)

BW

Child's birth weight (measured at birth - 1982): in grams.

Categories: <2,500g
 2,500g to 2,499g
 2,500g to 3,499g
 >3,500g

PREMAT

Prematurity in the child (measured at birth – 1982): assessed by doctors at the hospitals

Categories: Premature
 Not premature

WAZ and HAZ

Weight-for-age and **Height-for-age** (measured in 3rd follow-up - 1986): expressed in z-scores, i.e., number of standard deviations (above or below the median of reference population) that corresponded to the children's weight or height (measured by the interviewers)¹.

Categories: < -2.00 SD
 -2.00 to -1.01 SD
 -1.00 to 1.00 SD
 > 1.01 SD

FAILURE

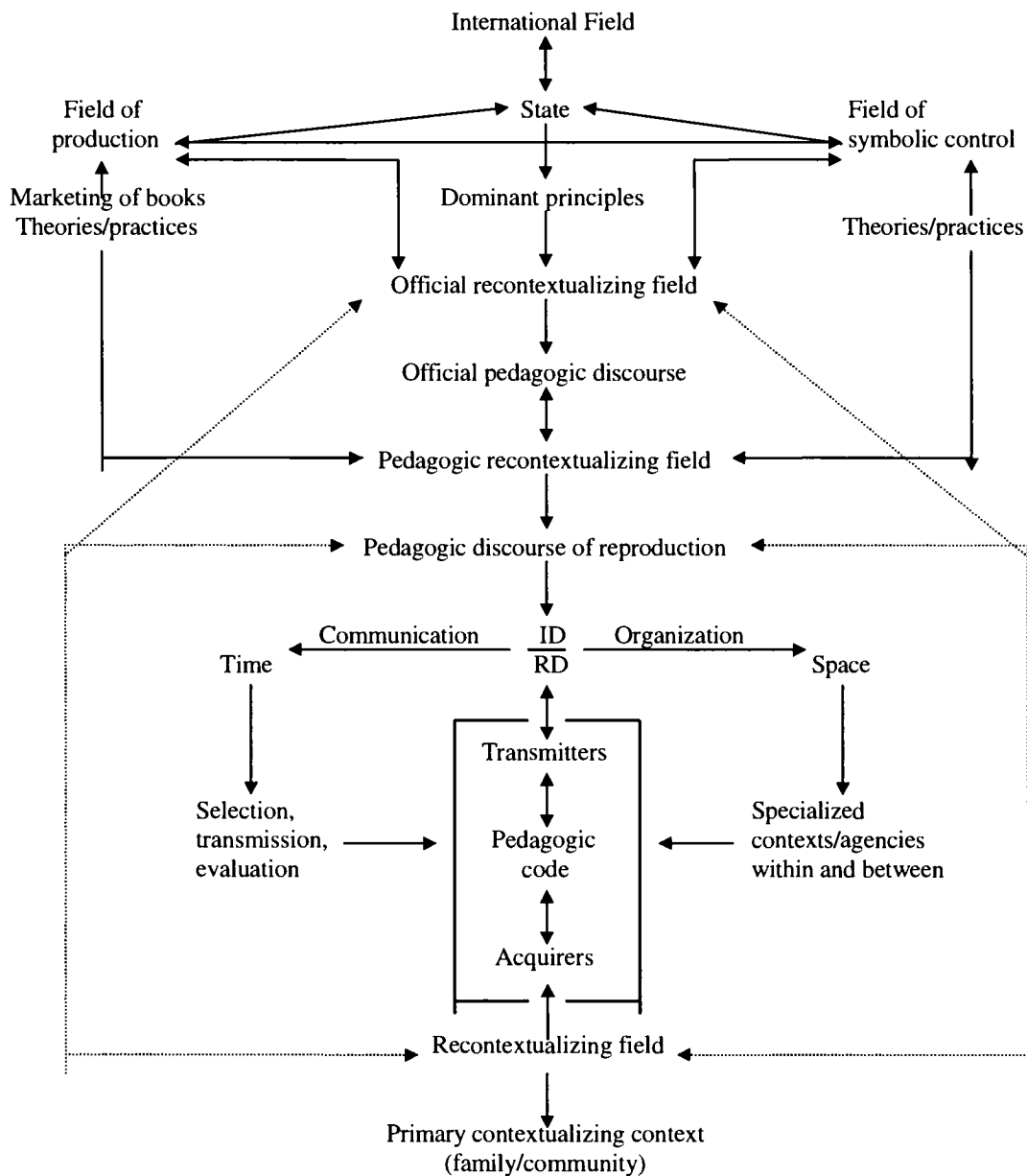
Child's academic performance (measured in 4th follow-up - 1991): informed whether the child had ever repeated a grade or dropped out of school.

Categories: Failed (repeated a grade or dropped out at least once)
 Never failed

¹ The measurement of children's nutritional status was carried out according to the recommendations of the World Health Organization (Waterlow, 1977). The norms used were devised by the National Centre for Health Statistics of the United States of America. According to these norms, a child is considered undernourished if her measurements are two or more standard deviations below the average measurement for the North American population of the same age. The use of foreign norms is justified by the fact that, according to Habitch et al. (1974), children of different ethnic groups present the same growth potential, up to the age of ten, when living in adequate nutritional and environmental conditions.

Annex 2:

Graphical model of Bernstein's state-regulated realizations of the pedagogic device



Source: Bernstein 1990, p. 197.

Annex 3:

Instrument 1 (translation)

Number: _____

School: _____

Grade you teach: _____

Area of specialization (if applicable): _____

Number of years you have been teaching in this school: _____

Type of professional teaching training: _____

PART 1:

In each of the items that follow two extreme positions in relation to teaching and schools will be presented. Could you please make a circle around the number that best represents the positions you occupy, according to your beliefs, in the continuum from 1 to 10. Please answer all the items.

- 1 School's main function is to **transmit**, to the new generation, the **knowledge** accumulated by society through the ages.
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 School's main function is to **develop** in the pupils a wider **understanding of society** and the position they occupy in it.
- 1 The most important element in the learning process is the **teacher**...
- 10 The most important element in the learning process is the **pupil**.
- 1 It is **not important** that teachers find out what the pupils know about a topic before teaching it...
- 10 It is **extremely important** that teachers find out what the pupils know about a topic before teaching it.

- 1 The syllabuses officially assigned for each subject should be **followed strictly**...
- 10 The syllabuses officially assigned for each subject should be **flexible to allow changes and adaptations** on the part of the teacher.
- 1 Pupils should be taught only **scientifically proven knowledge**...
- 10 The **beliefs and ideas of pupils** about the topics are extremely important and should be used in classroom.
- 1 New topics must be presented to pupils in the most **straightforward and simple way**...
- 10 New topics must be presented in **all their complexity**.
- 1 There is **no need to always** discuss the “real life” application of new topics being taught...
- 10 The presentation of new topics should always include their application to “real life” situations.
- 1 Academic controversies and different interpretations of topics should be **avoided** in the classroom...
- 10 Academic controversies and different interpretations of topics should be **encouraged** in the classroom.
- 1 Teachers should **never** express doubts and never discuss their mistakes or misunderstandings with pupils...
- 10 Teachers should **always** express doubts and discuss their mistakes or misunderstandings with pupils.
- 1 **Teachers** are supposed to do most of the talking in the classroom. Pupils are supposed to be silent...
- 10 **Pupils** are supposed to talk as much as the teachers in the classroom.

- 1 Most teaching should be directed to the **whole class** and should be planned to reach the “**average pupil**”...
- 10 It should be possible for teachers to spend a fair amount of their time in **individual** teaching, directed to each child’s **specific needs**.
- 1 Pupils that cannot follow the learning pace of the class should be put in **special classes** for slow learners...
- 10 Pupils that cannot follow the learning pace of the class should be kept in **regular classes**.
- 1 The assessments of pupils’ achievements should be carried out according to the **official criteria** established for children attending each specific grade...
- 10 The assessments of pupils’ achievements should be based on their **individual progress**.
- 1 Working class children are generally **intellectually less capable** than middle class children...
- 10 Working class children are generally **intellectually as able** as middle class children are.
- 1 Most working class children are bound to fail because **they are deficient** due to illness, lack of stimulation and family disorganization...
- 10 Illness, lack of stimulation and family disorganization **cannot be responsible** for the failure of working class children.
- 1 The high rates of grade repetition and drop out in working class children are due to deficiencies of **children and their families**...
- 10 The high rates of grade repetition and drop out in working class children is caused by deficiencies in **schools**.
- 1 It is **not important** for teachers to be members of their trade unions...
- 10 It is **important** for teachers to be members of their trade unions.

PART 2:

Please complete the following sentences according to how you usually act in your classroom.

1. When children say something “wrong”, using normal working class’ vocabulary, I usually _____

2. When pupils make mistakes I usually _____

3. When teaching very poor children the most important thing to do is _____

4. The best thing to do about children who are constantly misbehaving in class is

5. Poor children fail in school because _____

6. What I like best about my work is _____

7. What I dislike most about my work is _____

Annex 4:

Instrument 2 (translation)

Please make an evaluation of your school by assigning the place it occupies in the continuum expressed in the horizontal line:

|-----|

Total failure

Total success

1. Explain why your school is in such a position in relation to the total failure extreme. What are the school's qualities that prevent it being in the lower extreme of the continuum?
2. Can you describe how your school could improve to reach the best possible position in relation to the total success extreme (within school's current reality)?
3. Mark the place your school could occupy if such improvements were to be made.

Additional questions for the final version:

3. How could the building be improved?
4. How could teaching and teacher's work be improved?
5. How could the role of the school in relation to working class children (which are the ones most affected by failure) be improved?

Annex 5:

Teachers' interview schedule (translation)

Initial version

1. Why did you decide to become a teacher?
2. How do people learn things?
3. How do you go about teaching a new topic to your pupils?
4. How do you deal with classroom discipline?
5. How do you assess the achievement of your pupils?
6. What are the causes of grade retention and drop?
7. How is your relationship with the administrative team and with the other members of staff?
8. What do you like/dislike most about your work?

Final version

1. How do you go about teaching a new topic to your pupils?
2. How do you deal with classroom discipline?
3. How do you assess the achievement of your pupils?
4. What are the characteristics of a "good" pupil? and of a "bad" pupil? What are the reasons for the pupils being "good" or "bad"?
5. What are the characteristics of a "good" teacher? and of a "bad" teacher?
6. What are the causes of grade retention and drop out?
7. How is your relationship with the administrative team and with the other members of staff?
8. What do you like/dislike most about your work?

Complement to final version

1. Describe the relationship between your school and the community.

2. How do you evaluate the community the school serves?

(after showing the photographs of the pupils in their classrooms)

3. Do you think that these photographs illustrate the opinion you have just expressed about the pupils?

Annex 6:

Summary description of LFp (translation) (fed back to the staff for appraisal)

The following report is the result of an investigation that was directed to capture the "culture" of your school. The work carried out in the school was aimed at testing the methods to be used in a wider investigation about school cultures, which will be implemented during the year in other schools. The work was carried out through observations, interviews and informal talks during approximately two weeks. The investigation lasted for a short time and the research was restricted to the afternoon shift (focusing on the initial years of *Primeiro Grau*). Therefore, it is important to stress that the present description can be partial. It represents the perceptions of a particular researcher on an extremely vast and complex reality.

Physical features of the school:

The school looks adequately decorated, tidy and clean, suggesting that it has been successful in getting funds to invest in its physical infrastructure. Promotions to raise money for school are reported to be common.

Communication seems to be a valued aspect in the school's culture: the notice boards are frequently used and maintained up to date. There are posters showing children's works on the walls of halls and of young children's classrooms. Photographs illustrate the extra-curricular activities that are carried out in the school.

Staff:

The stories the teachers tell about how they came to work in the school are similar. Although their accounts might lead to the conclusion that their group was formed by chance, it seems that a selection process occurs after people start working in the school: the ones that do not adapt leave.

The importance that staff attribute to the "group spirit" that exists in the school seems to be significant. Staff appear to be fairly integrated and work cooperatively. Teachers mentioned the importance of having a united group that has common aims

and invest in the integration of their members. Teachers worry about always having a consensus of ideas. Such a topic was mentioned as one of the aspects that could make the school reach its best. This fact seems to imply the idea that there is a wish for uniformity in the school. A degree of satisfaction is expressed by teachers when reporting that some people start out thinking differently from the group end up changing their minds as a result of talking and sharing of experiences. The demanding character of the group and its practice of having discussions about their disagreements and difficulties have been mentioned.

The environment in the staff room is friendly and lively. The conversation topics are varied and, sometimes, focus upon aspects related to pedagogic work. Staff claimed the importance of developing a good "self-esteem" in everyone.

The school is characterized by the existence of a strong Headteacher, who is in the post for almost ten years. She seems to have played a fundamental role in the construction and maintenance of the school's current culture. The general opinion is that, without her, the school would not be doing so well.

Evaluation of the school:

The teachers seem to believe that the work they do in the school is good, close to being the ideal school. They mentioned that the Municipal Secretariat of Education uses their experiences and productions to guide the work of other schools in town. A certain degree of pride can be perceived as a result of the relatively independent (and, according to staff's account, well deserved) position they occupy in relation to the Secretariat. The school was the organizer of a kind of association which congregated the other schools in the borough. The association became very powerful for a while, having some saying in the central administration.

Staff demonstrate a great bond to the institution and to colleagues. Everyone considers that the school is very close to being an ideal school. The pleasure of working in school can be illustrated through the accounts of some teachers. They reported having chosen to stay in this school when they were offered better paid or easier to reach jobs in other schools.

Theory of instruction:

Teachers believe that academic failure is mainly determined by the lack of incentive to study from pupil's families, due to poverty. The possible contribution of teachers to the process was mentioned by some teachers.

Some teachers expressed their wishes to develop the capacity to think and to learn by themselves in pupils. Teachers also mentioned the need to include pupils' ideas and experiences in their teaching.

Pedagogic practice:

It seems that a great deal of importance is placed on fixation exercises, on the examination of the work of each child (checking and correcting the work in their notebooks), and on the final correction of the exercises on the blackboard. The teacher has the main role in the process of teaching/learning: it is the teacher that gives the direction for the activities and marks its pace. Pupils seem to have familiarity with the kinds of exercises that are proposed and know how to do them.

There seems to be an effort, on the part of the administrative team, to promote study meetings where theoretical guidelines for classroom work are given to the teachers. "Hints" to deal with pupils' behaviour is one example of such material.

Behaviour-control practice:

Teachers seem to accept a certain level of conversation and physical movement in the classrooms. The disciplinary climate is relaxed and it seems that teachers are affectionate towards the pupils and capable of having fun during their interactions.

Classrooms are organized in rows of desks but there is flexibility for arrangements in pairs or in larger groups of three or four desks, according to pupils' activities.

The control of children's behaviour is carried out mainly through bids for silence. This behaviour becomes more frequent as pupils finish their work. The children that work faster usually have to wait for the others to finish and are asked to stay silent.

The prohibition to go to out during playtime is sometimes used to control pupils' behaviour, although this is not a very common practice.

Relative autonomy seems to exist in the school. There is space for negotiations with teachers and the Headteacher concerning different aspects of school's life. Pupils can make suggestions about classroom activities and are allowed to express some criticism to teachers.

Annex 7:

Summary description of HFp (translation) (fed back to the staff for appraisal)

The following report is the result of an investigation that was directed to capture the "culture" of your school. The work carried out in the school was aimed at testing the methods to be used in a wider investigation about school cultures, which will be implemented during the year in other schools.

The work was carried out through observations, interviews and informal talks during approximately two weeks. The investigation lasted for a short time and the research was restricted to the afternoon shift (focusing on the initial years of *Primeiro Grau*). Therefore, it is important to stress that the present description can be partial. It represents the perceptions of a particular researcher on an extremely vast and complex reality.

Physical features of the school:

The general features of the school suggest that it needs repairing and decorating. The difficulty in obtaining funds from the central administration to carry out such repairs are pointed out by the staff as the main reason for school's present physical conditions. Staff reported having organized a "strike" together with pupils and the community with the aim of forcing the city government to install lamp posts in the school's playground, which was extremely dark in the evening.

Staff:

Most teachers are full-time employees in the school and approximately one-fourth of them work in the school for more than ten years. A significant change in the staff team is currently taking place as a result of the recent dispute for leadership (election for Head and Deputy Headteachers). Such a dispute seems to have created a degree of division among the staff. Some teachers reported not have been satisfied with the election process and decided to ask to be transferred to other schools. New teachers are going to be hired.

According to the teachers the school has been characterized by staff subgroupings: the

teachers that worked with the first grades of Primeiro Grau and the ones that work with the later grades; the ones that have University degrees and the ones who do not. Some teachers claim the need for the school to restore the group cohesion that existed in the past. Teachers also claim for the need for teachers to be motivated and see their work as something more than the simple accomplishment of teaching tasks.

The school has a strong Headteacher who is occupying such a post for nineteen years. In spite of the strong competition during the recent elections, she has been kept in the post with the support from the staff, the pupils and the community. Some teachers say the Headteacher is “more than a Headteacher for the community”, meaning that she does more than she is supposed to help the community. Others praise her capacity to deal with the community.

Evaluation of the school:

Most teachers think that the school is not going through a very good phase. They all mentioned the dispute for the posts of Head and Deputy Headteachers as the main cause for disruption. Staff believe that they should unite and attempt to improve their work and the “uncomfortable feelings” that currently exist around the school.

One of the most appointed quality of the school is its capacity to maintain its pupils in spite of all the difficulties the school has to face.

Theory of instruction:

The most frequently cited cause of academic failure was the inadequate nutritional status of children. Teachers believe that a large number of pupils come to school just for the food. Teachers also believe that the high rates of absences and the lack of stimulation and support from children’s families contribute for grade repetition and drop out. The characteristics of the families served by the school - their “poverty” and “social disintegration” - were frequently mentioned by the teachers as impending factors of academic success.

According to teacher’s opinions, the process of learning new topics should include pupils’ previous experiences and knowledge. According to the staff, schools should offer to children the stimulation they lack at home.

Pedagogic practice:

It seems that a great deal of importance is placed on fixation exercises, on the examination of the work of each child (checking and correcting the work in their notebooks) and on the final correction of the exercises on the blackboard. The teacher has the main role in the process of teaching/learning: it is the teacher that gives the direction for the activities and marks its pace. Pupils seem to have familiarity with the kinds of exercises that are proposed and know how to do them.

Behaviour-control practice:

Classrooms are usually organized in rows and a certain degree of interaction between pupils is permitted, such as conversations in low voice. The level of physical movement and conversations by pupils increases as they finish their work. It is at this point that teachers start intervening through bids for silence followed by threats of possible punishments. The children that work faster usually have to wait in silence until the others finish their work.

The children that present serious behavioural problems are managed through more restrictive measures. When they misbehave in class, they are usually sent to the Headteacher's office. Teachers report calling such children's parents to school to discuss other disciplinary measures when children become out of control.

Annex 8:

Summary description of LF (translation) (fed back to the staff for appraisal)

The following report is the result of an investigation that was directed to capture the "culture" of this school. The work was carried out with the initial grades of *Primeiro Grau* although teachers and pupils from Years 5 to 8 also participated in the research. The investigation did not include the night shift.

The work was carried out through observations, interviews and informal talks with staff and pupils for approximately two months. Due to the relatively short duration of the research it is important to stress that the present description might present some inaccuracies. It reflects the perception of a particular researcher on an extremely vast and complex reality.

Physical features of the school:

The school looks good, although it needs some repairs, such as painting, replacing broken window panels, and fixing floorboards. Pupils are primarily concerned with renewing and cleaning the toilets. Staff emphasize the difficulties to get funds from the Secretariat of Education to carry out the repairs that are needed. Staff mention that they often organize fund-raising campaigns in the community. The apparatuses used for sports in the playground were bought with the money raised during such campaigns and with funds donated by local business, according to teachers' reports.

There is a general wish to expand the school. Several teachers point out the necessity to build new classrooms, arguing that a large number of children from the community have to go to other schools due to the lack of vacancies in this school. The need of a more adequate space for Physical Education classes is also stressed. Staff claim that the pupils are packed in a small area during such classes and the noise disturbs the other lessons. Some teachers express their wishes for a library, a projection room (where the video equipment is to be installed) and for a science lab.

The community served by the school:

The majority of teachers think that the community served by their school has a good

socio-economic level. However, the existence of a few families in financial need and not structured according to traditional patterns is reported by the staff. Some teachers stress that the community has respectful attitude towards the school. Other teachers comment that, as opposed to other municipal schools, the pupils always bring the materials teachers ask them.

Staff:

Most teachers from the daytime shifts have been working in the school for five years or more. However, there are some that work in the school since for more than twenty years. There is a large proportion of teachers that work full-time in this institution.

The staff room atmosphere is usually happy and friendly. Conversations centre on different topics that also include academic discussions.

Most teachers were receptive to this investigation, although some teachers showed an initial resistance to the study.

Evaluation of the school:

Teachers say that it is very good to work in this school, claiming it is one of the best schools under the municipal administration. Teachers claimed that the school environment is good and a few mentioned the quality of the school's teachers and the good things the school offers to pupils. The suggestions for improvement centred on material aspects. Teachers have great expectations about the new team that has started to administer the school recently. They have promised to introduce changes and improve the school. The general opinion is that the staff are very good and committed to their work, although there are a few exceptions.

The relationships among staff are considered to be good by the teachers. However, a wish for a greater degree of integration can be perceived (mostly between staff that work in different shifts). Some teachers expressed their wish for more meetings and pedagogic discussions in the school.

Several teachers express the wish to take courses in order to become more up to date. Nevertheless the teachers report that this is difficult due to the lack of substitute

teachers. If teachers are absent and children do not have classes, the former have to plan extra days of school and this is a nuisance for both teachers and pupils. Therefore, teachers are not stimulated to take courses very often.

There were only a few essays from pupils describing their schools. However, such essays indicated that the pupils like the school and staff very much.

Theories of instruction:

The most mentioned cause for academic failure (repetition and drop out) is the attitude of pupils' families towards schooling. Teachers believe that if children do not get incentive from home there is nothing they can do to make them learn. Teachers claim that some parents use the school as a crèche, that is, they see the school purely as a place to leave their children when they are out working. Some teachers mention that emotional problems, originating from family breakage's, also influence pupils' attainment. Other teachers think that schools are very old-fashioned and are not keeping pace with the changes that are taking place all around the world. A few mentioned that the school is not adequate to teach working class children.

According to teachers' opinions, academic failure can be fought against through the counseling services of schools or through social workers that would deal with the problems of the children and their families. A few teachers suggest that the creation of special classes for the pupils that present more difficulties could help.

Although not liking the labels, teachers describe a "good" pupil as an interested, and participative child, a child that makes an effort to learn and responds to the teachers. Teachers claim that it is not necessarily the one that has good grades.

Regarding the description of the "good" teacher, staff mentioned different aspects. The capacity of establishing good relationships with the children and the effort to make them understand what is being taught were claimed by some to be the "good" teacher's qualities.

Pedagogic practice:

Most teachers report that they hold discussions to find out the previous knowledge of

pupils and before introducing new topics. Some teachers claimed to try and relate the new contents to children's lives, to make such topics more meaningful. A large amount of time is spent doing "fixation" exercises and children's work tends to be corrected both individually (by looking at the notebooks) on the blackboard, for the class as a whole.

Behaviour- control practice:

The disciplining of children is described as being carried out through talking. A few teachers report asking misbehaving children to leave the classroom as their last resort to deal with serious disciplinary problems. Others mentioned establishing rules for behaviour in the first contacts with the children. Teachers seem to accept a certain level of conversation and physical movement in the classrooms. Children become noisier as they finish their work. The children that work faster usually have to wait for the others to finish and are asked to stay silent.

Evaluations of pupils:

The evaluations of pupils are carried out through a series of tests and other tasks. Several teachers mentioned that they take into account children's behaviour when evaluating them.

Annex 9:

Summary description of HF: (translation) (fed back to the staff for appraisal)

The following report is the result of an investigation that was directed to capture the "culture" of this school. The investigation did not include the night shift.

The work was carried out through observations, interviews and informal talks with staff and pupils for approximately two months. Due to the relatively short duration of the research it is important to stress that the present description might present some inaccuracies. It reflects the perception of a particular researcher on an extremely vast and complex reality.

Physical features of the school:

The school needs repairing - such as replacing broken window panels, fixing door locks, windows and floorboards - and decorating its internal and external walls. Teachers complain about several blackboards that have areas that are useless for writing. Staff emphasize the difficulties to get funds from the Secretariat of Education to carry out the repairs that are needed. Staff mention that they often organize fund-raising campaigns in the community.

Teachers complain about the playground area available for Physical Education classes. Teachers claim it is small and too near the classrooms, disturbing the other teachers' lessons.

The community served by the school:

The majority of teachers think that the community served by their school is very poor and needy. Some teachers comment that some parents want the school to take total care of the children.

Staff:

Most teachers have been working in the school for five years or more and there is a large number that does "double shift" in the school. The Headteacher has been in this post for six years and was just re-elected.

The staff room atmosphere is usually happy and friendly and conversation centre on different topics. Most teachers were receptive to this investigation from the start. They made themselves available when possible and were very helpful.

Evaluation of the school:

Staff consider the school to be medium, when asked to locate the school on a line between the best possible school and the worst possible school. Staff mentioned the relationships among themselves both as a good and a bad aspect of the school. Some teachers claim that people are friendly and supportive, others complain about subgroupings and the practice of gossiping and worrying about other people's lives. As suggestions for the improvement of the school, teachers mentioned the improvement of relationships, the opportunity for teachers to do courses to improve their skills and get up to date, and working in teams. Teachers comment on the difficulties of doing courses due to the lack of substitute teachers. If teachers are absent and children do not have classes, the former have to plan extra days of school and this is a nuisance for both teachers and pupils. Therefore, teachers are not stimulated to take courses very often.

Some teachers express dissatisfaction about the fact that a Pedagogic Coordinator that was assigned to school did not adapt and had to leave.

The essays pupils wrote about school express their warm feeling towards the institution and the staff. However, pupils expressed their disliking of the playtime, claiming that there is a lot of violence among pupils.

Theories of instruction:

The most mentioned cause for academic failure (repetition and drop out) is the emotional unbalance of pupils' families, mainly caused by poverty. Teachers know very well and tell the life stories of different pupils. They express concern for the pupils and the need to protect them, to keep them out of the streets. Teachers also mentioned that parents do not give support and incentive to children and this is considered to be another cause of academic failure.

Most teachers think that the problem of academic failure should be dealt with by

creating special classes for the children that cannot learn or making them spend more time in school. Teachers also think that the mentality of parents should be changed to make them value schooling more.

Although not liking the labels, teachers describe a “good” pupil as an interested, and participative child, a child that makes an effort to learn and responds to the teachers. Teachers claim that it is not necessarily the one that has good grades.

Regarding the description of the “good” teacher, staff mentioned that capacity to care for the pupils, to be their friends and to give them emotional support. Most teachers criticize the colleagues that are only worried about imparting contents irrespective of children’s real needs.

Pedagogic practice:

Most teachers reported introducing new topics by writing the contents on the blackboard or giving printed material to the pupils and then explaining it. Some teachers reported talking to children beforehand to find out what they know about the topic before introducing it. A large amount of time is spent doing “fixation” exercises and children’s work tends to be corrected both individually (by looking at the notebooks) on the blackboard, for the class as a whole.

Behaviour control-practices:

The disciplining of children is described as being carried out through talking. A few teachers report asking misbehaving children to leave the classroom as their last resort to deal with serious disciplinary problems. Others mentioned establishing rules for behaviour in the first contacts with the children. Teachers seem to accept a certain level of conversation and physical movement in the classrooms. Children become noisier as they finish their work. The children that work faster usually have to wait for the others to finish and are asked to stay silent. Several teachers claimed that disciplining the children was a difficult task in the school.

Evaluations of pupils:

The evaluations of pupils are carried out through a series of tests and other tasks.

Teachers emphasize the need to give children several chances to get good marks.

**The following appendices have been removed DUE TO THIRD PARTY RIGHTS
OR OTHER LEGAL ISSUES**

Annex 10: Photographs of children in their classrooms in HF and LF