

An instrument for evaluating classroom management (QCME)

M. Luisa Mir Pozo

Department of Educational Sciences

University of the Balearic Islands

Spain

marisa-mir@uib.es

ABSTRACT

Introduction. This article explains the process followed in adapting and validating a measuring instrument for evaluating classroom management. Since evaluation is important in providing information towards improving the teaching-learning process, there is a need to have useful tools available to stimulate teachers' reflection on their own action and to work on their self-evaluation habits.

Method. We applied an adaptation of the Questionnaire on Classroom Management in Early Childhood Education (QCME) by Nault (1994) to a sample of 247 professionals at different educational levels related to Early Childhood Education.

Results. The majority of items are deemed important by more than 75% of the judges. The adapted questionnaire offers internal consistency measured by a Cronbach alpha coefficient of 0.97. Additionally we obtained a good agreement index between scores assigned.

Discussion. Research results allow us to identify situations considered important in early childhood classroom management based on much agreement among experts consulted. They also lead us to present this instrument as a tool for use in professional development, as a help in reflection, in detection and in decision-making.

The Questionnaire can be an object for personal interest, use, expansion and adaptation by its different users (students, teachers, university professors, student teaching advisers, headship teams and educational psychology guidance teams, inspectors, consultants in teacher development centers, etc.), thus contributing in the effort to better manage the teaching-learning process.

KEYWORDS: Classroom Management, Classroom Organization, Early Childhood Education, Evaluation

INTRODUCTION

Classroom management is the first professional activity to be developed at the beginning of a teaching career, and represents the most significant difficulty to be overcome when a student teacher first begins to teach (Zabalza and Marcelo, 1993). Numerous research efforts have shown that the question of controlling classroom activity constitutes a matter of concern even for the experienced teacher, and is a decisive factor in what they set out to do (Deakin University, 1985; Doyle, 1977, 1979, 1981, 1986; Dreeben, 1973; Emmer, 1987). For Gimeno Sacristán (1988), the teacher's most immediate challenge consists of managing life for a specific group of students with activities to implement the curriculum in real space and time.

According to Gairín (1996), management is an *organizing* function which corresponds to the function of taking action or the realm of task execution, the area of implementing school organization. It is the process of directing and organizing a class. Organization involves, first of all, deciding in advance the objectives to be reached, foreseeing resources that must be mobilized, and carrying out actions in a period of time. Second, it means analyzing the action plan to determine necessary tasks and functions, as well as which members of the organization they must be assigned to. Further, it requires execution of the assigned tasks, their coordination, and evaluation of results.

More specifically, organization is linked to implementation of the *curriculum*, to the improvement of the teaching-learning process and to better quality in educational invention. It provides tools for "doing" the curriculum, and makes possible professional development. The importance of the organizational frame is substantiated by Fernández Pérez (1991), who indicates that the conditions, circumstances, means, instruments and resources, sequences and times make possible achievement of curriculum design objectives and in practice optimize them and their specific implementation in educational settings.

Management also implies managing the social climate of the class (García Correa, 1996), the relationship system, the enhancement of learning or the internalizing of social norms. The multi-dimensional nature of managing the teaching-learning process justifies its complexity (figure 1).

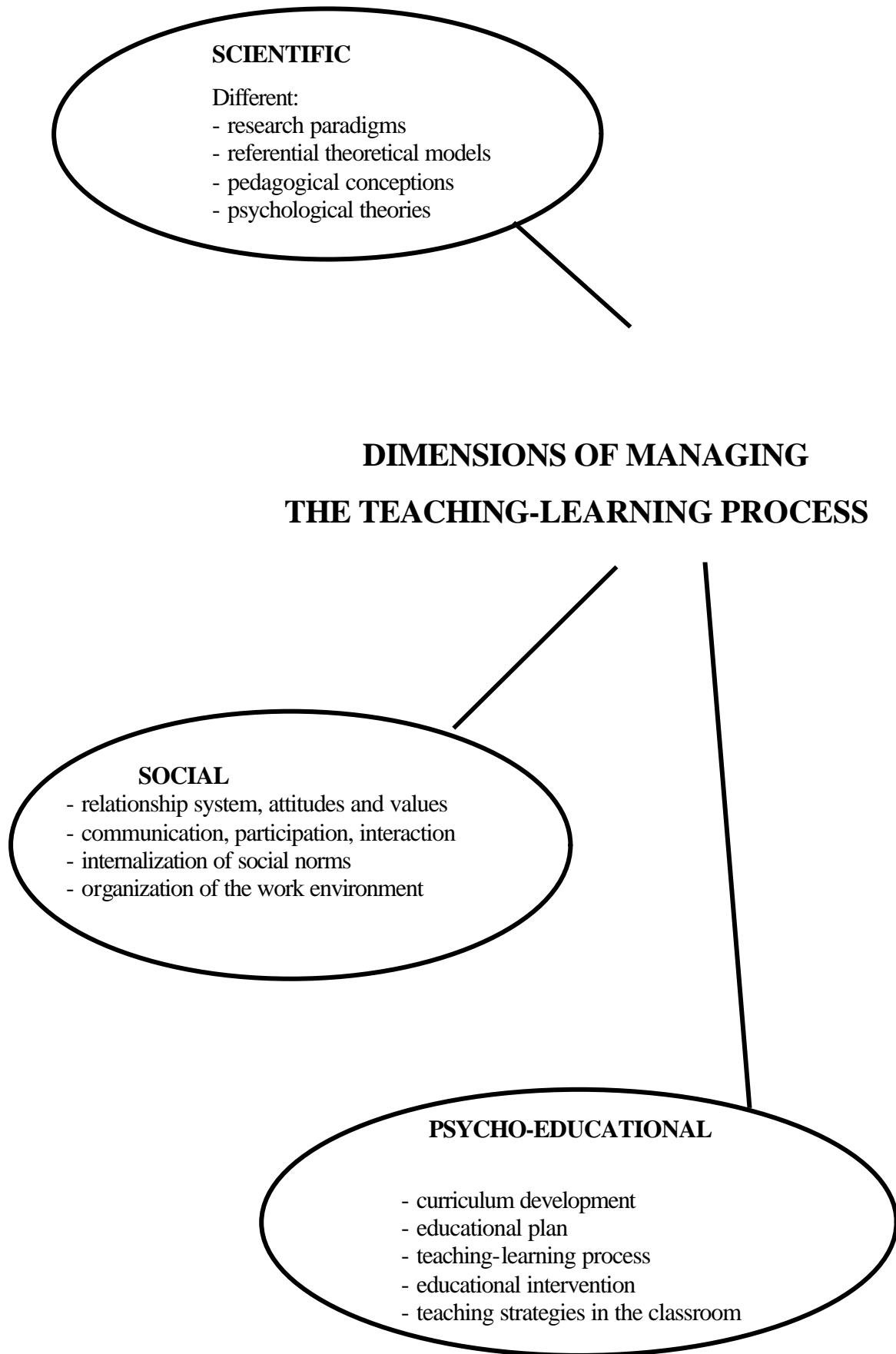


Figure 1. Dimensions of managing the teaching-learning process

Coll (1986) places "curriculum" somewhere between the statement of general principles and their translation into practice, between educational theory and pedagogical practice, between planning and action, between what is prescribed and what actually takes place in the classroom.

In the Spanish curriculum, the educational plan developed at each school is a management instrument that lists and defines features of the school's identity, formulates objectives and expresses the organizational structure of the institution (Antúnez, 1987). The lesson program developed by each teacher in order to guide classroom tasks represents the instructional units. From this we understand curriculum as a decision space from which the administration, the school community and the teachers articulate their respective frameworks of intervention.

Per Rosselló (1996), we place classroom management at three points in time, as shown in figure 2, referring to phases where the curriculum presents itself to the teacher, phases which to our understanding are directly related to classroom management:

- 1) *Preinteractive* or *Proactive* Phase: The specifying of educational interactions and their evaluation.
- 2) *Interactive* or *Active* Phase: the curriculum is put in practice, it is redefined "in" and "by" the educational situation.
- 3) *Postactive* or *Retroactive* Phase: curriculum evaluation.

In this context of curriculum, we understand that classroom management tasks are specifically addressed at the third level of school curriculum specification: lesson programming. The Program Unit or Lesson Unit determines the sequencing of content areas, makes teaching objectives explicit, designs teaching-learning activities and evaluation activities according to methodological, organizational and evaluation options from the school's educational plan (PEC) and its annual programming (PAC), and foresees resources and materials needed in order to achieve anticipated learnings. These postulates are reflected in Figure 2.

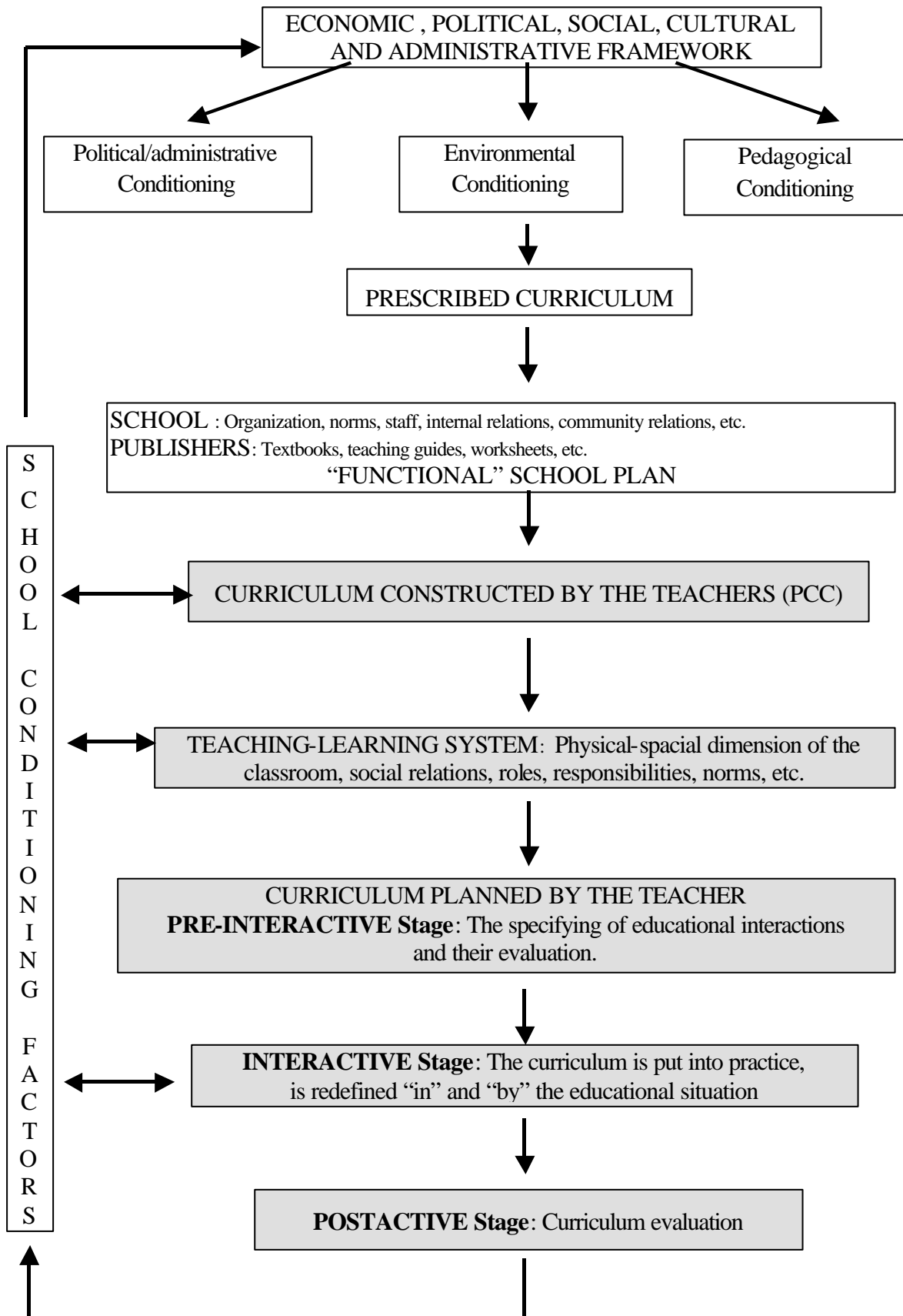


Figure 2. Curriculum: decision space (Rosselló, 1996)

According to Zabala (1992), we find all the methodological variables within these units, from the most traditional model to the method of global work projects: "... these units have the virtue of maintaining a unitary character and gathering together all the complexity of practice, while at the same time they are instruments that can address the three phases of every reflective intervention: planning, application and evaluation" (Zabala, 1995, p.14-15).

Zabala (1992), taking into account authors such as Joyce and Weil (1985), Aebli (1988), Tann (1990) and others closer to the Spanish tradition, proposes: a) activities or tasks (manner of grouping and piecing them together in teaching-learning activities or instructional sequences); b) communicative relationships and situations (the role of teachers and of students); c) ways to socially group or organize the class; d) a way to distribute space and time; e) an organizational system of content areas; f) use of curricular materials; g) a procedure for evaluation.

Gimeno Sacristán (1996) feels that, for the teachers, curriculum design means professionally an opportunity to plan one's practice before carrying it out, representing it to oneself in a diagram which includes the most important intervening elements projected by a sequence of activities. In this author's opinion, what teachers do to control classroom activity: "... means a flexible design of practice which is expressed in annual plans, in trimester programming and in more limited periods of time for specific units or themes, although practical guidelines usually remain in one's mind without being formalized in writing" (Gimeno & Pérez, 1996, p. 313).

Interest in the object of this study forms part of our teaching and investigative work, coming up in advisory sessions and in organizing students' practice teaching. We recognize the difficulties involved in classroom management during supervised sessions, in subsequent evaluations of student teaching, and in research carried out with new teachers in their first job (Colom, Gómez, Mir, Riera, Rodríguez & Rosselló, 1993). Reflection skills and activities were one of the most evident lacks detected in students and new teachers. Specifically, one of the main problems which students faced was the way to plan, organize and direct classroom functioning and evaluation, including a lack of self-evaluation habits, which speaks of limited reflection on the task performed (Mir, Riera, Rodríguez & Rosselló, 1991, 1993).

Our experiences concurred with the relevant literature, specifically Veenman's exhaustive review (1984) about problems perceived by new teachers, and that of Vonk and Schras (1987), which in turn lines up with studies performed in the U.S. environment by Zeichner and Gore (1990) and in Canada by Hargreaves and Fullan (1992), among others.

Our concern over the type of helps we might be able to offer in order to analyze teaching-learning situations prompted us to investigate an instrument which encourages the exercise of reflective thought from the work by Nault and Léveillé. Nault's conception (1994) about an instructor's professional development at the level of "classroom management" leads him to choose a reflective model. This author proposes that direct observation of professional gestures practiced in the classroom, and guided reflection, enable one to decide on the best means to use for improving a particular teaching situation. When putting classroom management elements into practice, the teacher can use the mechanism of "reflective thought" highly recognized in writings on the teaching profession. Thus, the benefit of analyzing the underlying process to reflective thought that contributes to the development and mastery of managing a classroom.

Many authors consider the mechanism of reflective thought to be essential to the progressive acquisition of this professional competency. The concept of reflective thought has been at the center of discussions on teacher training since the beginning of the 80s, especially in English-speaking countries like England, the U.S., and English-speaking Canada. The authors refer to it by different names such as mode of reasoning (Dewey,1904), professional reflection (Schön,1983), investigative teacher (Stenhouse,1975), cognitivist theory (Borko,1988) and critical theory (Elliott,1987). All these definitions have in common a process of reflection which enhances professional development. This process is proposed as a mode of reflective investigation of the educational setting, and as a constant analysis of problematic situations, and also as a critical evaluation of practice.

We can consider, then, that reflective thought in classroom management is a reflection about the set of elements which lead to precise actions in the classroom. This process mirrors how reflective thought takes into account the ground gained or lost by classroom management actions. In other words, reflective thought encompasses all effort in the classroom situation towards increased awareness of future acts and of past acts including instantaneous reflection that happens at the moment an action is performed. It is a leap from the known to the

unknown, formed by suggestions springing from the experience one has gone through, and which will be put to test in future action.

If the mechanism of reflective thought were used regularly in professional development, it would permit both the new and the experienced teacher to not only correct problems which occasionally arise, but could also serve to identify problems during action -- particularly if the objectives of reflective thought are identifiable with the help of an inventory of important situations in the professional act of teaching.

Based on contributions from scientific studies, Nault defines the concept of classroom management as: "The set of planned and sequenced acts performed by an instructor in order to produce learnings " (1994, p.15). He proposes a model formed by three sequential functions which classify classroom management behaviors in operational phases. This author categorizes elements of classroom management in a sequential diagram revolving around three themes: the planning of teaching-learning situations, the organization of classroom functioning, and control during action. These topics constitute the objects of the reflective act and take place at different times: before (pro-active phase), during (active phase) and after (retro-active phase) the action in class. Nault suggests that an inventory of the essential elements for managing the classroom can be a good instrument for exercising reflective thought, a guide for systematizing the set of acts that a teacher should manage in order to produce teaching-learning situations.

Objectives

We proposed designing a Questionnaire which would allow us to systematically study situations of Classroom Management in Early Childhood Education (QCME), that would generate information, that would serve for reflection and discussion, and that would guide educational intervention in the classroom.

Given the inexistence of an instrument with these characteristics in our country, we adapted the Canadian questionnaire, already validated at primary and secondary educational levels by Nault and Leveillé (1997), to the Spanish context. Thus, the object of our research was to replicate the psychometric work by these authors in a new sample in order to validate the scale and study its reliability.

First of all we set out to identify classroom management behaviors related to the second stage of early childhood education, and second, to demonstrate their validity.

METHOD

Adaptation of the original instrument to the Spanish educational context, specifically to the second stage of early childhood education, was performed using a research design that demonstrated its psychometric qualities by contrasting theoretical validity and empirical validity.

Data in this study were obtained by the research teams on Classroom Management belonging to the departments of Educational Sciences at the University of Sherbrooke (Canada) and the University of the Balearic Islands.

Sample

The sample for this study was made up of 247 experts pertaining to different educational settings representing the sector: certified teachers holding a position in public and/or private education in classrooms with 3-, 4- and 5-year-olds, school headmasters, Early Childhood Education advisors at the Teaching & Resource Centers (CPRs), members of the Educational Psychology and Early Stimulation guidance teams (EOEPs), members of the linguistic immersion teams, university professors providing instruction for certification of teachers in Early Childhood Education, inspectors from the educational administration and other specialists in Early Childhood Education such as specialists from the Ministry of Education, from the Regional government, freelance professionals, personal researchers, authors with publications.

According to professional category, the largest percentage corresponded to classroom teachers of 3-, 4- and 5-year-olds (38.1%); then the educational psychology guidance teams (27.1%); university professors (21.5 %); and inspectors from the educational administrations (13.4 %).

This sample differed from that of the original study (N=75) especially in that the original included a substantial proportion of subjects from different educational levels (primary and secondary), while in this sample they pertain to the second stage of early

childhood education, and the sample is larger (N=247). This sample variation contributed to assuring the validity of the questionnaire.

Instrument

The classroom management questionnaire seeks to measure observed behaviors and describes four scales constructed with a Thurstone design (scale 0-10), with a hundred statements or items distributed among the four dimensions. Each of these dimensions is made up of an unequal number of items for each of them. The items are positive and represent statements whose content confirms the sense or the scale to which they belong. Each of these inventory statements has ten possible responses, which receive a value and indicate different degrees of agreement or disagreement with the statement as formulated.

The Nault questionnaire (1994), as translated and adapted by Mir (1999a), was administered to the subjects. Classroom management is conceived as a unit that allows a global approximation to teaching behaviors. The questionnaire includes scales referring to classroom management variables and their dimensions, that is, actions related to: planning, organization, intervention and evaluation (see Attachment 1, excerpt from the questionnaire).

Procedure

The process followed in the creation of new items was initiated with the translation and study of Nault's model, for the purpose of understanding the methodology followed in preparing and validating their questionnaire (Nault & Léveillé, 1997). Given that adaptation of the instrument was based on the theoretical model from Nault (1994), the starting point was the Canadian instrument's organizational structure and the procedure followed in producing the questionnaire.

In order to adapt it to Spanish school culture, statements considered valid in the original instrument were kept, eliminating situations irrelevant to early childhood education (3-6 years), considering differences in organizational and intervention aspects between the two stages (0-3 and 3-6 years), and other items were created which are indicative of classroom management behavior in the second stage of early childhood education, per an analysis of content in the Spanish-based curriculum design and a review of pertinent bibliography. From the literature review we inductively extracted teacher behaviors that addressed elements of psycho-educational guidance from the early childhood curriculum. Each of the situations

selected were ratified by opinions of various authors. A process of redefinition of categories and their dimensions was initiated in order to adapt them to early childhood education, as one can observe in figure 3, this prompted the disappearance or substitution of some categories and the creation of others more in line with the Spanish lexicon, identifying situations that would enable construction of the first set of items. Afterward, traits were selected, defined and operationalized and were assigned to the different categories following the direction of two specialists. The percentage obtained was 90%, thus, we considered the result good and that there was proper consistency in the assignment of traits to their categories. Later we proceeded to purge items successively in order to avoid repetitions. Once the review process was finalized, the inventory of representative situations was ready for its empirical validation, assuring this way that situations presented in the QCME were valid in our school setting and relevant to the teaching profession.

In the second phase, in order to assure that the sample of items contained in the questionnaire properly represented valid and important situations, we opted for inter-judge validation (specialists in early childhood education). The new items were tested to verify their relevance and understanding, administering them to a population sample and analyzing their answers for reliability and consistency. Over the course of this process, the sample of experts that should validate the items was defined, identified, selected and contacted, and the database was created in order to collect their answers. Once the pilot test was performed, questionnaires were distributed and then collected, scores and observations were recorded in the database, results were analyzed statistically, selecting those items that met necessary requirements for empirical validation of the adapted instrument, and they were classified according to the original model.

The QCME demonstrates two important metric qualities: its validity and its reliability.

Construction of the instrument is based on the original conceptual model by Nault (1994). This model represents one of the main currents of thought regarding classroom management and justifies the situations addressed in the original questionnaire.

Figure 3. Definitions of the variables and their dimensions (Mir, 1999)

<p>The planning of teaching-learning situations (P)</p>	<p>Classroom organization and functioning (O)</p>	<p>Intervention during action (C)</p>
<p><i>Planning</i> is the activity that tends toward systematizing the sequence of actions that must be performed in the context of the classroom in order to produce learning.</p> <p>Learning objectives These are the statements that express type and degree of learning to be achieved with respect to selected content. They express the capacities that the students are supposed to develop.</p> <p>Content This is the set of selected information and experiences from each area of the curriculum that we want to teach. It involves making decisions about aspects to work on (in early childhood education procedural content is considered especially important in order to <i>learn to learn</i>), presentation and distribution of these aspects over the course of the school year, as well as their adaptation to the needs of the pupils.</p> <p>Activities These are the active, ordered manner of carrying out methodological strategies or learning experiences. Designing learning activities implies selecting diverse types of activities which one plans to carry out, analyzing their functionality, the type of experiences they provide, to whom they are directed.</p> <p>Didactic material is the set of elements, materials, resources that the children will use to carry out learning activities.</p> <p>Space This is the physical framework of the classroom that includes structural elements and the distribution of different scenarios for activities, thus creating the classroom's learning atmosphere.</p> <p>Time This refers to distribution of learning activities in the short or long term, daily organization of the schoolday, management of activities, their duration, the</p>	<p><i>Organization</i> is an activity that consists of identifying and carrying out an effective and orderly manner of functioning in order to complete the work planned for class, responding to the needs and aptitudes of the pupils. This activity addresses organization of class activities at a social, didactic and relational level.</p> <p>Social organization refers to the rules of living together in a group setting. It defines how the teacher generally functions with the pupils within the classroom. It refers to the pupil's movements and interactions. In early childhood education we expect participation from other speakers in the social context (family members, specialists, community members) who are invited to collaborate in the classroom dynamic.</p> <p>Didactic and materials organization These are the support routines for the learning activity. They specify actions to be performed with the selected material in view of carrying out the different tasks.</p> <p>Organization of relationships defines verbal and nonverbal behaviors in the interchanges between teacher and pupils. These are the communication routines combined with the system of interaction and the structure of activities. They create the relational context.</p>	<p><i>Intervention</i> during action consists of sharing experiences, collaborating in ways of organization and interaction by supporting, guiding the child, getting involved with him in jointly constructed tasks and relationships. It means the teacher guarantees a climate of physical and affective security, work conditions with his or her pupils that ensure learning. It implies observing, analyzing, and evaluating with respect to expectations and to conditions of prescribed performance.</p> <p>Defining expectations. Means specifying expectations with clarity, making routines and procedures explicit, negotiating norms and reminding them of limits</p> <p>"Being available" / "Being tuned in" / "Being attentive" means to be able to capture what goes on in class, have eyes for everything, be available to respond to the children's inquiries, tuned in to their expressiveness, to their initiatives, to their suggestions. Paying attention to circumstances.</p> <p>Reacting in class Consists of a set of reflexes available to the teacher in any situation. Teacher reaction modalities are: body language by means of simple eye contact, gestures, facial expression, distance, knowing how to situate oneself in the classroom, one's disposition and intervention by means of speaking, silence or through noise.</p>

alternation of activities and their adjustment to the individual's and the group's learning pace.		
Evaluation (E) Evaluation is the teacher's verification of his or her own project of work, making possible an assessment of its appropriateness and completion.		

The instrument has been completed and expanded not only in its original validation but also in its adaptation to another educational level. In this study our justification of situations addressed in the new questionnaire is supported by contributions of pertinent bibliography in our country whose authors endorse the model proposed by the early childhood curriculum.

Theoretical validity rests on the synthesis of the scientific literature that inspired the construction of the instrument and represents main currents of thought regarding classroom management. The Questionnaire on Classroom Management in Early Childhood Education (QCME) offers an inventory of representative situations and behaviors extracted from an ample review of scientific publications regarding classroom management. By way of example we offer Appendix 2, an excerpt from the instrument which shows the correspondence of QCME items to references from pertinent Spanish bibliography in order to theoretically ratify the new situations addressed in the questionnaire, given that it is not only an adaptation to another context, but also an adaptation to different educational level.

Authors were selected using the following criteria: a) authors from Spain; b) published in the last ten years approximately; c) in harmony with the model proposed by the early childhood curriculum. These last two criteria are related to the initial period of an educational reform movement that has taken place in Spain, and to guidelines from the new curriculum which was implemented in this era.

Each item in the questionnaire is presented with the endorsement of several authors, serving as the scientific basis of the instrument, in agreement with the theoretical model of the Base Curriculum Design for Early Childhood Education (Ministry of Education and Culture, 1989,1992). As can be noted, the set of these behaviors for managing educational situations has numerous bibliographic references which address the psycho-didactic orientation of the early childhood curriculum design.

The presentation of bibliographic references and the questionnaire items is organized as a function of the questionnaire variables and their corresponding dimensions. First the situations in the reference work are identified and then the authors referenced are assigned nominally to the questionnaire items.

Empirical validity of content sought to determine the data's index of importance—the average of scores and the degree of agreement obtained—and the reliability and consistency of the scores assigned by the judges through the Cronbach and Kendall coefficient. The purpose was to make evident whether the hypothesized structure adequately represented the behavior observed in the items. In these analyses the statistical package SPSS was used.

In order to ensure that the sample of items contained in the classroom management questionnaire (QCME) properly represented valid and important situations in the Spanish context, 247 judges were asked the degree of importance that they attributed to each of the items in order to manage a classroom. The questionnaire includes a quantitative scale with scores from 0 to 10 in order to allow analysis of agreement among judges regarding the degree of importance of the different situations. This agreement index is reflected in the percentage of survey responses with scores of 8, 9 and 10 in the scale, following the agreement analysis established in Thurstone's Q index. Thus, in order to find out the degree of agreement among the judges, statistical values descriptive of the group of experts were calculated from the classroom management variables and their diverse dimensions: averages, standard deviations, frequencies and percentages. This information served to identify the importance of items according to the experts consulted.

RESULTS

From the results we were able to establish an average of answers for each item. Table 1 shows importance indices for the items. The basic statistics extracted for each factor of the QCME were the average score M_i (0 to 10) attributed to each QCME item by the judges and the scores in percentiles which indicate the degree of agreement. A percentage of agreement among the judges was also calculated taking into account two criteria: first, the percentage of judges who had given a 6 or more; later, by the same procedure, the agreement of answers falling only in the 9 to 10 area, showing items judged important or essential for managing the classroom.

It can be observed that all items are judged important (7 or more on a scale of 0 to 10) by more than 75% of the judges, with the exception of item 22 at 6.9. We note that 32 of the 100 items in the QCME have a rating of 8 or more, these situations being valued as very important by more than 75 % of the judges.

Table 1. Indices of item importance in the early childhood QCM

Item No.	M _i	% agreement of judges			Item No.	M _i	% agreement of judges		
		Imp. 6+	7+	Very imp. 8+			Imp. 6+	7+	Very imp. 8+
1	7.9	85.0	79.4	57.9	51	8.3	96.0	91.9	65.6
2	9.1	95.5	94.3	85.4	52	8.6	96.0	94.7	72.9
3	7.9	86.2	80.6	59.5	53	9.0	99.2	97.2	81.4
4	8.1	90.7	85.0	61.1	54	8.5	94.3	89.9	70.0
5	8.2	90.3	85.8	68.0	55	8.4	92.7	89.5	68.8
6	8.7	96.4	93.9	75.7	56	8.2	92.7	88.3	61.5
7	8.3	95.5	91.9	66.0	57	8.6	96.4	93.1	72.5
8	9.0	98.8	97.2	85.8	58	8.2	94.7	89.5	63.2
9	9.2	99.2	96.4	90.3	59	9.1	98.0	97.2	86.6
10	8.6	96.0	91.9	72.5	60	8.5	96.0	93.5	69.6
11	9.1	98.4	96.8	87.0	61	8.8	98.0	96.8	81.8
12	8.6	96.8	91.1	73.7	62	8.9	98.8	96.8	82.6
13	7.8	86.2	81.4	59.9	63	8.7	97.2	93.9	76.1
14	7.7	85.0	78.9	56.7	64	8.7	97.6	93.5	76.1
15	8.0	85.8	81.4	62.3	65	8.8	97.6	95.1	80.6
16	8.9	96.0	93.5	80.6	66	9.1	99.2	98.8	84.6
17	8.6	96.8	92.7	74.1	67	8.6	94.3	89.9	74.9
18	8.7	95.1	92.7	78.9	68	8.8	96.8	96.4	76.9
19	8.0	91.5	85.8	60.3	69	8.3	92.3	88.7	66.0
20	7.2	80.2	74.1	44.9	70	8.1	88.7	85.8	63.6
21	8.9	98.4	97.2	81.4	71	9.1	99.2	98.4	86.6
22	6.9	70.9	63.6	41.3	72	8.0	89.9	87.0	61.9
23	7.8	88.7	82.2	51.4	73	8.9	97.2	96.8	80.2
24	7.8	86.2	80.6	53.0	74	9.1	99.2	97.2	85.4
25	8.0	87.0	82.6	59.1	75	8.7	95.5	92.7	77.7
26	8.4	93.9	90.3	66.4	76	9.4	99.6	99.2	92.3
27	8.0	91.1	83.8	58.3	77	7.5	75.3	72.9	55.1
28	8.4	93.5	89.1	65.6	78	9.4	99.6	99.2	92.7

29	7.3	81.0	72.1	47.0	79	8.5	91.5	89.9	73.7
30	7.9	85.8	80.6	58.7	80	9.3	97.6	97.6	90.7
31	8.8	97.6	96.0	78.5	81	9.3	98.8	98.4	89.5
32	7.2	74.9	69.2	44.5	82	8.5	94.7	90.3	72.9
33	8.4	90.7	86.6	70.9	83	8.2	91.9	88.3	65.6
34	8.2	92.3	87.9	66.0	84	9.2	98.0	97.6	88.3
35	9.1	96.8	96.0	84.2	85	8.7	93.5	91.1	76.1
36	9.0	98.4	96.8	83.0	86	9.2	98.4	98.0	89.1
37	9.0	98.4	96.8	83.0	87	9.1	97.2	96.0	85.0
38	7.3	78.9	74.1	40.9	88	8.6	93.1	92.7	73.7
39	8.1	88.7	83.4	61.9	89	8.7	96.4	94.3	80.2
40	8.4	93.5	89.5	65.2	90	9.1	98.4	97.2	87.0
41	8.1	92.3	86.2	59.9	91	9.2	98.0	97.2	90.3
42	8.7	94.7	93.1	77.3	92	8.6	96.0	93.9	73.7
43	8.3	91.9	89.5	66.8	93	9.0	97.2	96.0	82.6
44	8.3	91.5	89.1	67.2	94	9.1	97.2	97.2	87.4
45	7.4	79.4	74.1	48.6	95	7.8	84.2	78.1	55.5
46	7.1	74.9	68.4	41.3	96	8.2	91.5	89.5	66.4
47	8.0	90.3	85.0	59.1	97	8.7	95.5	93.5	74.5
48	8.4	97.2	94.7	71.7	98	8.7	95.5	93.9	76.1
49	9.1	97.6	96.8	86.2	99	8.7	96.0	93.9	76.5
50	9.1	97.6	96.4	86.6	100	8.8	97.2	95.1	78.9

Homogeneous *Reliability* was demonstrated thanks to Cronbach's alpha coefficient. In order to see if answers to the items were internally consistent we performed a covariance analysis. This test informed us of the high correlation existing between questionnaire items $\alpha = .9779$, and Kendall's W agreement coefficient allowed us to observe a good concordance between ratings placed by the 247 subjects $W = 0.1714$ $p \leq 0,000$. All high scores are considered so by many judges and the same is true for low scores, with very differentiated average ranks, allowing good concordance to be observed (lowest rank: 28.03 and highest rank: 69.22) (table 2).

Table 2. Kendall Coefficient

Rank Item	Rank Item	Rank Item	Rank Item
40.83 P01	48.67 P26	45.16 O51	69.22 C76
63.98 P02	39.45 P27	50.32 O52	35.28 C77
42.87 P03	47.12 P28	59.73 O53	68.57 C78
42.97 P04	30.57 P29	48.49 O54	51.04 C79
46.92 P05	38.09 P30	45.57 O55	66.43 C80
54.12 P06	55.80 P31	43.39 O56	66.83 C81

46.40 P07	29.94 P32	51.33 O57	51.05 C82
60.50 P08	48.65 P33	42.75 O58	44.78 C83
65.89 P09	44.78 P34	62.81 O59	65.11 C84
50.67 P10	64.13 P35	49.94 O60	54.75 C85
62.16 P11	59.66 P36	56.78 O61	65.25 C86
51.49 P12	60.02 P37	58.38 O62	61.99 C87
40.98 P13	28.22 P38	52.64 O63	53.98 C88
37.53 P14	43.55 P39	54.18 O64	53.21 C89
41.47 P15	48.44 O40	54.75 O65	63.18 C90
58.31 P16	42.20 O41	61.29 O66	63.97 C91
51.82 P17	55.25 O42	52.56 C67	51.68 C92
53.86 P18	46.54 O43	55.97 C68	58.91 C93
38.82 P19	46.10 O44	47.20 C69	63.14 C94
28.23 P20	29.23 O45	42.00 C70	37.25 A95
57.82 P21	26.02 O46	61.56 C71	45.83 A96
28.03 P22	39.60 O47	42.04 C72	54.96 A97
34.31 P23	48.05 O48	58.15 C73	53.30 A98
35.80 P24	64.73 O49	62.88 C74	53.62 A99
40.65 P25	62.28 O50	55.70 C75	57.59 A100

This item analysis showed definitively that the QCME possesses a highly scientific value with regard to the instrument's homogeneity and its reliability. Items which the judges deemed important or very important were validated by the results.

CONCLUSIONS

First, results obtained are more than sufficient to justify the instrument's usefulness for identifying, observing, analyzing and evaluating teaching-learning situations in early childhood classrooms.

The questionnaire allows us to make classroom management indicators operative for a class of 3-, 4-, and 5-year-olds, in order to identify teaching behaviors related to planning, organizing and intervention during action and evaluation. Classifying situations from the questionnaire in different phases of the teaching-learning process (pro-active phase, active-interactive phase and post-active phase) facilitates systematic observation. The questionnaire, in turn, makes possible an informative retroaction as a basis for reflection, analysis and discussion about the teaching-learning process, giving reference points before, during and after the action.

Second, the validation obtained confirmed the instrument's adaptation to a Spanish context and to the second stage of early childhood education, at a linguistic and cultural level,

and in turn demonstrated the adapted instrument's psychometric qualities. Numerous theoretical references taken from the Spanish bibliography amply justified the questionnaire statements. The population of Spanish experts ratified with much agreement the importance of specific behaviors for managing an early childhood classroom. We believe, therefore, that the QCME can be helpful for understanding and interpreting situations --often problematic and complex-- in which student teachers and practicing teachers find themselves.

Since the QCME offers a theoretical and empirical framework valid for exploring classroom intervention, it can be used as an observation instrument in whatever way the users' personal situations require. Moving forward, we propose some formative strategies and possible activities both for initial teacher training as well as for ongoing development.

Addressing the problems faced by future teachers in their student teaching (the way to plan, organize and direct classroom functioning), this questionnaire can serve both students and teachers in analyzing teaching-learning situations in early childhood classrooms (Mir, 2001) and in stimulating reflective thought about the action. We believe that this instrument can enable advisory professors to focus more on classroom interaction, intervening in the student's problematic situations in order to analyze student-teaching experiences and elicit reflection activities, as Zabalza and Marcelo direct us (1993).

Other classroom management study proposals consist of introducing this questionnaire as an instrument for reflection about teaching activity in the context of training programs (Mir, 1999b), as a support element or guide for an intervention process in the classroom in initial teacher training: didactic material, work dossiers or student-teaching manuals (Mir & Riera, 2001), as a tool for self-evaluation in upper-division teaching (Mir, 2000a). From this understanding it is possible to initiate an intervention project aimed at introducing support elements that are considered necessary and feasible taking into account available resources.

Another possibility consists of utilizing this instrument to identify and evaluate student perceptions during their student-teaching experiences and studying how their acquisition of this competency evolves, as well as their handling of teaching-learning situations over the course of their professional training (Mir, 2002).

The instrument can also be useful as material for instruction in new technologies. Creating a website with the digital support of QCME can facilitate access to a database for consulting bibliographic references that support classroom management in our country (Mir, 2003). At the University of the Balearic Islands, a website on classroom management allows students from the different islands to self-evaluate their degree of mastery of this material (Mir, 2000a), and to have access via intranet to the relevant documentation <<http://www.uib.es/depart/dceweb/gei/index.html>>

In ongoing professional development, it can be a didactic tool for teachers who wish to renew their educational practice, serving as a guide not only for new teachers but also for all those who wish to analyze teaching-learning situations in early childhood classrooms (Mir, 1999c, 2000b), or who wish to improve their teaching practice.

Another professional development alternative, to promote improvement in classroom management, could consist in school leadership integrating use of the QCME, thus avoiding sporadic and individual applications, and making clear the advantage of adopting didactic decisions based on a analysis of classroom management by the teaching team. Even teacher self-evaluation could stimulate teachers to review their own teaching activities and recognize that the main reason for participating in the evaluation is to understand and perfect one's own practice.

Using the QCME as an observation instrument according to the requirements of different users (students, schoolteachers, university professors, student-teaching advisors, psychopedagogic guidance teams, inspectors, advisors at the centers for ongoing teacher development, etc.), makes it possible to identify categories of respondents according to their diverse "interaction styles".

With this instrument we wish to help enable teachers to make their own decisions, having a basis for doing so in real and specific situations, to facilitate their own evaluation of their work based on concrete data, and to give them the necessary mechanisms for constructing their own work, helping them feel that they are the protagonists in that work and in its improvement.

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Attachment 1

Questionnaire on Classroom Management in Early Childhood Education (QCME)

Questionnaire on classroom management in Early Childhood Education (QCME)

Guidelines for responding to the inventory

Indicate on the scale of 0 to 10 the degree of importance that you assign to each of the behaviors designated in this list.

0 • • **3** • **5** • **7** • • **10**
 none — little — some — substantial — very much

0 and 1 not important
 2 to 4 of little importance
 5 more or less important
 6 to 8 quite important
 9 to 10 very important

Organization of relationships

Defines verbal or nonverbal behaviors in the interchanges between teacher and pupils. These are the communication routines combined with the system of interaction and the structure of activities. They create the relational context.

- | | | | | | | | | | | | |
|--|----------|---|---|---|---|----------|---|---|---|---|-----------|
| O58. Specify the routines for participating in a roundtable. | 0 | • | • | 3 | • | 5 | • | 7 | • | • | 10 |
| O59. Give clear and stable orders. | 0 | • | • | 3 | • | 5 | • | 7 | • | • | 10 |
| O60. Make explicit the strategies (procedure) for approaching the work plan. | 0 | • | • | 3 | • | 5 | • | 7 | • | • | 10 |
| O61. Offer guidelines and suggestions so that the children inform the group about their completed work. | 0 | • | • | 3 | • | 5 | • | 7 | • | • | 10 |
| O62. Collect all contributions from the members of a group. | 0 | • | • | 3 | • | 5 | • | 7 | • | • | 10 |
| O63. Organize and structure the children's contributions, looking for inter-relationships among them. | 0 | • | • | 3 | • | 5 | • | 7 | • | • | 10 |
| O64. Put forward questions, suggest unusual associations that help students find new dimensions about the topic, aspects not foreseen. | 0 | • | • | 3 | • | 5 | • | 7 | • | • | 10 |
| O65. Invite students to look for information in diverse sources. | 0 | • | • | 3 | • | 5 | • | 7 | • | • | 10 |

Attachment 2

Correspondence of QCME items with bibliography

Intervention during action

Consists of sharing experiences, collaborating in forms of organization and interaction by supporting, guiding the child, getting involved with him in jointly constructed tasks and relationships. It means the teacher guarantees a climate of physical and affective security, work conditions with his or her pupils that ensure learning. It implies observing, analyzing, and evaluating with respect to expectations and to conditions of prescribed performance.

Defining expectations

Means specifying expectations with clarity, making routines and procedures explicit, negotiating norms and reminding them of limits

C67. Clarify what the student is expected to do.

...**Zabalza (1987)**, proposes clarifying what the child is expected to do, the situation and the meaning of norms and of values (explain the why of things) accepting the children's suggestions, explaining rights and duties within the class. Make proposals, suggestions, give positive instructions (instead of indicating what one must not do); aim for palpable output that makes the children perceive themselves as productive, effective.

C68. Confirm that students know and understand norms and routines

...**Fernández, Arnaiz, Gómez, Mir, Serrats, Bassedas, Huguet, Solé**, assign much importance to clarity, stability and coherence of attitudes, norms, values and educational criteria that the children can interpret properly, that do not depend on the adult's state of mind. It is not enough to dictate to them, but they should be explained, agreed to, parents should be involved in their completion, and they should be consistently applied at the school level.

C69. Make explicit one's own feelings and expectations to the children

...**Zabalza (1987)**, is in favor of revealing one's own feelings, making them explicit so that the child has new information about how the adult feels and reacts, about what can be done when one is very angry and about what kind of things cause the teacher to be angry.

C70. Segment and measure out the task.

C71. Progressively grant the child more responsibility and control

...**Coll, Colomina, Onrubia, Rochera (1992)**, propose measuring the task difficulty and providing the student necessary support for dealing with it, providing a bridge between previous knowledge and the new knowledge, offering a composite structure for task completion, progressively transferring control to the pupil, intervening actively, interacting in other contexts.

C72. Keep different actions oriented toward fulfilling the objectives of the activity.

...**Sánchez Blanco (1997)**, make the steps of the tasks known to the children.

C73. Maintain interest: look for resources to make the task motivating.

...**MEC (1992)**: the educator influences children when he or she verbalizes aloud the steps that will be taken in the completion of an action, when saying to himself what must be planned, how something must be done before doing it, when verbalizing the goal and the steps that will be taken in order to achieve it, when evaluating aloud the foreseeable consequences.

C74. Select proposals that take into account what the children know and what they wish to know.

...**Pérez Cabaní (1995)**: use teaching methods that allow transfer of control from the teacher to the pupil.

...**Coll (1990)**, proposes yielding and progressively transferring responsibility and control in learning.

...**Colomina y Onrubia (1992)**: adjust the type and degree of help to progress reached by the student in completing the task, progressively withdraw help, and promote autonomy and control in learning.