



Development of Social Competences in the Primary School—study of specific pedagogic practices

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ABSTRACT *This study intended to promote the development of socio-affective competences in children in the first two years of primary school (age 6–8). A model of pedagogic practice with particular characteristics in terms of the relations between subjects, discourses and spaces was implemented. The mediating influence of teacher's pedagogic practice, family's social class and gender was studied. The results showed that the pedagogic practice with general values of weak framing (i.e. where some control is given to the learner) but with strong framing in specific aspects was the practice which facilitated the development of the selected competences by all children.*

Introduction

The study is part of a broader piece of research developed within the ESSA Project (Sociological Studies of the Classroom), whose main aim is to identify pedagogic practices favourable to the learning of all children. The research is sociological and particularly based on Bernstein's theory of pedagogic discourse (1990, 1996). It starts from research formerly developed by ESSA (Morais *et al.*, 1992, 1993). That research was particularly focused on the influence of sociologically distinct modalities of pedagogic practice on the learning of content and of the instructional and regulative discourses used by students in the fifth and sixth years of schooling (age 10⁻–12⁺). The studies were particularly focused on sciences. They suggested that a teaching–learning process where some control is given to the acquirer (the student as learner) in the transmission–acquisition process corresponds to a version of pedagogic practice where the students show better results. Using conceptual instruments from Bernstein's theory, that practice was characterised by distinct values of classification and framing in the various aspects studied, but where a trend for a global weak value was present. Classification values were weak in the relation between spaces (teacher–students and

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students–students) and framing values were weak in the relation between discourses (academic and non-academic discourse). The relation between the subject teacher–students was characterised by strong classification but framing varied according to the relation considered. Framing was weak at the level of the hierarchical rules and in pacing and was strong in the discursive rule evaluation criteria, i.e. when the criteria were made explicit by the teacher. In the discursive rules selection and sequence there was a tendency for a strong framing but less strong than in the evaluation criteria. This value was a result of strong values at the macro-level when the contents were selected and sequenced and weak values at the micro-level when the students introduced knowledge and altered the sequence planned. In the student–student relation, the framing values were, in general, weak in both discursive and hierarchical rules (see the following section to clarify the conceptualisation used).

The present study, whose empirical stage lasted for two academic years, intends to apply the aforementioned model of pedagogic practice to the learning of the contents of the specific regulative discourse used by primary school children; that is, we intended to apply that model to a specific instructional practice directed at the learning of selected social competences. From the global study we selected for this article the analysis of the influence of the pedagogic practice in the development of social competences. A detailed description of the whole study can be found in Rocha (1995). Specific papers describe the other main parts of the study: process of teachers' training/reflection (Rocha & Morais, 1996), characterisation of pedagogic practices (Rocha & Morais, 1999b), relation with family's process of socialisation in the regulative context (Rocha, *et al.*, 1998), and qualitative study of selected children (Rocha & Morais, 1999a).

Theoretical Context

As we have said, the approach of this study is sociological and Bernstein's theory gave the conceptual instruments which were operationalised to conduct and analyse the research. Particularly important were the concepts of code, classification, framing, specific regulative discourse and specific instructional practice.

Bernstein points out that in society as a whole and in the educational context in particular, there is an interaction which is the result of the distribution of power and control at the organisational and communicational levels within a class structure, which values distinct kinds of knowledge and legitimises distinct forms of communication through which knowledge is transmitted by and between subjects. To analyse the distribution of power and its management, Bernstein defines the concepts of classification and framing which give the possibility of considering the dynamic interrelation between the two levels of analysis: the structural level and the interactional level. The structural level is related to the principle of the relation between categories (agents, spaces, discourses). These categories can be separated by marked boundaries (a strong classification will be present) or by blurred boundaries (a weak classification will be present). It is the principle of classification which maintains power relations. It is at the level of the communicative interaction between the various categories (spaces, subjects, discourses), defined by the concept of framing, that the principles of the structural level can be changed or maintained. Whereas classification relates to power, framing relates to control and their values can vary with a relative independence. The social relations within the classroom are many. We have considered the relation between spaces (teacher–students and students–students), discourses (academic–non academic) and subjects (teacher–students and students–students). The framing relations between

teacher and students can be analysed in detail if we separate the discursive rules, which regulate who has control over selection, sequence, pacing and evaluation criteria of learning, from the hierarchical rules, which regulate who has control over the norms of social conduct. Framing (and classification) can be defined within a range of values from very strong (F^{+++}) to very weak (F^{---}) for all the relations considered. In the case of the hierarchical rules, Bernstein has considered three types of control—imperative, positional and personal—which correspond to decreasing values of framing and which can be defined with more rigour if we use the aforementioned scale¹¹.

The codes entail an orientation to meanings which can be restricted or elaborated and which can be realised by a range of values of classification (C) and framing (F), with respect to the relations referred. A restricted or an elaborated orientation institutionalised through distinct levels of C and F originate distinct code modalities. Distinct code modalities originate distinct modalities of pedagogic practice. To operate within a distinct code in a particular context requires the possession of recognition and realisation rules for that context. Recognition rules are principles which allow the distinction between specific contexts and realisation rules are principles which allow the production of the text adequate to a specific context. Realisation rules entail the passive realisation, i.e. the selection of the meanings appropriate to the context, and the active realisation, i.e. the production of those meanings. Recognition rules relate to classification, which mark the boundaries between contexts and realisation rules relate to framing, which define communication within a context. To produce the legitimate text in a specific context the subject must have recognition rules, realisation rules and *also* socio-affective dispositions favourable to the context.

Children enter school possessing distinct codes. The greater or lesser similarity of these codes to school codes will respectively facilitate or hinder the educational success of children coming.

The elaborated code of the school transmits a pedagogic discourse (PD) which integrates two discourses: the instructional discourse (ID), which refers to knowledges and skills, and the regulative discourse (RD), which is a discourse of order, relation and identity and constitutes, maintains, reproduces and legitimises the transmission/acquisition of social relations. The instructional discourse transmitted in the classroom entails specific cognitive knowledge and competences and represents a specific instructional discourse (SID). We can also consider that there is a specific regulative discourse (SRD) whenever that discourse contains as specific contents socio-affective competences which correspond to values or principles which guide the interveners in the socialising process. A systematised learning of those competences requires, as any other learning, a specific instructional practice (SIP), that is a pedagogic practice with specific characteristics which aim to promote the teaching-learning contents, in this case the SRD contents. Likewise, the production of the legitimate text (adequate performance) in the instructional context requires the acquisition of recognition and realisation rules for that context and its subcontexts, and the production of the legitimate text in the regulative context (in this study a subcontext is where the competences help, respect, responsibility, autonomy were valued) requires the acquisition of recognition and realisation for this context. Children's performance in the competences selected was appreciated to the degree in which children had acquired those rules.

Problem, Hypothesis and Objectives

Former research had suggested a pedagogic practice with the characteristics pointed out earlier as favourable to the development of cognitive competences by students of the fifth and sixth years of schooling. In the present study we wanted to investigate the results of that model of pedagogic practice for the development of social competences by primary school children at ages 6–8 years. The problem of this study was the following: *What is the influence of the pedagogic practice in the success of socially differentiated children in the two first years of primary school, particularly in the development of social competences?*

To answer this problem we formulated the following hypothesis: *Pedagogic practices condition the learning of social competences and there are pedagogic practices more favourable to that learning. Those practices are characterised by weak global values of framing, but where there is a strong framing of the evaluation criteria and to a certain extent of selection. We also hypothesised that their family's socio-economic and cultural level and their gender would influence children's learning of social competences.*

Although this study was focused on the influence of pedagogic practice on the learning of social competences, we also observed the learning of cognitive knowledge and competences because we were interested in children's global development. We wanted to find out if the SIP for the development of socio-affective competences was reflected in the development of cognitive competences and in what direction. We also wanted to know if children with better results in the socio-affective competences were the children with better results in cognitive competences.

The stages of the study were the following:

- select from the social competences which integrate the primary school syllabus in Portugal, specific competences to be developed by children in the classroom context;
- apply to the learning of selected social competences by children in the first and second years of schooling the model of pedagogic practice suggested as adequate to the learning in the instructional context;
- characterise the pedagogic practices *really* occurring in the classroom;
- analyse students' performances in terms of the pedagogic practice(s) implemented, mediated by family's socio-economic and cultural level and their gender;
- analyse the consequences of those practices in terms of children's school success, particularly in the regulative context; and
- analyse the consequences of focused strategies in the regulative context on the acquisition of cognitive understandings and competences.

Sample

The sample was made up of 83 children (and their fathers and mothers) in the first two years of primary school (age 6–8) distributed by five school classes in two schools of an urban area. The sample was socially heterogeneous and contained 44 girls and 39 boys. Each school class was taught by one teacher. The five teachers (V, T, X, Y, Z) were all female. The sample composition in terms of teacher, family's socio-economic and cultural level (FSECL)[2] and children's gender is shown in Fig. 1.

We initially established basic criteria for the composition of the sample which would guarantee: (a) a heterogeneous group of children in terms of social class and gender, equally distributed by five school classes of the same school; and (b) a group of five teachers to teach those classes who had the same kind of training, professional

Teacher X	Teacher Y	Teacher Z	Teacher T	Teacher V
G1 G2 8 7	G1 G2 11 8	G1 G2 10 8	G1 G2 8 8	G1 G2 7 8
FSECL A G1 G2 1 2	FSECL A G1 G2 5 3	FSECL A G1 G2 4 5	FSECL A G1 G2 0 0	FSECL A G1 G2 0 0
FSECL B G1 G2 4 1	FSECL B G1 G2 4 3	FSECL B G1 G2 0 2	FSECL B G1 G2 0 0	FSECL B G1 G2 1 0
FSECL C G1 G2 3 1	FSECL C G1 G2 2 2	FSECL C G1 G2 4 1	FSECL C G1 G2 4 6	FSECL C G1 G2 5 4
FSECL D G1 G2 0 3	FSECL D G1 G2 0 0	FSECL D G1 G2 2 0	FSECL D G1 G2 4 2	FSECL D G1 G2 1 4

FIG 1. Distribution of the sample according to the five teachers and the children's gender and FSECL.

experience and similar number of years of teaching. These criteria could not be totally accomplished. If the distribution of children by FSECL and gender is relatively equitable in the sample as a whole, their distribution by school classes, as shown in Fig. I, is socially quite distinct. On the other hand, the school classes could not be part of the same school, because there were not a sufficient number of classes in each school. For that reason we chose two schools with a similar location. With respect to teachers, they had obtained their degree in the same college, but differed in terms of professional experience and teaching time, which varied between 8 and 24 years.

Methodology

Pedagogic practice was the independent variable of the study. Its influence on children's achievement in the competences of the specific regulative discourse, mediated by FSECL and gender, was studied. Children's performance was therefore the dependent variable. The social competences selected were *help*, *respect*, *responsibility* and *autonomy*.

Pedagogic practices in this study were the recontextualising by each teacher, in her classroom, of the model proposed. They revealed the extent to which teachers produced the legitimate text, i.e. the extent to which the classroom reality corresponded to the implementation of the model of pedagogic practice we had suggested, within an action research approach[3]. This model was the model suggested by former research but changes at the level of selection and sequence were introduced in the direction of weaker framing. The social competences were primarily selected by the researchers out of the competences which are part of the text of the syllabus for primary school and were suggested to the teachers who were going to teach the five school classes. Although placing some reservations on the development of the competence *autonomy* on the basis of the early age of the children, the teachers agreed to try to teach the four competences, *help*, *respect*, *responsibility* and *autonomy*. The conceptualisation of each competence

TABLE I. SRD contents: conceptualisation and respective indicators

Contents	Concept	Indicators
Help	Collaboration or cooperation between people when looking for solutions to a situation which entails some difficulty.	Share materials. Collaborate in the activities.
Respect	Following the agreed rules in the fulfilment of the functions of each person.	Raise a hand to show that s/he wants to speak. Wait for his/her turn to speak. Do not make noise when moving around the classroom or when moving tables or chairs.
Responsibility	Competence of 'taking care' of something.	Take care of his/her tasks. Take and/or bring information and/or needed materials between the school and the home.
Autonomy	Competence of doing things on his or her own, of taking an initiative, of giving an opinion.	Give ideas about what is going to be done at school. Take the initiative. Tell what he/she thinks about what is being studied or observed.

was obtained through a reflection and discussion process undertaken by each teacher and her children which took place in each classroom and which focused on everyday life situations followed by classroom situations[4]. For each competence, indicators corresponding to the legitimate text to be produced were identified, that is behaviours to which children should approximate in order to show that they had developed the social competences selected were defined. The result of this activity is shown in Table I.

With respect to the discursive rule sequence, the framing values were likely to be weak because we did not establish a temporal progression for the learning of the four competences and respective behaviours. Indeed, they would occur simultaneously although with distinct degrees of difficulty. The model proposed is shown in Table II, where the values of classification and framing for each relation are indicated.

To answer the problem of the research, we intended to analyse and evaluate children's performance in the selected social competences, that is, in the learning of the contents of the specific regulative discourse, in terms of the pedagogic practice and considering the FSECL and gender as mediating variables. The data for analysis were obtained through class observation, which took place in two periods of empirical study (second term of first year and first term of second year). Each period of class observation lasted for 1 week and the five classes were observed in succession to avoid differences in time between classes, which could reflect differentiated opportunities for learning and consequent differentiated developments. These data were complemented with the data teachers brought regularly to the weekly work meetings.

To characterise each one of the five teachers' practices we gave a value to each one of the relations considered, by comparison with the theoretical model. The values given to classification and framing in the various relations were obtained from comparing classroom transcripts with tables containing relations studied, respective indicators selected and scales of increasing values of classification/framing for each one. The whole procedure followed for the characterisation of the pedagogic practice is described in

TABLE II. Model of pedagogic practice more adequate to the learning of all children

		Relation between subjects (Fi)		Relation between discourses (Fe)		Relation between spaces (Ci)	
		Teacher-students		Students-students			
		Discursive rules		Hierarchical rules		Student-student relation	
Selection	Sequence	Pacing	Criteria			Academic-non-academic knowledge	Teacher-students and students-students spaces
F ⁻ (weak)	F ^{- -} (weak)	F ^{- -} (weak)	F ^{+ +} (strong)	F ^{- -} (weak)	F ^{- -} (weak)	F ⁻ (weak)	Ci ^{- -} (weak)

Rocha & Morais (1999b). To give some idea of the procedure used to characterise each one of the pedagogic practices, the reader can look at the transcripts given later in the article to illustrate behaviours and levels of children's performance. In the first observation (second term of first year) we distinguished three modalities of pedagogic practice which corresponded to three modalities of pedagogic code. The greater or smaller approximation to the model suggested led us to consider three distinct pedagogic practices, P₁, P₂, P₃. This is shown in Table III.

P₁ was the pedagogic practice which had more similarities with the proposed model, practice P₃ was the most distant and P₂ corresponded to an intermediate situation. On the whole they constituted three sociologically distinct realities. Pedagogic practice P₁ represented, therefore, the realisation of the legitimate text, i.e. it translated the implementation in a specific context of a classroom dynamics in accordance with the theoretical planned profile.

Children in P₃ were those who had less opportunities for learning the social competences selected, given the dynamics of the classroom created by the teacher. It was clear through the observation of the classes that the way the transmitter assumes her/his functions and promotes the interactional relations with the acquirer is a determinant factor in the creation of facilitating situations for the learning of the contents of the specific regulative discourse. We also observed that there are activities and strategies which concretise facilitating situations.

In the first observation of the classes (second period of the first year), pedagogic practice P₁ was being implemented in classes Y and V, pedagogic practice P₂ in classes X and Z and pedagogic practice P₃ in class T. In classes Y and V (P₁) and X and Z (P₂) the learning of the social competences, *help*, *respect*, *responsibility* and *autonomy* was promoted, through an adequate instructional practice, whereas in class T (P₃) children were placed in a context more favourable to the acquisition of the social competence obedience. Although having distinct levels of framing in those classes (which justifies the distinction between P₁ and P₂), teachers promoted a transmitter-acquirer relation of communication with a predominance of personal control. In class T (P₃) the teacher tended to centre on herself in the process of communication and to use imperative control.

In each classroom we observed a recontextualising of the pedagogic practice which was not maintained identically during the whole empirical stage as a consequence of the action research process which took place during the same period of time[5].

In the second observation of the classes (first term of the second year) there was an evolution of the three pedagogic practices to two practices. There was an evolution of pedagogic practice P₃, observed in the beginning of the empirical work, in the direction of pedagogic practice P₂. This means that children became socialised within a relation where they gradually had more control. Table IV shows that evolution. We can notice that in three classes Y, V and Z, practice P₁ was implemented and in the other two classes, X and T, practice P₂ was implemented. We can also notice that in class T the learning of all social competences selected was promoted through a more adequate specific instructional practice. An adequate relation of communication was shared in all classes although it was more frequent in the classes where P₁ was the modality of pedagogic practice implemented[6].

In the face of the evolution which took place and in the transformation of practices P₁, P₂ and P₃ to practices P₁ and P₂, we could only compare evolution results obtained by children who were placed in classes X, Y, V and Z.

TABLE IV. Distribution of the teachers by the pedagogic practices they implemented during the 2 years of the empirical study

	Stages of the study		
	1st year	2nd year	
	P1	YV	YZV
Pedagogic practices	P2	XZ	XT
	P3	T	

Children's social class (considered in a nominal sense) was determined on the basis of four indicators: father's and mother's academic qualifications and occupations. Each one of the variables could have one of four values corresponding to the four categories of the scale we used[7]. The information was obtained from children's registration files[8]. All doubts were clarified when children's parents answered the questionnaires[9].

In our sample the first two levels included parents who had a manual occupation and who either completed only primary school or entered fifth/sixth years of schooling without completing them. Levels three and four included parents who had a non-manual occupation and who completed a level of schooling equal to or higher than the fifth/sixth years.

On the basis of these indicators we constructed a composite indicator of the family's socio-economic and cultural level (FSECL), again in a 1-4 (D, C, B, A) scale which defined the family's social situation of each child[10].

The scale for the variable gender (G) had two degrees: G1—girls; G2—boys. Although this is usually considered a nominal scale, we used it in this study as an ordinal scale, assuming that girls occupy in the social hierarchy a lower position than boys.

Children's achievement in the contents of the specific regulative discourse, i.e. in the social competences *help*, *respect*, *responsibility* and *autonomy*, was translated into four performance levels. Achievement was appreciated by the data given weekly by teachers together with the data of our class observation in the 2 years of the empirical study.

To analyse children's performance we did the following.

- In the transcripts of class observation we marked children's attitudes corresponding to the indicators chosen for each content (competence) of the specific regulative discourse.
- We counted for each child the number of interventions corresponding to each content of the specific regulative discourse, obtaining four totals for each child corresponding to the four social competences selected.
- We saw the highest number of interventions for each content in the whole sample so that we could place children's performance by reference to the highest value found.
- We defined children's level of performance in terms of the value of the frequency of their interventions.

This procedure was firstly followed by one researcher and later on validated by another researcher. Whenever there was disagreement a discussion among the two researchers led to more reliable coding. A few cases where agreement could not be reached were considered ambiguous and were discarded from the analysis.

To quantify children's level of performance we used a scale of four degrees which corresponded to four distinct situations. The scale was the following.

- 0 The child does not realise the legitimate text and does not recognise the context, which means that he/she does not possess the recognition and realisation rules.
- 1 The child recognises the context but does not produce the legitimate text, which means that he/she possesses the recognition rules but does not possess the realisation rules—he/she has a reduced performance.
- 2 The child selects the adequate meanings, which means that he/she possesses the recognition rules and the realisation rules at the level of the passive realisation—he/she has a medium performance.
- 3 The child produced the text appropriate to the context which means that he/she possesses both recognition and realisation rules—he/she has a higher performance.

These rules are sociologically acquired in intra and inter-context interactions. We considered that children's performance could approximate to four distinct type-realizations corresponding to four degrees of framing defined for each one of the indicators of the four socio-affective competences which constituted the SRD. To make this description clearer, we give examples for each social competence, the distinct four degrees of framing which define the respective behaviours types (Rocha & Morais, 1999b) and also an excerpt of the transcripts of the classes to illustrate the observed behaviours correspondent to each degree of framing.

In the case of the social competence *help* and for one of its indicators, *collaborate in the activities*, we distinguished the following behaviour types: the teacher indicates the activities (F^{++}), the teacher allows children to collaborate in some activities (F^+), the teacher gives an incentive to the children to collaborate in some activities (F^-), the teacher gives an incentive to the children to collaborate in all activities (F^{--} [11]). The legitimate text for this context would be to collaborate in the activities and its realisation depends on the nature of the teacher's action—we observed a correspondence between degrees of classroom framing and degrees of children's performance in the production of the legitimate text. In other words, whereas weak values of framing favoured the production of the legitimate text by children to performances of a degree of three, pedagogic practices where the values of framing are strong, make difficult or even inhibit the production of the legitimate text by children, as a consequence of the teacher's intervention itself. This situation arose due to the fact that the proposed model of pedagogic practice suffered distinct recontextualisations in the five classrooms.

The following are examples of behaviour showing the indicator *collaboration in the activities* of the social competence, *help*.

Before leaving the classroom after the morning class was finished, the teacher tells the whole class:

'Hurry up, I want the room tidy! ... Everything in its place! ... Nobody heard?! ... I've already told you to tidy up the room!' (F^{++})

This teacher's attitude, which indicates what children should do, prevents them to showing if they really possessed the recognition and realisation rules for the social competence *help*, because all they could do was to obey the teacher's instruction. This situation illustrates a performance of degree zero.

Sofia[1 2] is at the blackboard trying to solve an exercise and says, 'I want to do it but I can't!'

'So, what are we going to do? ... We have to help ...' (teacher)

'I can help!' (Duarte)

'Go ahead.' (teacher) (F^+)

The teacher encourages the child who volunteered to help. This child shows possession of the recognition rules, that is, he did not take the initiative to act on his own but as soon as the teacher asks what to do and reminds him that there is a need to help, the child recognises the context of *help* and volunteers to give that help. This situation illustrates a performance of degree 1.

The children have finished some pictures and they are going to place them on the wall. Elsa is having some difficulty in fixing them.

'We can't ...'

'Can I ask Ms X for something to hammer the pictures?' (Tiago)

'Of course!' (teacher)

'I also helped to paint that panel ...' (Luzia)

'And I helped to choose the colours!' (Sérgio)

'I also helped when we did the other work ...' (Miguel)

'Nice children, helping out. Good!' (teacher)(F⁻)

In this situation the children show possession of the recognition rules and passive realisation in the context of *help* and of the indicator *collaboration in the activities* because they identify the context, and with the teacher's approval they remember other situations where they had collaborated in the activities. This behaviour illustrates a performance of degree two.

The class had just finished an activity of collective teaching. According to the plan the personalised teaching was next. Dina advanced: 'We may tidy up our things to do what we like during personalised teaching'.(F^{- -})

In this case the child shows possession of the recognition and realisation rules (including active realisation) because she produces the legitimate text appropriate to the context, that is she knows that she can and should help and takes the initiative of doing it, collaborating in the activities.

In all situations the role of the teacher in the transmission–acquisition relation is decisive in the creation of opportunities for children's learning of the social competences selected. The establishment of behaviour types relative not only to *help* but also to other social competences where teachers' intervention conditions children's intervention, defines the dynamics of the interaction and illustrates how the opportunities of learning are directly related to the levels attributed to framing. This is particularly evident in the case of the implication of the acquirers in the learning of competences which require their active participation and which are translated in distinct degrees of performance.

With respect to the social competence *respect* and to one of its indicators, *do not make noise when moving*, we distinguished the following behaviour types: the teacher indicates where children can go and recommends that they should do it carefully without any noise (F^{+ +}); children ask the teacher if they can move and after her agreement they do it without disturbing others (F⁺); children tell the teacher they are going to move according to the type of activity and do it without disturbing others (F⁻); children move freely around the classroom without noise and following the agreed rules (F^{- -}).

The following are examples of behaviours showing the indicator *do not make noise when moving* of the social competence, *respect*:

Two children have finished solving problems at the blackboard. The teacher tells them: 'Get back to your seat! ... Behave ...'

And to another child who is trying to make words on the board:

'So, not yet?! ... Sit down properly! I do not want any noise or talking'.

(F^{+ +})

We consider that this is a performance of degree zero because the teacher herself only requires that children obey and does not give them the opportunity of learning the competence *respect*. As a consequence children have no chance to show whether they possess the recognition and realisation rules.

A designing and painting activity is going to start and children will do group work.

'May I join Isabel?' (Ema)

'If you are going to work in her group you may go ... But remember what we agreed ...' (teacher)

'I know, no noise.' (Ema) (F⁺)

This is a performance of degree one because it corresponds to a situation in which the child recognises that she can move, provided she respects the norms, namely asking for teacher's permission. This teacher's attitude can delay the production of the legitimate text agreed, which requires that whenever needed the children can move on their own without making a noise. The pedagogic practice characterised by F⁺ did not yet constitute a facilitating context for that learning. The fact that children responded to the requirements of that teacher, i.e. produced the legitimate text of that pedagogic practice, meant that by obeying what was indicated by the teacher children could not go beyond the realisation of degree one.

Observations of this kind conditioned the interpretation of the classes' descriptions, highlighting the fact that the teacher's intervention interferes in the production of the legitimate text by children. Although we cannot establish a linear relation of cause-effect between that intervention and the degree of children's performance, the teacher's action often constituted a limiting factor.

Personalised teaching is going to start. Leonor and Nidia tell the teacher: 'We are going over there to work with the logic blocks'. (F⁻)

We consider this intervention to be a performance of degree two because children identify the context and produce the legitimate text, being already able to take the initiative.

The activity is finished and will be followed by music for which free space in the classroom is needed.

The children carefully moved the tables and chairs near to the walls, clearing the space in the middle of the classroom. (F^{- -})

This example illustrates a performance of degree three because children showed themselves to have recognised the context, i.e. to have recognition rules and act according to what was expected in that context, which means that they had active realisation rules.

These children's interventions, legitimised in the contexts of the respective classrooms, show performances which approximate to degrees two and three, because they inform the teacher of what they are going to do or are already able to take an adequate and legitimate initiative recognised as a legitimate text. It is important to notice that the stronger levels of framing constituted in the situations referred to factors which made it difficult from the start to produce what was intended to be the legitimate text for the indicators of the four selected competences.

We used the same methodology for the social competences *responsibility* and *autonomy*. With respect to *responsibility* and to the indicator *taking care of tasks*, we considered the following behaviour types: the teacher indicates arbitrarily the children

who are going to do the tasks (F^{++}); the teacher looks at the tasks board and indicates who should do them each day (F^+); some children remind the need to look at the tasks board so that they each do what they should (F^-); and children look at the tasks board and do the tasks which relate to them (F^{--}).

The following are examples of the observed behaviours.

When entering the classroom, Fábio and Vítor went to look at the task board.

The teacher said:

'Hey, hey, kids! What are you doing?! ... Go to your seat! ... I'll tell you who is going to do what!'. (F^{++})

This excerpt illustrates a performance of degree zero which is the only one legitimised by pedagogic practice P_3 . If we remember that the conceptualisation of each social competence and the selection of the respective indicators were shared by the researchers, the teachers and the children, these children would know that theoretically they could look at the tasks board. However, what we observed in practice is that the teacher did not legitimate in her classroom the behaviour which would correspond to children's performance of degree three. This example reinforces what was said before about the teacher's intervention, i.e. the relation between the creation of facilitating situations for children's learning and the degree of performance they can attain. Weak degrees of framing can make possible children's production of the legitimate text within performances of degree three, although this would not automatically imply that all children achieved that degree. However, the fact is that that pedagogic practice made such possibility viable. On the contrary, the recontextualising within the lines of practice P_3 inhibited children from showing the possession of recognition and realisation rules which would be reflected in the production of the legitimate text within the highest degrees of performance (two and three). And this is a consequence of the intervention of the teacher herself.

The teacher has the daily routine of looking at the task board and telling the children who should do the daily tasks (observation and registration of the weather, registration of the temperature, registration of attendance, handing out and collecting the notebooks). (F^+)

In this recontextualising of the pedagogic practice children are asked to follow the directions given by the teacher. They may recognise the context of doing a task but this attitude, in face of the attitude of the teacher, reflects obedience and not responsibility, as was conceptualised. We considered a performance of degree one.

At the beginning of the morning, Fátima says:

'Miss, the tasks table!'

'Thanks Fátima! ...' (to the class) 'Did you hear what Fátima said? Let us see who has things for today ... Henrique, the calendar! ... Romão, change the water of the flowers ... Ema, see the weather! ... Dora, the temperatures! ...

Is everything done? Then open your notebooks ...' (F^-)

This example shows a performance of degree two because the child identifies the context and suggests to the teacher what should be done. This behaviour is stimulated by the teacher and this can facilitate a later performance of higher degree.

When entering the classroom Elsa, Fernão and Joaquim go to the task board. Elsa says, 'Today is my turn for handing out the notebooks! ... And Alberto is going to water the plants!'

'I take care of the weather!' (Fernão)

'It is not my turn to do anything!' (Joaquim) (F^{--})

We considered this a performance of degree three because the children recognise the context where it is legitimate to show responsibility and act according to the expectations and demands of that context.

Finally, with respect to the social competence *autonomy* and to the indicator *give ideas about what is going to be done*, we differentiate the following behaviour types: the teacher indicates with whom each child is going to work and what they are going to do (F^{++}); the teacher asks for suggestions for the work to be done (F^+); the teacher allows children to give ideas about the work (F^-); children give ideas about strategies, materials, etc. (F^{--}). Examples of situations observed were as follows.

The teacher addresses the class: ‘Pay attention, now! ... I am going to tell each of you with whom he is going to work and what he is going to do ... Listen well, I don’t want you to get ideas of your own!’ (F^{++})

As happened for the preceding social competences, we can see that also for *autonomy* the pedagogic practice P_3 does not promote the learning of this competence and that children’s performance is of degree zero.

‘Now that we have finished you are going to say what you think of what you did ...’ (teacher)
 ‘We took too much time and we didn’t manage to do everything’ (Marco)
 ‘If everyone had behaved I think we would have had time for everything! ...’ (Telma)(F^+)

This is a performance of degree one because children recognise the context but the teacher had to ask explicitly for their participation.

‘Miss, may I say something?’ (Nuno)
 ‘If it has to do with what we are studying.’ (teacher) (F^-)

This excerpt shows a performance of degree two because the child reveals that he identifies the context and is able to select the meanings adequate to that context.

The criterion for the selection of the elements of the group was being established. The teacher was hesitating about how to proceed with the selection. Manuel asks:
 ‘May I give an idea?’
 ‘Of course!’ (teacher)
 ‘It could be a “lenga-lenga”’.
 ‘Alright, it’s a good idea!’
 ‘I also have another good idea. We could use raffles.’ (Fernão)(F^{--})

This last behaviour shows that children developed the competence *autonomy* and attained the degree three of performance.

Finally, to quantify children’s performance in cognitive competences we also used a 4-point scale similar to the scale we used for socio-affective competences. The notes regularly taken by teachers and the formal information given each term to parents by teachers were the basis for placing each child in each of the four degrees of the scale. This work was done in collaboration with teachers.

The study used simultaneously a quantitative and a qualitative methodology. The quantitative approach was used for the treatment of the data obtained from the transcripts of the classes we observed. On the basis of these transcripts we counted the frequencies

of children's performances in the social competences and they were statistically treated. The statistical procedures for the treatment of the data were analysis of variance (when we compared media with more than two groups), the student *t*-test (to compare two media) and the Kruskal–Wallis test (for situations where we obtained a null variance in any of the groups and we decided to opt for a non-parametric analysis). Within a qualitative approach we went beyond the transcripts of the classes registered by the researcher to consider the researcher 'impression' of the classroom's ambience (more subjective but not less important). We also considered the notes regularly brought by teachers. These contributed to clarify the situation of each child, i.e. to give more precision to the level attributed to each child in the various indicators we considered and to determine the trend of the respective global value. We can therefore consider that we used a mixed method of analysis.

Analysis of the Results

We studied the relation between modalities of pedagogic practice and children's differential achievement. The practices which promoted a transmitter–acquirer relation of communication where some control was given to the acquirer in the transmission–acquisition process represented, according to the hypothesis formulated, contexts which would facilitate children's learning. A relation of this kind was observed from the beginning of the empirical study in classes Y and V (P_1) and was later on observed in class Z, where in the beginning a practice identified as P_2 was implemented. Class X consistently maintained the pedagogic practice P_2 , which as we saw before was somewhat different from the proposed model. Class T, which in the first period of observation recontextualised the proposed model to practice P_3 , presented an evolution in the direction of P_2 . Since in the second period of observation practice P_3 was no longer present, the comparative analysis is centred, as we said earlier, in pedagogic practices P_1 and P_2 .

Children of pedagogic practice P_1 had from the beginning the most favourable conditions for the acquisition and application of the contents of the specific regulative discourse when compared with the students of other pedagogic practices whose learning opportunities were more limited. The results which we present for each pedagogic practice do not refer to children's performance in each one of the two periods of observation but to the evolution of that performance, which is a result of changes from the first to the second period of observation. Thus, for example, a child who is in level 1 of evolution is a child who went forward a level from the first to the second period, for example from degree 1 to degree 2 or from degree 2 to degree 3. However, it is important to point out that although we were particularly interested in the evolution levels, we also analysed children's absolute level of performance in each period. We saw that initially and in general children of all social levels showed higher levels in the two simpler social competences, *help* and *respect*, than in the complex competences, *responsibility* and *autonomy*. Although, and also in general, children of higher social levels showed an initially better performance, the difference between social groups was much smaller than one could expect. This may be related to the fact that in our sample children of all social levels had low levels of performance in the complex competences *responsibility* and *autonomy* in the family (Rocha *et al.*, 1998). However, by the end of the study differences between children had blurred, when they experienced pedagogic practice P_1 .

Comparative Analysis and Discussion of Results of Children's Learning Socialised in P₁ and P₂

We analysed the results obtained by children socialised by P₁ and P₂, which were the two modalities of pedagogic practice kept during the whole period of the empirical study and which for that reason could be compared in each one of the selected social competences of the specific regulative discourse. We then proceeded with the comparative analysis of those results.

Fig. 2 shows the data relative to the evolution levels of performance in social competences by children of pedagogic practices P₁ and P₂. It is possible to see that it is in P₁ that there were higher frequencies of the higher levels of performance for all competences of the specific regulative discourse. Furthermore, it was in P₂ that there was a regression of level in *help* and *responsibility* for one child and it was also in P₂ that, in general, there were more frequencies without any evolution.

When we compared as a whole the results of P₁ and P₂ in each competence of the specific regulative discourse, we noticed that statistically significant differences were only evident for *help* ($p = 0.004$). We also noticed that for all social competences the highest means with simultaneous smaller dispersions are those of pedagogic practice P₁, i.e. that the modality of pedagogic practice which facilitates the learning of the selected competences by all children is the practice P₁. Data of children's performance also showed that practice P₁ gave the better results for children of any FSECL. In practice P₂ no child of the lowest FSECL obtained the best results in any social competence. These data suggest that a pedagogic practice with the characteristics of P₁ is the most appropriate for the narrowing of children's differential achievement. In fact, this pedagogic practice promotes opportunities for the learning of social competences and this gives rise to better results for all children.

FSECL and Children's Learning Evolution in Practices P₁ and P₂

Figs 3 and 4 show the data relative to the evolution of children of differentiated social levels in pedagogic practices P₁ and P₂. Data show that there is not in general a regular relation between FSECL and children's learning for any of the four social competences. Although this pattern is found in both pedagogic practices, children of all social levels show in general better performances in P₁ when compared to P₂. Pedagogic practice P₁ also narrows the gap between differentiated children, even when absolute level of performance is considered. Pedagogic practice P₂ is less favourable to children's learning to a point that no child of the most disadvantaged group attained the highest possible mark in any social competence. Although differences found are not statistically significant, these results should not be overlooked.

Gender and Children's Learning Evolution in Practice P₁ and P₂

Fig. 5 and 6 show the data relative to boys' and girls' evolution levels in pedagogic practices P₁ and P₂. Whereas, in general, boys show a higher evolution when compared to girls in practice P₂, this difference is blurred in the case of practice P₁. Differences are not statistically significant. The data suggest that this variable is not determinant of children's results with regard to the selected social competences, particularly in the case of pedagogic practice P₁. Although without statistical meaning, it seems that practice P₁ promotes the narrowing of boys' and girls' performances.

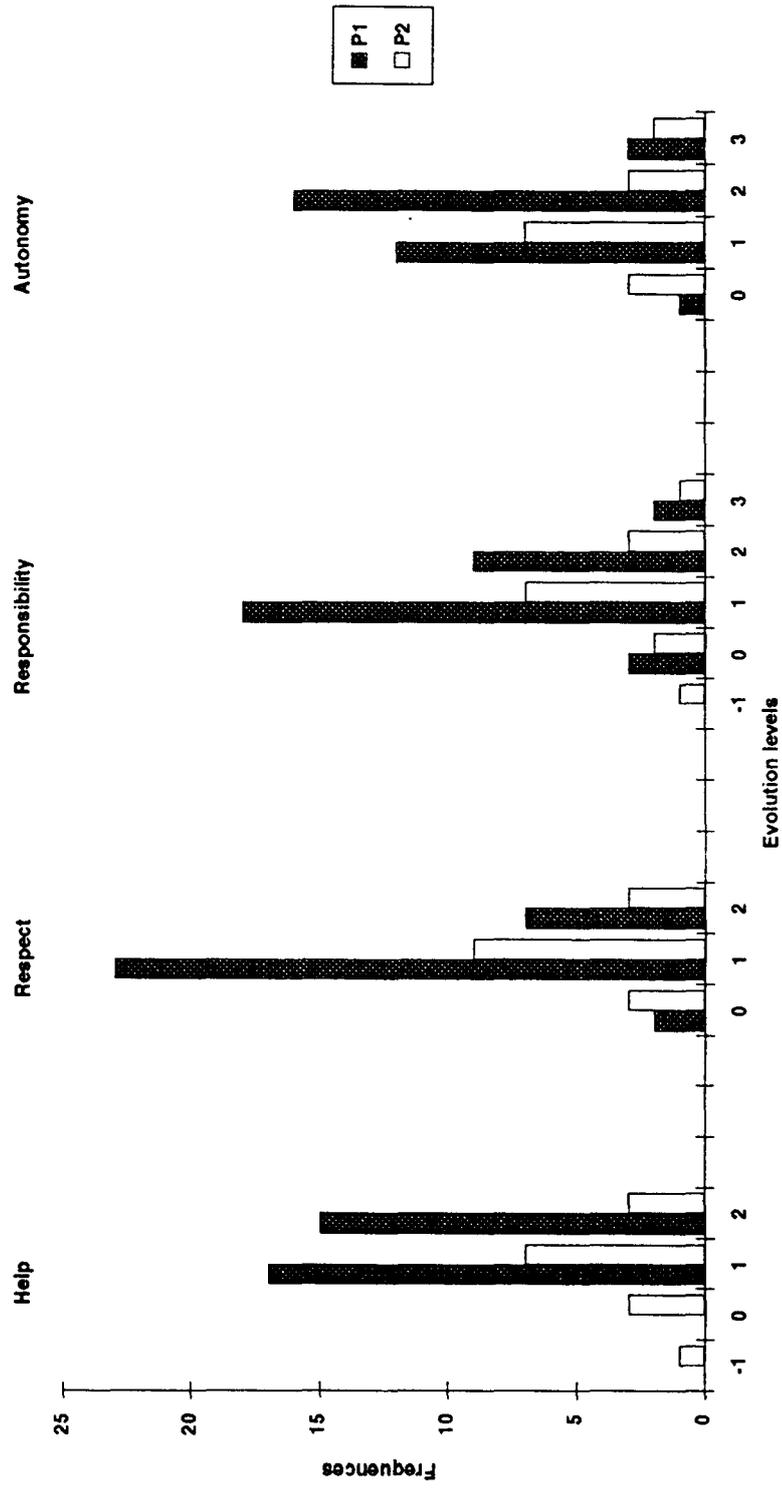
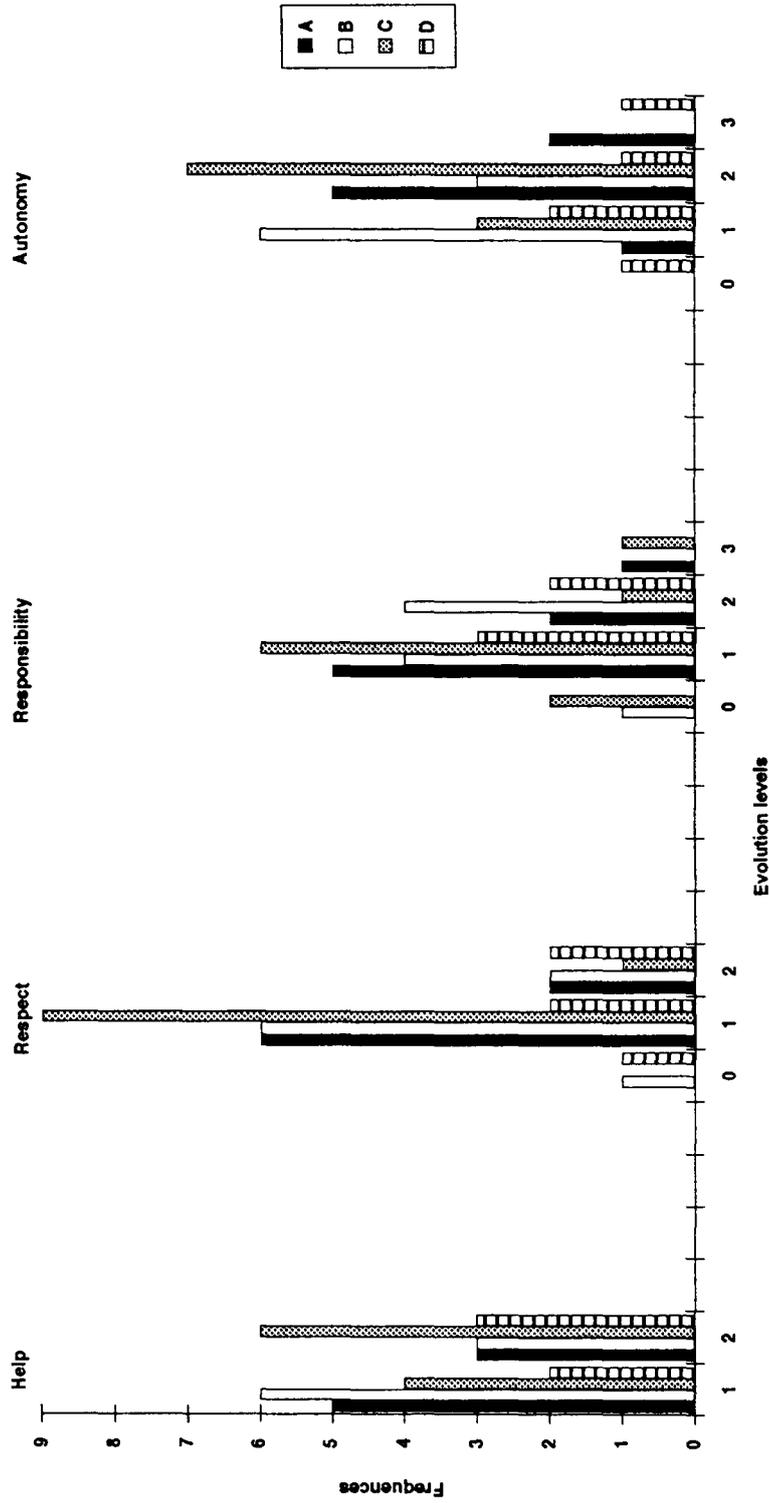
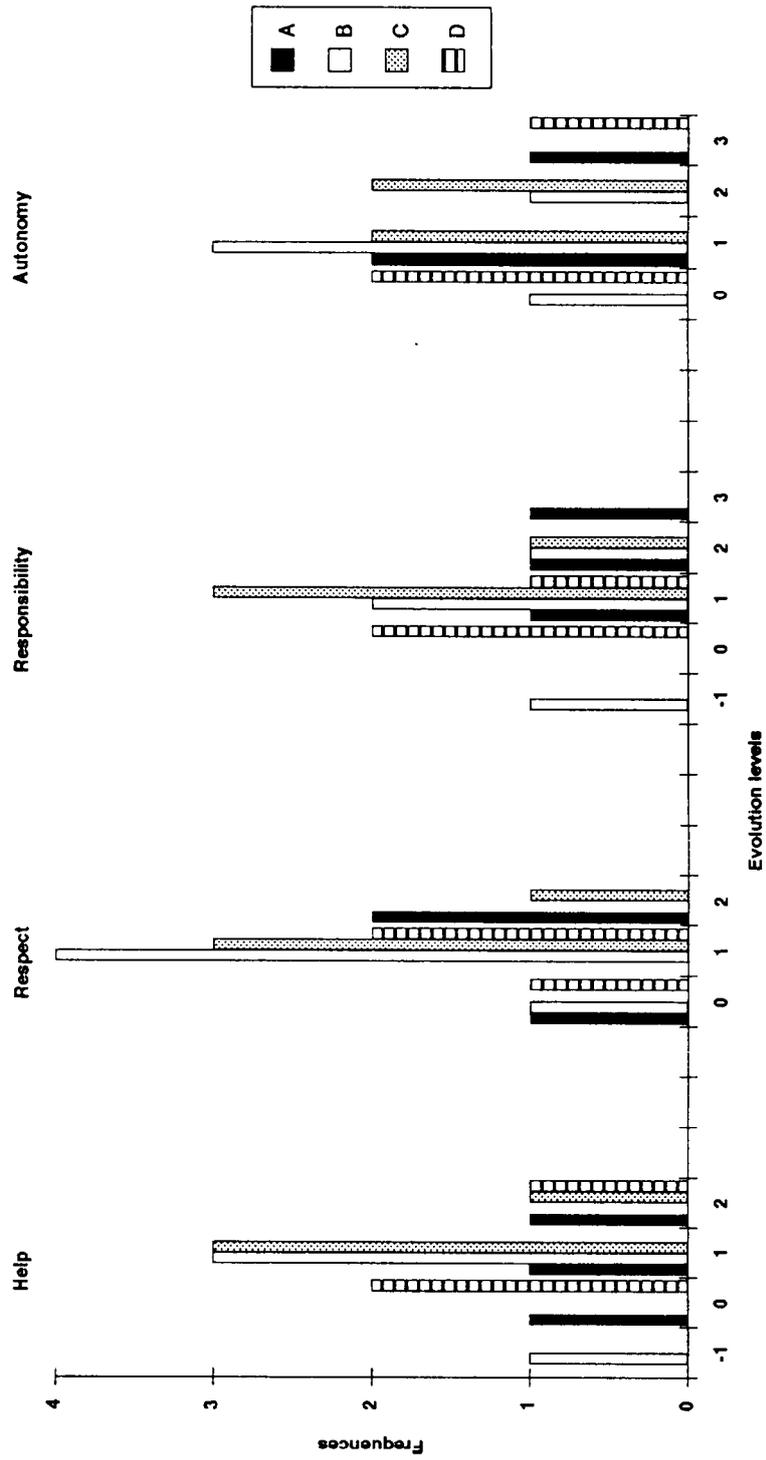


FIG 2. Comparative analysis of the competences of the SRD of children of P₁ and P₂.



A, B, C, D - Decreasing FSCE levels.

FIG 3. Children's performance in competences of the SRD in P₁ mediated by FSCECL.



A, B, C, D - Decreasing FSCE levels.

FIG 4. Children's performance in competences of the SRD in P₂ mediated by FSECL.

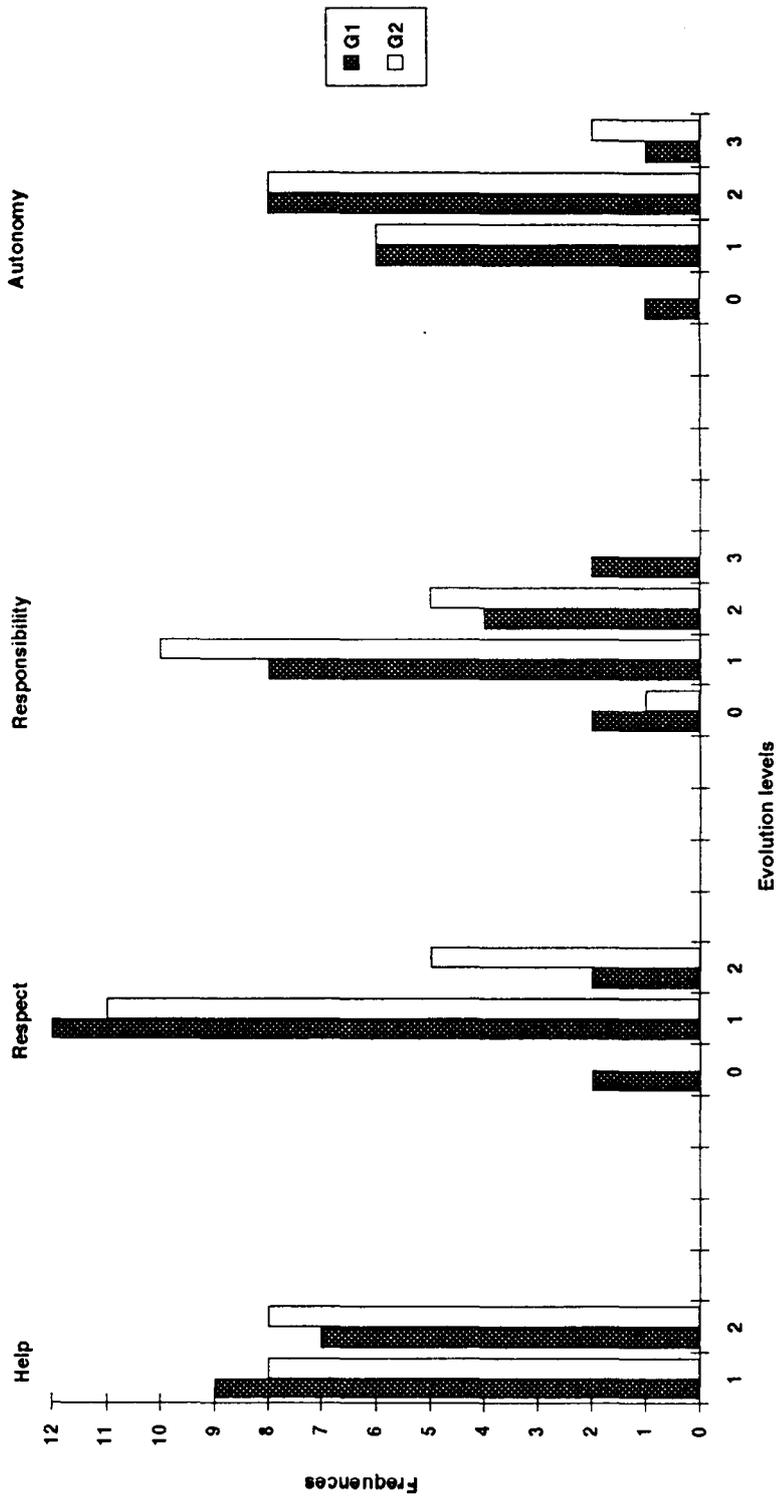


FIG 5. Children's performance in competences of the SRD in P1 mediated by gender.

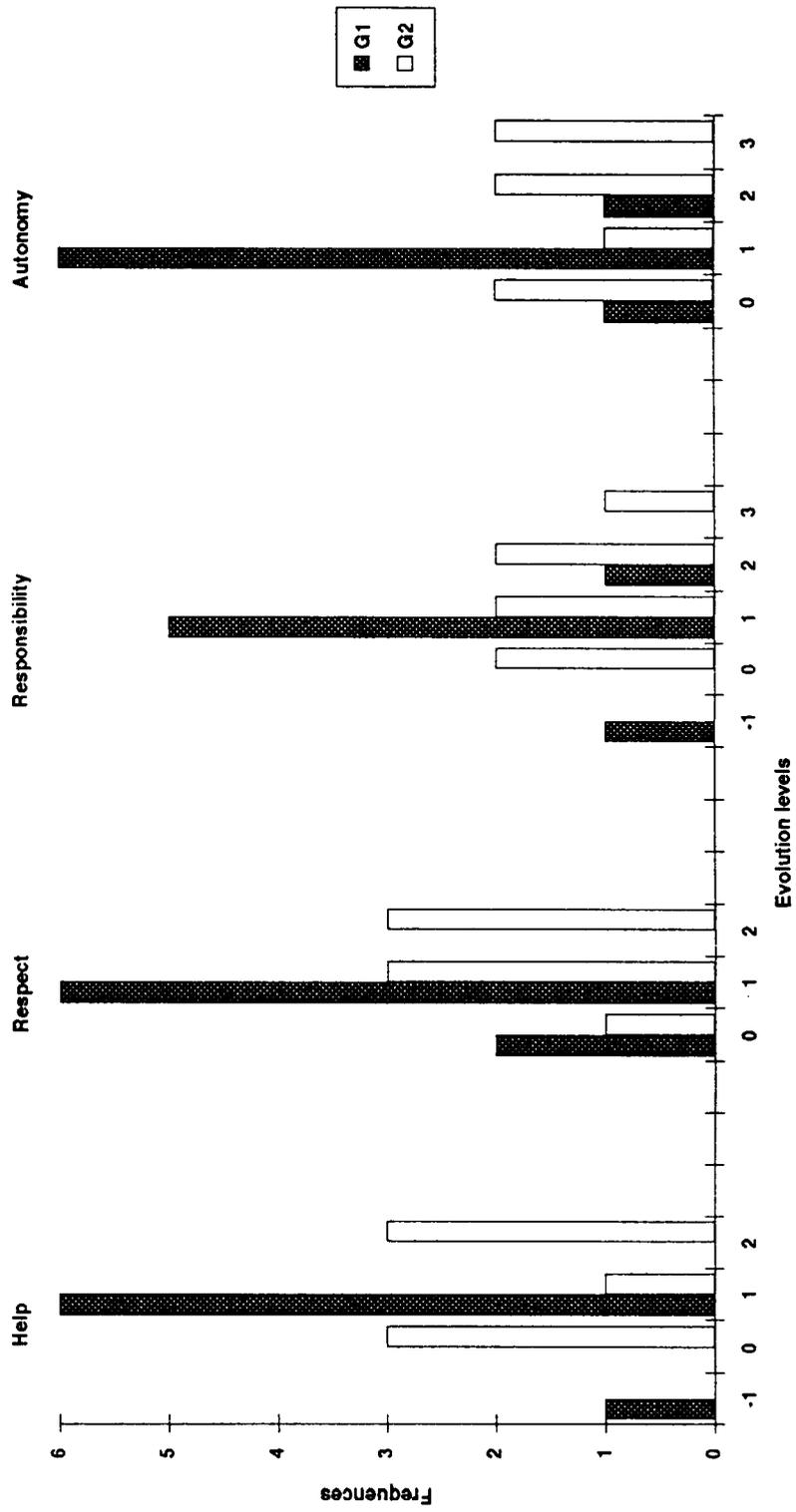


FIG 6. Children's performance in competences of the SRD in P₂ mediated by gender.

Comparative Analysis of the Results Obtained in Social and Cognitive Competencies

As we said earlier, we intended to study the implications of the pedagogic practice on children's school and educational success. Although the focus of our analysis was the learning of social competences, we also wanted to study the relation between these competences and cognitive competences.

We considered for this analysis children whose cognitive performance in the first observation had not attained the highest level (measured on a scale similar to the scale used for social competences), that is all children that could show an evolution. We saw that 24% stayed in the same level of performance, i.e. had not had any evolution, 61.3% had an evolution of one level and 14.6% had an evolution of two levels.

Fig. 7 shows the results. In the figure, 0, 1, 2, 3 indicate levels of evolution for cognitive competences (CC) and socio-affective competences (SAC). For children who had kept the same level of performance in cognitive competences, 33.3% also showed no evolution in social competences, 33.3% had an evolution of one level and 33.3% had an evolution of two levels. For children who had an evolution of one level in cognitive competences 4.4% had no evolution in the performance of social competences, 56.5% had an evolution of one level and 39.1% had an evolution of two levels. Children who had an evolution of two levels in cognitive competences all showed evolution in social competences: 45.5% had an evolution of one level and 54.5% had an evolution of two levels.

The results show a statistically significant relation between the evolution in cognitive competences and the evolution in social competences ($p = 0.008$), where high values in cognitive competences are associated with high values in social competences.

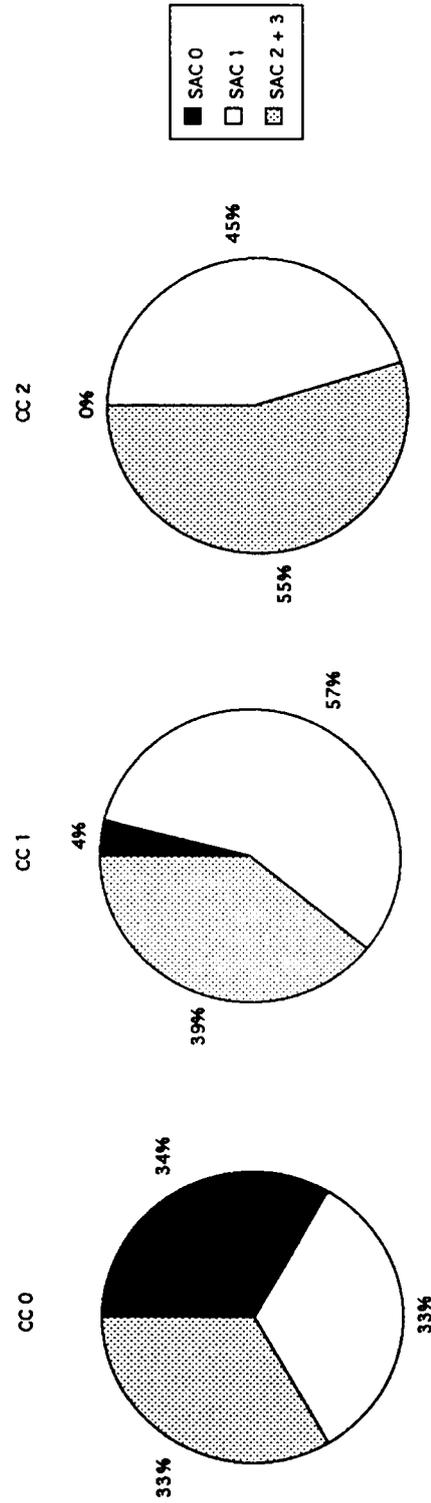
Fig. 7 indicates that children with no evolution in the production of the legitimate text for cognitive competences are equally distributed in the three levels of evolution observed in social competences. When level 1 of performance in cognitive competences is considered, social competences show either the same level (56.5%) or a higher level (39.1%). For level 2 of performance in cognitive competences, social competences are concentrated either in level 2 + 3 (54.5%) or level 1 (45.4%).

Discussion and Conclusion

The study analysed the influence of pedagogic practice on differential achievement of primary school children in the learning of selected social competences.

Having the conceptual support of Bernstein's theory of pedagogic discourse and the reference of former studies of the ESSA Project (Morais *et al.*, 1992, 1993), we formulated a hypothesis where we suggested that the learning of the competences *help*, *respect*, *responsibility* and *autonomy* is conditioned by school pedagogic practice, although it can be influenced by the variables FSECL and gender.

In the model of pedagogic practice we initially presented, we defined power and control relations in the classroom context in terms of given values of classification between spaces and of framing in the discursive and hierarchical rules in the teacher-child relation, and also in the relation between children and in the relation between academic and non-academic knowledge. This model should be concretised in real situations of the pedagogic practice of the five classes selected. However, the first visit to schools showed three distinct pedagogic practices (P_1 , P_2 , P_3). From these three practices only one, P_1 , coincided with the planned model, P_3 being more distant from that model and P_2 being closer. From the first to the second observation, that is from the



SAC - Socio-affective competences
 CC - Cognitive competences
 Values in the graph are rounded to the nearest unit

FIG 7. Relation between the evolution in the cognitive competences and the evolution in the socio-affective competences.

second term of the first academic year to the first term of the second year, the pedagogic practices evolved in the direction of the model proposed to a point that practice P₃ no longer existed.

Pedagogic practice P₃, which existed only in the first period of observation, had important differences in relation to the model we had proposed, namely at the level of framing values in the discursive rule selection, which instead of the weak values suggested had strong values, and in the discursive rule evaluation criteria, which instead of the strong values suggested had weak values. In the hierarchical rules, practice P₃ was characterised by strong framing values (imperative/positional control), which concretised a totally opposite relation to the relation proposed in the model. With respect to the student–student relation, practice P₃ presented somewhat less weak framing values than the initial model. In the relation between spaces teacher–students and students–students the weak classification which had been suggested presented strong values. As a consequence of these characteristics the pedagogic practice P₃ did not constitute a facilitating context for the learning of the competences which integrate the specific regulative discourse. And, in fact, this was what happened. Only when practice P₃ had evolved towards practice P₂ could children start to develop the selected social competences.

When we compared the results of pedagogic practices P₁ and P₂ the data suggest that, in general, it is in pedagogic practice P₁ that we observe the best performances of children of the various FSECLs to a point that in practice P₂ no child of the most disadvantaged social group obtained the best possible mark in any social competence. P₁ showed to be the pedagogic practice which led to the decreasing of the gap between children—all children improved, particularly those who were in the lowest levels. A more detailed qualitative study which was carried out with four children strengthens these conclusions (Rocha Morais, 1999a).

When we consider the variable *gender*, there is a trend for boys' performance to be, in general, slightly better than girls'. This difference was not significant and was only evident in pedagogic practice P₂. Only further studies can give an explanation for this fact, which partially contradicts studies made at higher levels of schooling (Morais *et al.*, 1993). However, it suggests that, here again, P₁ narrows the gap between differentiated children.

On the whole, the comparison of children's results in pedagogic practices P₁ and P₂ in all competences of the specific regulative discourse, suggests that children of P₁ show higher performances, that is differences between the first and the second periods of observation were more evident for these children. Pedagogic practice P₁ will be the modality of practice better adjusted to the learning of social competences by all children and therefore to the reduction of their differential achievement. These results clearly suggest that a pedagogic practice more distant of P₁ than P₂ was, in the direction of P₃, would give origin to still worst performances.

In general, the aspects studied point to better results in the performance of social competences of the specific regulative discourse when children are socialised by pedagogic practices which privilege a transmitter–acquirer relation where some control is given to the acquirer. The explication of the evaluation criteria (the teacher says what is missing in children's production of the text), which was a constant in the two pedagogic practices, will also be a facilitating factor for the learning of the specific regulative discourse by children. The study also suggests that facilitating factors for that learning will be weak framings at the level of the discursive rules pacing, sequence and to a certain extent selection and at the level of the hierarchical rules. A weak framing between children seems also to be favourable to learning. When we consider the relation

between discourses (academic/non-academic knowledge), the weak values of framing would have constituted a factor for the decrease of children's differential achievement. Finally, the weak values of classification between teacher and children spaces would have also contributed to a better children's learning. These characteristics seem to constitute sociological factors with a very relevant influence on children's school success. Such influence was more determinant than FSECL and gender. This conclusion seems to us of crucial importance because it shows the determinant role of the school, which through specific pedagogic practices can blur differences in the socio-affective development of children from distinct socio-economic and cultural levels. The weak framing at the level of hierarchical rules (the teacher uses a personal type of control) deserves special attention because it was probably responsible for favourable social dispositions (motivations, etc.) shown by children. In fact, if the production of the legitimate text requires acquisition of recognition and realisation rules (children had to recognise the context of the social competences required and to select and produce the appropriate text to each one of the four competences), it also requires those dispositions.

The characteristics which defined the model of pedagogic practice, which led to the learning of social competences by all children, may constitute good indicators for the definition of a theoretical profile of pedagogic practice to be the object of reflection and application in terms of teachers' training. The definition of a theoretical profile similar to the profile to which the results of this study point, adapted to the concrete circumstances of teachers' training and to the specificity of schools and school classes, may be useful to teachers and educators in general. When conditions of intervention are regulated by clearly defined parameters, teachers would be aware of what they are doing, what they want and do not want to change, and the consequences for children's learning. Children would also be aware of what is expected from them.

Although the study was primarily directed to children's development of social competences, we wanted to explore whether this development would promote or retard cognitive acquisition of knowledges and competences. Our five teachers showed a great concern at the beginning of the study about this point. They were afraid that the extra focus on social competences and respective strategies would prevent the usual emphasis on cognitive aspects. The study showed precisely the opposite—the development of social competences along the 2 years not only did not retard cognitive acquisition but it promoted that acquisition.

Finally, we would like to address the issue of the evolution of teachers along the process of action research and its relation to children's performances. Teachers also started from distinct levels of performance which were related with their previous knowledge and professional experiences. This influenced their children's performance, highlighted by the paradigmatic case of teacher T, who for one year developed a pedagogic practice (P_3) totally opposite to the model proposed and which constrained the development by children of the social competences selected. The process of teachers' training/reflection is described in detail elsewhere (Rocha & Morais, 1996). What seems important to point out here is that there was an evolution of teachers throughout the study to acquire recognition and realisation rules in relation to the context of pedagogic practice P_1 and that this had consequences in children's performance—children also acquired the recognition of the particular social context and the realisation of the legitimate text to that context. The fact that not all five school classes were socially identical certainly influenced the results obtained initially and this can be considered a limitation of the study. The interesting result, however, is the fact that even more social disadvantaged school classes improved when teachers improved their performance.

We can consider two levels of realisation of the legitimate text: teachers' production of the legitimate text, that is, application in the classroom context of the modality of pedagogic practice corresponding to the proposed model (which would be a learning context more adequate to the learning of all social competences), and children's production of the legitimate text. This was the case of pedagogic practice P_1 . On the contrary, practice P_3 evidenced that the teacher had not acquired in the beginning the recognition and/or realisation rules for the specific pedagogic practice proposed. The teacher did not produce the legitimate text and as a consequence prevented children's learning and their production of the legitimate text, that is an adequate performance of the selected social competences. This means that the production of the legitimate text by students depends on the production of the legitimate text by teachers in the school context, particularly in the classroom. In other words, the pedagogic practice which takes place in the classroom may function as a determinant factor of the production of the legitimate text by students.

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NOTES

- [1] According to Bernstein (1990), code is a regulative principle, tacitly acquired, which selects and integrates relevant meanings, the form of their realisation and the evoking contexts. The code is a regulator of the relation between contexts and a generator of principles which orient the production of the text appropriate to each context. At an operational level, the code is defined by the relation between the coding orientation and the form in which this orientation is realised, according to the formulae

$$\frac{O^{RE}}{C_{ie}^{\pm} F_{ie}^{\pm}}$$

In the formula O^{RE} refers to coding orientation, restricted/elaborated. When coding orientation is restricted, meanings are particularistic, context dependent with a direct relation to a local context. When coding orientation is elaborated, meanings are relatively context independent, generalised and so have an indirect relation to a local context.

Official pedagogic practice in school institutionalises an elaborated orientation (local pedagogic practices in the family may be mediated by either orientation). The orientation gives rise to a wide range of realisations. How these meanings are expressed and the form they take depend upon the distribution of power and principles of control which regulate the social relations and contexts of the pedagogic practice. Bernstein uses the concepts of classification and framing to analyse pedagogic contexts.

In the above formula, C refers to classification, that is degree of boundary maintenance between categories (spaces/agencies, agents, discourses) and F refers to framing, that is degree of communication between categories. Framing between subjects refers to the control they have on the selection, sequence, pacing and evaluation criteria, i.e. the discursive rules which regulate the instructional pedagogic practice. It also refers to the hierarchical rules which regulate the norms of social conduct, i.e. the regulative pedagogic practice.

Classification and framing can vary and this variation corresponds respectively to different degrees of power and control in the relations between categories. Classification and framing refer either to relations within a given agency (internal *C* and *F*) or to relations between agencies (external *C* and *F*). Variations in classification and framing at the various levels determine specific modalities of code. These modalities of code regulate specific pedagogic practices.

- [2] The family socio-economic and cultural level was determined on the basis of the academic qualification and occupation of the children's parents. A detailed description of the scales for academic qualifications and occupations can be found in Morais *et al.*, 1993, pp. 532–537. A summary is the following.

Academic qualification scale: The number of years of schooling was the main criterion used: 1—cannot read and write; 2—completed primary school or also attended fifth/sixth years of schooling; 3—attended seventh and eight years of schooling; 4—completed ninth year of schooling or did a medium level course after the sixth year; 5—completed the twelfth year (ended secondary school) or did a medium level course after the ninth year; 6—did a medium level course after secondary school, attended university or completed a university degree. This scale was reduced in this study to a 1–4 points scale in which: 1 = 1; 2 = 2; 3 = 3 + 4; 4 = 5 + 6.

Occupation scale: The socio-economic position was the main criterion used: 1—non-skilled manual workers without supervisory functions; 2—non-skilled manual workers with supervisory functions, skilled manual workers with/without supervisory functions, self-employed non-skilled workers; 3—self-employed skilled workers, small proprietors; 4—non-manual employees in administration, commerce and other services without supervisory functions; 5—non-manual employees in administration, commerce and other services with supervisory functions; 6—self-employed and salaried professionals, administrators, managers. This scale was reduced to a 1–4 points scale: 1 = 1; 2 = 2 + 3; 3 = 4; 4 = 5 + 6.

- [3] A process of teachers' training/reflection took place during the whole empirical stage. For details of the action research study see Rocha & Morais (1996).
- [4] The teacher–children talk which led to the conceptualisation of the various competences is described in detail in Rocha & Morais (1999b).
- [5] See note 3.
- [6] For a complete characterisation of pedagogic practices, see Rocha & Morais (1999b).
- [7] See note 2.
- [8] GEP, model number 2/92.
- [9] For details of questionnaires see Rocha *et al.* (1998).
- [10] The composite index can cover a range between 4 and 16, i.e. the totals can vary between a minimum limit of 4 if all indicators are placed in level 1 and a maximum limit of 16 if all indicators are placed in level 4. After the classifications were obtained we noticed some dispersion in the data. We made the following equivalence in an ordinal scale: 0.25/0.38 = FSECL 1; 0.44/0.56 = FSECL 2; 0.62/0.75 = FSECL 3; 0.81/1.00 = FSECL 4.
- [11] A complete list of the indicators and respective framings for all situations considered can be seen in Rocha & Morais (1999b).
- [12] Children's names were changed to keep them anonymous.

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