

## SCHOOL FACTORS ASSOCIATED WITH SOCIO-EMOTIONAL DEVELOPMENT IN LATIN AMERICAN COUNTRIES

### [*Factores escolares asociados al desarrollo socio-afectivo en Iberoamérica*]

by/por

[Article record](#)

[About authors](#)

[HTML format](#)

**Murillo, F. Javier** ([javier.murillo@uam.es](mailto:javier.murillo@uam.es))

**Hernández-Castilla, Reyes** ([reyes.hernandez@uam.es](mailto:reyes.hernandez@uam.es))

[Ficha del artículo](#)

[Sobre los autores](#)

[Formato HTML](#)

#### Abstract

We present the results of an international research that intends to identify key factors associated with school and classroom socio-emotional achievement of Primary Education Students in Latin America countries. This Multi-level Study has been conducted with 4 analysis levels; we studied 5,603 students from 248 classrooms from 98 schools in 9 countries. We worked with 4 product socio-affective variables (self-concept, academic behaviour, social interaction and satisfaction with the school). The results showed a series of classroom and school factors that explain the socio-emotional development, consistent with those found in research on school effectiveness to cognitive factors.

#### Keywords

School Effectiveness, Socio-emotional factors, Education Quality, Latin America.

#### Resumen

Se presentan los resultados de una investigación internacional que pretende identificar los factores de escuela y de aula asociados al logro socio-afectivo de los estudiantes de Educación Primaria en Iberoamérica. Se realizó un estudio Multinivel con 4 niveles de análisis, se analizaron 5.603 alumnos de 248 aulas correspondientes a 98 escuelas de 9 países. Se trabajó con cuatro variables de producto socio-afectivo (Autoconcepto, Comportamiento académico, Convivencia social y Satisfacción con la escuela). Los resultados arrojaron una serie de factores de aula y escuela que explican el desarrollo socio-afectivo, coherentes con los hallados en la investigación sobre eficacia escolar con factores cognitivos.

#### Descriptores

Eficacia Escolar, Factores Socio-afectivos, Calidad de la Educación, Iberoamérica.

Traditionally, School Effectiveness Research has been concerned with identifying the factors that characterize effective schools, taking different measures of cognitive outcome, such as Mathematics or Language performance (e.g. Reynolds and Teddlie, 2000, Murillo, 2005; Townsend, 2007), as outcome variables. From this approach, we have a lot of information about which factors those are (Edmonds, 1979,

Purkey and Smith, 1983, Levine and Lezotte, 1990; Cotton, 1995; Sammons, Hillman and Mortimore, 1995; Scheerens and Bosker, 1997, Sammons, 2007).

However, awareness of approach limitations and the inconsistency of focusing only on cognitive variables; in recent years has stressed the need to also consider socio-emotional product vari-

ables, so that full development of students is studied. In this research line there are works such as Knuver and Brandsma (1993), Samdal, Wold and Bronis (1999), Opdenakker and Van Damme (2000), Konu, Litonen and Autio (2002), Engels, Aelterman, Schepens and Van Petegem (2004), Gray (2006), and Van Petegem, Creemers, Aelterman and Rosseel (2008), among others.

In Latin America, the number of studies conducted under the conceptual paradigm of School Effectiveness Research has increased. This was highlighted in the State of the Art Review published few years ago by Murillo (2003), and in the occurrence of a chapter devoted exclusively to the issue in the International Handbook on School Improvement and School Effectiveness (Murillo, 2007). However, it would not be fair to say that all of these studies have focused on identifying the factors of effectiveness based on cognitive performance variables, without considering other product variables.

This article presents the results of an international investigation aimed at determining the school and classroom factors associated with socio-emotional achievement of Latin-American elementary school students.

## 1. Theoretic Foundations

### 1.1. Literature Review

The interest in knowing which school and classroom factors are linked to academic performance in key areas such as Mathematics, Language, Foreign Language or Social Science, due to their instrumental value, has been the driving force of abundant research projects since more than 40 years ago. This has allowed collecting fertile empirical data, which indicate which school and classroom elements are critical for high performance in these curriculum areas. But we cannot forget that students do not attend school simply to acquire an education in purely cognitive content and procedures. From a broader perspective, the aim is that students acquire a comprehensive education to be more supportive, with a positive self-concept and develop their critical thought (Hofman, Hofman

and Guldemond, 1999, Leonard, Bourke and Schofield, 2004, Murillo, 2005, Townsend, 2007).

Among other objectives, School Effectiveness Research tries to find classroom, school and context factors that characterize an effective school, defined as:

*...that which comprehensively develops each and every one of his students more than would be expected, given their past performance and the social, economic and cultural status of the families* (Murillo, 2005: 30).

Thus, its interest lies in identifying the school, classroom and context factors associated with the students' development. However, until now, as already noted, most investigations have focussed their attention on specific curricular areas, while other elements that define an integrated student development, if discussed at all, are done so in a way that is tangential or in most cases completely absent. In short, this perspective has been more a *desideratum* than an investigative reality.

In the same way, socio-emotional outputs such as school attendance, attitudes toward school, behaviour, motivation and self-esteem can be seen as intermediate outcomes that affect and are affected by performance and student progress. Thus, as Sammons points out (2007:17), "the promotion of better cognitive outcomes should not be seen as an alternative, and less as a barrier, regarding socio-emotional outcomes, or vice versa." In fact, the relationships are reciprocal; improving student learning will certainly increase self-esteem and commitment, positive attitudes toward school, but the reverse is also true.

Some classic works such as *Fifteen Thousand Hours* (Rutter, Mortimore, Ouston and Maughan, 1979) or the *School Matters* (Mortimore, Sammons, Stoll, Lewis and Ecob, 1988) have also addressed the study of socio-affective factors. Indeed, the primal *Fifteen Thousand Hours*, named for what the authors estimated as the time that a student spends in school over the first twelve years of their school life, was a lon-

itudinal study that examined the progress of some two thousand students with different characteristics, belonging to twelve Secondary schools located in London. In it, among the school test scores, other product measures were used such as "good behaviour", "crime" or "attendance". The results indicated not only the highlight variables that gave explanation of academic results, but also show the importance of factors such as the emphasis on academics, teacher behaviour, the use of rewards and punishments in education, or "friendliness" of the school for the students".

The second major research that examined the school factors that influence the socioemotional results was called *Inner London Educational Authority's Junior School Project (JSP)* (Mortimore et al., 1988), but made history with the name of the book reflecting its final report: *School Matters*. Its significance is such that Goldstein (1997), for example, said it is the first investigation in the history of School Effectiveness that meets all the minimum requirements for any kind of valid inference. In it, were studied a series of cognitive output measures, student behaviour assessed by teachers, attitudes toward education, measures of how students think that their teachers perceive them and student Self-concept. It found twelve factors explaining the school differences: Leading with purpose, leader-team involvement; teacher participation, consistency between teachers, structured sessions, intellectually challenging teaching, focusing on the work environment; Few topics in each session; Maximum communication between teachers and students; Writing and using evaluations; Family involvement and positive climate.

Shortly after a Dutch study was published that marked the research on this subject, in northern Europe, developed by Knuver and Brandsma (1993). However, it is from 1999 up until today that more works on this subject have been developed, especially in Europe. Some examples are the investigations of Smyth (1999), Samdal, Wold and Bronis (1999), Opdenakker and Van Damme (2000), Thomas, Sees, Sammons and Mortimore (2001), Konu, Rimpelä and Lintonen

(2002), Engels et al. (2004), Konu (2006), or the latest Van Petegem et al. (2008).

## 2. Theoretical Framework

The development of a theoretical framework that guides the research aimed at identifying the factors associated with socio-emotional performance is faced with decisions: to determine which product variables should be used and how to make them effective and to figure out whether these factors obtained with cognitive products are different.

In the emerging research on socio-emotional factors two key questions are emphasized: what can be considered the socio-emotional outcomes? And how can these be measured? These issues are of vital importance given that, depending on how these products are understood, the factors influencing them will be different (Van Petegem et al., 2008). In essence, we find two major trends. On the one hand, we have the more traditional view that considers variables such as self-concept, behaviour or socialization. As we have seen, these are the variables that were used both in *Fifteen Thousand Hours*, and in *School Matters* and which try to contribute this image of what is meant by "integral development."

On the other hand, Knuver and Brandsma (1993) understood the socio-affective factors as student attitudes toward school and toward learning. These authors used the concept of "school wellness" ("school well-being"), widely used since that time, defined as experience (positive or negative) of the students relating to the school and its organization and the classroom and their teachers (Samdal, Wold and Bronis, 1999; Opdenakker and Van Damme, 2000). However, the welfare variable is neither easy to explain nor to measure (Knuver and Brandsma, 1993; Samdal, Wold and Bronis, 1999; Tymms, 2001). The interesting proposal of Engels et al. (2004) defines student welfare as "a positive emotional state resulting from the harmony between the sum of specific contextual factors on the one hand, and personal needs and expectations to the school, on the other" (p. 128). It reflects proactive involvement and posi-

tive change (Seligman and Csikszentmihalyi, 2000, Arthaud-Day, Rode, Mooney and Near, 2005), and also reflects the fit between the person and their context (Kristof, 1996).

In this study 'classic' variables such as self-concept, classroom behaviour or social cohesion have been included, but in addition to another, the student welfare with the school: "satisfaction with school."

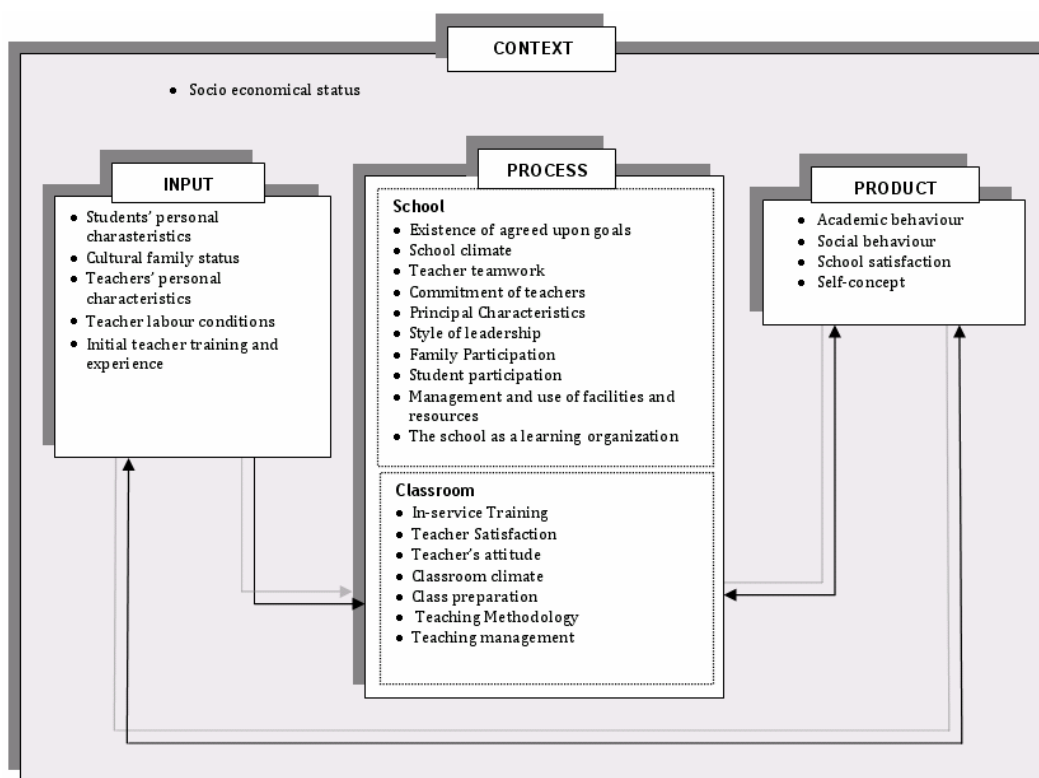
The second element is to identify which school and classroom factors are under hypothesis. Obviously, these must be based on a theoretical framework, otherwise, using one of Cuttance's metaphors (1987), we will become fishers who will capture everything that falls in our nets, with the size of the holes in them as the only selection criterion, which is nothing more than the irrelevant criteria of statistical significance.

This search is influenced by two factors. Firstly, the research carried out indicates no major differences, nor a theoretical basis that supports it, including outcomes derived from

cognitive and socio-affective factors (e.g. Sammons, 2007). And, secondly, it is necessary to take into account research carried out in a similar context, in this case in Latin America (Fuller and Clarke, 1994; Harber and Davies, 1997, Murillo, 2007).

Thus, this research focused on a model developed with two main sources. On the one hand, relevant research reviews (e.g. Levine and Lezotte, 1990; Cotton, 1995; Sammons, Hillman and Mortimore, 1995; Scheerens and Bosker, 1997, Sammons, 2007), and, secondly, the different quality empirical research results developed in the region in recent years (Willms and Somer, 2001; Cervini, 2002, 2004; Raczynski and Munoz, 2005; INEE, 2007, Murillo, 2007, White, 2008). Furthermore, variables are organized according to four levels of unit analysis (student, classroom, school and country) and according to their function in each input variable, Context, Process and Product (Escudero, 1997). Figure 1 shows the theoretical model to validate.

Figure 1. Theoretical model to validate



As noted, the study factors were organized after an exhaustive review of the literature, considering the analysis level that is: country, school, classroom and student, and the role each factor has on the model (context, input, process or product), as shown in Table 1.

## 2. Objectives and Methodology

The present investigation intends to identify school and classroom factors associated with socio-emotional achievement of Latin-American elementary school students. It seeks to participate in building a more comprehensive and holistic school effectiveness theory, that in fact, includes the factors contributing to the students' integral development, appropriate to the social, cultural and educational context in Latin America. This study developed an *ex post facto* investigation, done by the multilevel model methodological approach with four analysis levels: student, classroom, school and country.

As noted, after an exhaustive review of the literature, the factors were organized considering the analysis level including country, school, classroom and student, and the role that each factor has on the model (context, input, process or product), as shown in Table 1.

We used four variables of socio-affective performance:

- Academic conduct, understood as the perception of teachers of the development of four types of behaviour in school settings: confronting school situations, commitment, assertiveness, and relationships with others.
- Social coexistence: a measure of the teacher's perception of the behaviour of each student in the classroom in his or her interactions with peers.
- Satisfaction with the school: student satisfaction with various elements of the school such as teachers, peers or school as a whole.
- Self-concept: defined as the perception that each person has about of himself,

what he thinks or knows and how he is perceived. This includes three areas of academic self-concept (reading, math and general school self-concept), four areas of non-academic self-concept (scale of physical abilities, physical appearance, relationships with peers and relationships with parents), and general self-concept

Our study used 5,603 students, 248 classrooms, 98 schools, and 9 countries. The sampling was done using two hierarchical criteria: first, to maximize the experimental variance, in this case the performance of students adjusted by their socio-economic status (school effectiveness), and second, in order to maximize the ecological representativeness. To fulfill the first sampling criterion, ten schools, in each country, were selected as follows: four high-performing schools, three low performing and three mediocre performing, adjusted in all cases for their sociocultural level. Given the impossibility of having, a priori, an estimate of the student performance, based on schools national and international assessments and expert opinions were used, for example, educational supervisors. For getting reliable ecological representativeness, three criteria were applied: geographic region, in order to properly reflect the regional diversity of each country, habitat, for which schools from a large city (over million), urban (between one million and 25,000 inhabitants) and rural (under 25,000) were chosen and school size, so that schools were analyzed large, medium and small, depending on the average size of each country. The school sampling criterion was to select the third grade of Primary Education / Basic (8/9 years old modal age), selecting all classrooms in the grade schools and elected. Finally, we studied all children who attend these classes.

*Table 1. Factors analyzed in the research*

<b>Level 1 (Student)</b>	<b>Level 4 (Country)</b>
<p><b>Input</b></p> <ul style="list-style-type: none"> <li>· Gender (d)</li> <li>· Origin (native/immigrant) (d)</li> <li>· Native language (Spanish/other) (d)</li> <li>· Socio economical family status (z)</li> <li>· Cultural family status (z)</li> </ul> <p><b>Product</b></p> <ul style="list-style-type: none"> <li>· Academic behaviour (e)</li> <li>· Social behaviour (e)</li> <li>· School satisfaction (e)</li> <li>· Self-concept (e)</li> </ul>	<p><b>Context</b></p> <ul style="list-style-type: none"> <li>· Socioeconomical Status (z)</li> </ul>
<b>Level 2 (Classroom)</b>	<b>Level 3 (School)</b>
<p><b>Input</b></p> <ul style="list-style-type: none"> <li>· Teacher's personal characteristics: <ul style="list-style-type: none"> <li>▫ Age (c)</li> <li>▫ Gender (d)</li> </ul> </li> <li>· Teacher labour conditions <ul style="list-style-type: none"> <li>▫ Economic conditions satisfaction (z)</li> <li>▫ Labour conditions satisfaction (z)</li> <li>▫ Doubleheader (d)</li> </ul> </li> <li>· Square number of teacher per student (rec) (c)</li> <li>· Initial teacher training and experience <ul style="list-style-type: none"> <li>▫ Initial teacher training (c)</li> <li>▫ Teaching experience (c)</li> <li>▫ Years at school (c)</li> </ul> </li> </ul> <p><b>Process</b></p> <ul style="list-style-type: none"> <li>· In-service Training <ul style="list-style-type: none"> <li>▫ In-service training (z)</li> <li>▫ Attitude towards in-service training(z)</li> </ul> </li> <li>· Teacher's expectations for students(z)</li> <li>· Teacher Satisfaction <ul style="list-style-type: none"> <li>▫ Satisfaction with the school (z)</li> <li>▫ Satisfaction with the teacher (z)</li> </ul> </li> <li>· Teacher's attitude <ul style="list-style-type: none"> <li>▫ Punishment as an instrument (d)</li> </ul> </li> <li>· Classroom climate (z)</li> <li>· Class preparation (z)</li> <li>· Teaching Methodology <ul style="list-style-type: none"> <li>▫ Active class (z)</li> <li>▫ Master class (z)</li> <li>▫ Participative class (z)</li> <li>▫ Divers methodology (z)</li> <li>▫ Inclusive methodology (z)</li> </ul> </li> <li>· Teaching management <ul style="list-style-type: none"> <li>▫ Punctuality (z)</li> <li>▫ Classroom interruptions(z)</li> <li>▫ Missing lessons (c)</li> </ul> </li> <li>· Evaluation <ul style="list-style-type: none"> <li>▫ Evaluation Frequency (z)</li> </ul> </li> <li>· Family participation (z)</li> <li>· Student participation (z)</li> <li>· Management and teaching resources. <ul style="list-style-type: none"> <li>▫ Use of Traditional Resources (z)</li> <li>▫ Use of Technological Recourses (z)</li> </ul> </li> </ul>	<p><b>Input</b></p> <ul style="list-style-type: none"> <li>· School socioeconomic level (z)</li> </ul> <p><b>Process</b></p> <ul style="list-style-type: none"> <li>· Existence and knowledge of agreed goals <ul style="list-style-type: none"> <li>▫ Existence of educational project or (d)</li> <li>▫ Knowledge of the objectives for the community (z)</li> </ul> </li> <li>· School Climate (z)</li> <li>· Teacher teamwork (z)</li> <li>· Commitment of teachers (z)</li> <li>· Principal Characteristics <ul style="list-style-type: none"> <li>▫ Age of the director or (c)</li> <li>▫ Experience Policy (c)</li> </ul> </li> <li>· Style manager <ul style="list-style-type: none"> <li>▫ Bureaucratic style (z)</li> <li>▫ Participative style (z)</li> </ul> </li> <li>· Family Participation (z)</li> <li>· Student participation (z)</li> <li>· Management and use of facilities and resources <ul style="list-style-type: none"> <li>▫ Cleaning facilities (z)</li> <li>▫ Quality and appropriateness of the services (z)</li> <li>▫ Quality and appropriateness of teaching resources (z)</li> <li>▫ Quality and appropriateness of ICT (z)</li> </ul> </li> <li>· The school as a learning organization (z)</li> </ul>

*Notes: d) dummy variable. z) Variable typified. c) Variable-centred mean. e) Scale variable with mean 250 and standard deviation 50.*

The data collection instruments has been a set of 17 instruments:

1. *Self test from the Self-description Questionnaire (SDQ-I)* (Marsh, 1988; Marsh, Craven and Debus, 1991). This test measures the general self-concept, academic self-concept (reading, math and school) and non-academic (relationship with parents, with peers, physical appearance and physical skills) by 56 Likert questions. This self test has a reliability of 0.938
2. *Teachers' academic and social behaviour of students Report*, from the adaptation of the Test of Academic Self-concept Florida Key (Purkey and Cage, 1973) by Arancibia, Maltés and Alvarez (1990). The teacher for each of their students completes it. Using 30 items, indicating the frequency with which they have a number of behaviours. The reliability is 0.952.
3. *Student's general questionnaire* that asks about personal characteristics, cultural habits, extracurricular activities, personal, academic expectations, satisfaction with school and relationships with peers and teachers.
4. *Family Questionnaire* covering a range of issues such as socio-economic and cultural life of the family, family characteristics, family expectations on the child's educational level, cultural habits, extracurricular activities and parental support.
5. *Classroom teachers' Questionnaire*, which collects data about personal characteristics, initial and ongoing training, satisfaction with labour and economic conditions, their partners, classroom characteristics, the student group, teaching methodology and evaluation, time distribution and classroom management as well as the involvement of parents and their involvement.
6. *Questionnaire for teachers*, with whom we obtained information about their personal characteristics, experience, working conditions, school goals and issues related to planning and teamwork, leadership and school management, other structural and the presence and quality of facilities and resources at their school, and their satisfaction with various School elements.
7. *Institutional climate questionnaire*: developed by CIDE (Repiso Munoz et al., 2000) from the adaptation done by Aurelio Villa (Villa and Villar, 1992) of "School Climate Scale" of Marjoribanks (1980). It is made up of 31 Likert-type questions and has 0.893 reliability.
8. *Principal's Management style questionnaire*: It is an adaptation of "Educational Leadership Multifactor Questionnaire" by Bernard Bass, Spanish adapted by Aurelio Villa Roberto Pascual (Pascual, Villa and Auzmendi, 1993). It was completed with questions about their satisfaction with the school in general and specific aspects, time distribution of work and directors characteristics.
9. *School Form* which requested objective data completed by a member of the management team of school size, number of teachers and students, facilities and data from the surrounding area.
10. *Principal Interview*. Here the issues of the Institutional Educational Project, organizational effectiveness perceived, its strengths and weaknesses, the school as a learning organization, the teachers' participation and their commitment with leadership, school climate, decision making while others questions related to the principal's role as advisor and supervisor, and finally the school policy regarding student participation were addressed.
11. *Classroom observation list*. Designed with three different instruments that measure: a) the physical classroom characteristics, b) activities being undertaken by the teacher in the classroom (the proceedings are recorded every two minutes during an hour session and two sessions on three consecutive days) and c) the perception of the observer-researcher on teaching meth-

odology, time management and classroom climate, among other things.

In the 9 countries studied, all instruments were validated by a dual strategy. First, psychometric experts and school effectiveness and primary school teachers have done a validation. And, secondly, an experimental validation to ensure their quality was developed.

A research team from each country following strict common guidelines conducted fieldwork. The team visited each school an average of one week. To perform the analysis Multilevel models were used (or Hierarchical Linear Models) with four levels. These models, in essence, sought to obtain the model which, based on previous theoretical framework, best fit with the data. Thus, the modeling process followed is to find a model, the complete and parsimonious as possible, to fit the previous model and to explain most of the variance in student performance.

Since four variables were studied socio-affective performance, there were as many modelling multilevel processes, one for each variable. Throughout the process the analysis program used was MLwiN v2.02 and the estimate made by the method of *Iterative Generalized Least Squares (Iterative Generalised Least Squares - GLIA)*. In essence the process for each of the response variables is as follows:

1. *Estimating the null model.* This random effects model has four levels and does not include explanatory variables in any of them, and serves as a baseline for estimating the variance explained from which it would evaluate the contributions of more elaborate models.
2. *Estimating the model with adjustment variables.* From the null model, adding the variables set in the fixed part and, after analyzing if they make a statically significant contribution, they are included in the random part and it is been analyzed their

behaviour. This model with adjustment variables is the basis of the value added approach, since it is a model that includes external factors that affect student performance. The model is as follows:

$$\begin{aligned}
 y_{ijk} &= \beta_{0,jk} + \beta_{1,jk} NSE_{ijk} + \beta_{2,jk} NCult_{ijk} + \beta_{3,jk} Genero_{ijk} + \beta_{4,jk} Origen_{ijk} + \dots \\
 &+ \beta_{5,jk} LM_{ijk} + \beta_{6i} NSE\_esc_{ki} + \beta_7 IDH\_pais_i + \varepsilon_{ijk} \\
 \beta_{0,jk} &= \beta_0 + \varphi_{0i} + \upsilon_{0jk} + \mu_{0,jk} \\
 \beta_{1,jk} &= \beta_1 + \varphi_{1i} + \upsilon_{1jk} + \mu_{1,jk} \quad \dots \quad \beta_{5,jk} = \beta_5 + \varphi_{5i} + \upsilon_{5jk} + \mu_{5,jk} \\
 \beta_{6i} &= \beta_6 + \varphi_{6i}
 \end{aligned}$$

With:

$$\begin{aligned}
 [\varepsilon_{0,ijk}] &\sim N(0, \Omega_\varepsilon) : \Omega_\varepsilon = [\sigma_{\varepsilon_0}^2] \\
 [\mu_{0,jk}] &\sim N(0, \Omega_\mu) : \Omega_\mu = [\sigma_{\mu_0}^2] \\
 [\upsilon_{0,jk}] &\sim N(0, \Omega_\upsilon) : \Omega_\upsilon = [\sigma_{\upsilon_0}^2] \\
 [\varphi_{0i}] &\sim N(0, \Omega_\varphi) : \Omega_\varphi = [\sigma_{\varphi_0}^2]
 \end{aligned}$$

Where:

- $y_{ijk}$  There are different measures of socio-affective product
- $NSE_{ijk}$ , socio-economic development of the student's family
- $N\_Cult_{ijk}$ , the student's family cultural level
- $Rdto\_previo_{ijk}$ , students' prior performance
- $Gender_{ijk}$ , student's gender (male / female)
- $Origin_{ijk}$ , native or immigrant student
- $LM_{ijk}$ , student's native language: Spanish or other
- $NSE\_esc_{ki}$ , socio-economic development of the school
- $IDH\_country_k$ , *Human Development Index* for each country

3. *Estimating the contributions of classroom and school factors from the model fitted individually.* It has been estimated that each input and process variables (both classroom and school) contribution to the explanation of student performance variance from the fitted model. Thus, identifying the factors associated with socio-emotional achievement. The procedure for estimation is similar to the previous phase. First, we introduce each of the variables in



the fixed part of the model to test if their contribution is significant or not, and if so, it analyzes whether their contribution is significant to the random part.

4. *Models Estimation with all classroom and school variables*, it develops a model with all variables in each level have been significant in the fixed part.

### 3. Results

As it's been mentioned, the first step in identifying the factors associated with socio-emotional performance is the determination of the four null models, one for each outcome variable (Table 1).

Table 1. The null models for product performance socio-affective variables

	Behaviour	Social Behaviour	School Satisfaction	Self-concept
<b>Intercept</b>	253,84 (21,63)	253,73 (4,35)	251,59 (3,50)	253,63 (5,28)
<b>Random Part</b>				
<b>Between Countries</b>	27,902 (21,63)	124,25 (80,77)	88,07 (52,15)	221,16 (118,20)
<b>Between Schools</b>	45,22 (30,34)	142,03 (74,71)	95,88 (35,22)	172,46 (45,84)
<b>Between Classrooms</b>	246,35 (38,53)	706,59 (86,95)	191,99 (33,18)	192,37 (31,29)
<b>Between Students</b>	2044,21 (39,49)	1332,70 (25,75)	2124,88 (41,05)	1678 (32,72)

From the null models four fitted models were developed, i.e. the adjustment variables (Table 2). Although the function of these is to serve as a basis for identifying process associated factors, and provide some interesting information worthy to be shown:

- There is a relationship between socioeconomic status and family behaviour, satisfaction with school and self-concept, so that children in families with greater resources perform better, are more satisfied with the school and have higher self-concept. Specifically, Table 3 reports that for every standard deviation increase or decrease the family socioeconomic status, increase or decrease in behaviour 2.82 points, 3.51 points in satisfaction with the school and 1.85 in self-concept. Is important to remember that the four product variables are scaled so that the mean is 250 and the standard deviation is 50.
- The cultural level of families affects children's behaviour at school and directly in their self-concept. An increase or decrease of one standard deviation in the families' cultural level causes decreases or increases

5.22 points and 2.49 points in behaviour in self-concept.

- Girls perform better in school, achieve higher rates in social life and are more satisfied with school than their male peers, although their self-concept is lower. Specifically, women are 7.09 points higher on behaviour, 4.73 in social interaction, and 3.69 in satisfaction with the school, but 2.45 points lower on self-concept.
- Immigrant students behave worse, are less satisfied with the school and their self-concept is lower: 18.23 points lower on behaviour, 12.08 less satisfaction with school, and 8.29 less in self-concept.
- Children with a mother tongue other than Spanish (usually indigenous languages) are less satisfied with the school and have lower self-concept: 9.18 points lower on satisfaction with the school and 7.87 less in self-concept.
- The school socio-cultural neighbourhood only affects social interaction variable. More precisely, the data indicate that for each standard deviation raise or decrease the socio-cultural school, increase or decrease by 5.95 points student social life.

- The level of a country socio-economic development does not influence these socioemotional variables.

*Table 2. Results of multilevel models adjusted for four levels of socio-affective product performance variables.*

	Behaviour	Social Behaviour	School Satisfaction	Self-concept
<b>Fixed Part</b>				
<b>Intercept</b>	251,49 (2,47)	249,21 (3,38)	251,16 (3,03)	255,67 (4,77)
<b>Family NSS</b>	2,82 (0,79)	NS	3,51 (0,79)	1,85 (0,75)
<b>Family cultural Status</b>	5,22 (0,77)	NS	NS	2,49 (0,75)
<b>Gender (Male/female)</b>	7,087 (1,26)	4,73 (1,03)	3,69 (1,29)	-2,35 (1,16)
<b>Origin (native/immigrant)</b>	-18,28 (3,40)	NS	-12,08 (3,48)	-8,29 (3,27)
<b>Mother Language (Spanish/other)</b>	NS	NS	-9,18 (3,16)	-7,87 (2,29)
<b>School NSC</b>	NS	5,98 (1,64)	NS	NS
<b>Country NSC</b>	NS	NS	NS	NS
<b>Random part</b>				
<b>Between Countries</b>	33,91 (24,28)	50,61 (43,04)	62,45 (37,13)	176,47 (95,07)
<b>Between schools</b>	36,06 (28,05)	89,82 (66,97)	38,68 (25,82)	131,93 (39,28)
<b>Between Classrooms</b>	236,62 (37,10)	721,57 (88,02)	191,28 (32,65)	188,25 (32,54)
<b>Between Students</b>	1996,63 (38,58)	1327,93 (25,66)	2117,38 (40,90)	1684,33 (32,54)

*NS: Not significant at  $\alpha = 0.05$*

Since these results do not correspond with the main objective of the study we will not dig deeply into them, but certainly deserve reflection.

This Table 2 is also available the "country effect", the "school effect" and "class effect", i.e., the variance of each of the variables of socio-effective performance of the students explained by each levels of analysis. These effects are, in all significant cases, which justify and require the use of 4-level models.

From each of these four adjusted models, it is estimated the contribution of each one of the process variables, first individually (phase 3 of the modelling process) and then, it is repeated with all variables in their level simultaneously (phase 4). The results are organized according to each output variables and differentiating classroom and school factors.

### 3.1. Factors associated with academic behaviour

The first performance variable analyzed has been student socio-affective behaviour in the classroom. It was measured from the teacher

assessment on four types of behaviour in school settings for each of his students: approaching school situations, commitment, assertiveness, and relationships with peers. Thus, what we have is the teacher perception regarding the behaviour of each child.

The multilevel modelling process done with each individual variable indicates that of all the factors studied, which are shown in Table 1 - there are only five factors associated with academic behaviour found after analysis of different variables related to the classroom level: teacher gender, teacher satisfaction, classroom climate, the frequency of assessment and the opinion that punishment is a good way to deal with classroom problems generated by the students behaviour. And a school single variable: the teacher commitment to the school.

Table 3 provides the necessary data:

- If the teacher is female, academic behaviour of students is 8.902 points better;

- If the classroom teacher defends the use of punishment in certain cases, the behaviour low 6.77;
- The increase or decrease, of one standard deviation, of satisfaction with the school teachers increases or decreases 4.21 points in the behaviour of their students;
- The increase or decrease of one standard deviation of school climate results in the behaviour of students in a corresponding 5.33 points;
- One standard deviation increase in frequency will return the evaluation results leads to improved behaviour at 2.92 points;
- Teacher commitment in school is associated with the academic performance of students in that school, so that for every standard deviation increase the commitment, increment are 4.28 points in the behaviour of all children at the school.

Table 3. Estimating each of the variables from the adjusted models for behaviour in school

	Individual	By level
<b>Classroom Factors</b>		
<b>Teacher gender (male/female)</b>	8,02 (2,97)	5,47 (1,02)
<b>Punishment Teacher practice</b>	-6,77 (3,15)	NS
<b>Teacher Satisfaction</b>	4,21 (1,22)	3,99 (1,22)
<b>Classroom climate</b>	5,33 (2,33)	NS
<b>Assessment Frequency</b>	2,92 (1,22)	NS
<b>School Factors</b>		
<b>Teacher Commitment</b>	4,28 (1,94)	4,28 (1,94)

NS: Not significant at  $\alpha = 0.05$

Phase 4 in the modelling process involves estimating two models, one with all the variables in the classroom and the other with the school. In the first case, with the variables of level 2 (classroom), the significance is only kept by two of them: the teacher gender and the teacher's commitment. In the second case, as there were only one variable, the model for

the whole school level includes just a variable.

### 3.2. Factors associated with student's social coexistence

The second variable of socio-affective performance analyzed is student's social life. This variable is defined as teacher's perception of each student behaviour in the classroom in their interactions with peers.

The process of multilevel modelling indicates that there are twelve factors associated with this measure of socio-affective performance: nine school variable and three from the classroom.

Thus, the classrooms where students have a greater development of social life are characterized by the following elements (Table 4):

- The teacher is satisfied with the school where he works.
- There is a good classroom atmosphere (19.98).
- Classroom methodology defined by:
  - o conducting participatory activities (7.12),
  - o the use of traditional teaching resources (7.16),
  - o frequent assessment (4.82), and
  - o the teacher serving students as individuals, especially those most in need (7.84).
- The classroom is clean (5.83).
- Learning time is defined by:
  - o few interruptions in the classroom (7.93), and
  - o classes start on time (5.63).

Obviously, all these elements are linked. The use of participatory methodologies and teaching resources, or attention to diversity, generated a good atmosphere in the classroom, making teachers more satisfied ... and vice versa. That is, teachers happier with the class create a good climate, which enables the use of participatory methodologies.

In any case, do not forget that the dependent variable is the students' behaviour in the classroom in the teacher opinion. Thus, it is

logical that more satisfied teachers also consider the individual student behaviour is better.

Table 4 – Estimate of each variables from adjusted models for Social Life

	Individually	By Levels
<i>Classroom Factors</i>		
School teacher's satisfaction	8,62 (1,83)	6,76 (1,86)
Classroom climate	19,98 (3,67)	NS
Participative Methodology	7,12 (2,15)	NS
Classroom tidiness	5,83 (1,58)	NS
Assessment frequency	4,82 (1,90)	NS
Classroom disruptions	-7,93 (2,01)	-5,26 (2,02)
Diversity Attention	7,84 (2,01)	5,19 (2,01)
Punctuality	5,63 (1,90)	NS
Traditional resource use in the classroom	7,16 (1,99)	NS
<i>School Factors</i>		
Knowledge of community objectives	4,83 (2,38)	5,20 (2,06)
Frequency of teaching issues	5,47 (2,76)	NS
Participatory Management style	7,29 (1,96)	7,46 (1,87)

NS: Not significant at  $\alpha = 0.05$

Regarding the school variables, three have shown significant: knowledge of the school objectives by the school community, the frequency that pedagogical issues are present in the teachers' meetings and a participatory management style. That is, those related to a more pedagogical concern of the school, powered by a management style that encourages the participation of the school community.

### 3.3. Factors associated with student satisfaction with the school where he studied

An important question to acknowledge is which school and classroom aspects make students more satisfied with school; which elements favour a better opinion of the students of the school so that knowing them will allow empower them and finally to improve the student's welfare and thus, the school quality.

Multilevel modelling process (Table 5) leads to the following variables related to the classroom level associated with a school better opinion is:

- The teacher is satisfied with the school (4.02)
- Classes start on time (2.69) and suspende for few days (-0.57)
- The teacher does not consider that the punishment is an appropriate system to monitor the behaviour (7.19)
- The class dynamics is practical, problem-solving strategies, writing and reading in class are used (2.61)
- Traditional teaching resources are used (2.70)
- The teacher attends to individual students (4.71).

This data provide a picture of a classroom in which students are satisfied because the teacher displays a positive attitude and subsequent behaviour, stimulating a positive working environment where students feel individually cared, promoting an active work attitude and therefore there is a positive school opinion.

Table 5. Each of the individual variables estimation from the adjusted models with variable product satisfaction towards school

	Individually	By level
<i>Classroom Factors</i>		
Teacher defends the use of punishment	-7,19 (3,04)	NS
Teacher Satisfaction with school	4,02 (1,16)	3,42 (1,15)
Active Methodology	2,61 (1,19)	NS
Number of school days missed	-0.57 (0.27)	NS
Attention to diversity	4,71 (1,27)	4,08 (1,26)
Punctuality	2,69 (1,21)	NS
Traditional resource used in the classroom	2,70 (1,28)	NS
<i>School Factors</i>		
Community Goal knowledge	3,79 (1,67)	3,34 (1,39)
Frequency of addressing educational issues	4,86 (1,86)	NS
Frequency planning meetings	5,69 (1,61)	5,63 (1,45)
Parent involvement	4,69 (1,63)	NS
Teacher Commitment	5,88 (1,87)	NS
Participative management style	3,49 (1,26)	3,98 (1,14)
Cleaning facilities	3,49 (1,63)	2,93 (1,38)

NS: Not significant at  $\alpha = 0.05$

From the school level, multilevel models show a number of other factors associated with student school satisfaction:

- The school objectives are known by the community (3.79).
- Teachers are committed to the school (5.88).
- Tasks are planned by means of regular meetings (5.69).
- In staff meetings addressed pedagogical issues (4.86).
- The leadership style is pedagogical (3.49).
- Families participate in school activities (4.69).
- School facilities are kept clean (3.49).

In short, the teacher's behaviour and attitude and the sense of "community" lived in the school are two key elements linked with students school satisfaction.

### 3.4. Factors associated with self-concept

The self-concept is a factor closely linked with performance, but also to the student's wellness and quality of life. The study of fac-

tors associated with the development of self-concept provides a picture of the fundamental elements that should be considered to improve classroom and school.

As seen in Table 7, four main classroom factors appear to be associated with the student's self-concept.

- The teacher's experience, understanding, as the years that they have been practicing and remain in school are associated with factors of better self-concept. Indeed, each year of experience, more or less, that has the teacher has their self-concept increases or decreases by 0.45, and with respect to the age at school 0.61
- The methodology applied in the classroom can be specified into two factors which provide statistical significance: the use of active learning methodology (3.39 points per increase in standard deviation) and traditional resource use in the classroom (3,39). We understand the active participation and class work on assignments, essays, lectures, etc..

- The number of students in the classroom: children with better self-concept are in medium size classes.
- Consideration of punishment as a suitable system to maintain discipline in the class-

room is inversely related to good self-concept of students (6.71).

In conclusion, the teacher who works with each student and also with the group has a direct influence promoting a positive student self-concept .

Table 6. Each of the variables from models adjusted for self-concept estimation

	Individual	By Level
<b>Classroom Factors</b>		
Teacher Experience	0,45 (0,14)	0,40 (0,13)
Teacher Seniority	0,61 (0,17)	NS
Teacher defends the uses of punishment	-6,71 (3,15)	NS
Number of students in the classroom (recoded)	0,44 (0,21)	NS
Active teaching methodology	3,39 (1,13)	2,60 (1,30)
Use of traditional resources in the classroom	4,54 (1,36)	4,01 (1,32)
<b>School Factors</b>		
Frequency of addressing educational issues	5,63 (2,57)	NS
Teachers Commitment	5,86 (2,40)	5,93 (2,31)
Principal age.	0,42 (0,20)	0,42 (0,19)
Educational Management style	3,62 (1,74)	NS
Participative Management style	3,98 (1,86)	NS

NS: Not significant at  $\alpha = 0.05$

The school factors are three others related to self-concept. They are:

- Teachers' commitment with the School (5.86).
- Leadership style understood as a pedagogical style (3.62) and encourages participation (3.98).
- Time exercising the leadership. The results indicate that for each year that increase or decrease with respect to mean, increases or decreases by 0.42 points self-concept of students.

In the global model, the variables studied together, not observed any factor at the school level. While in the model with all the school variables analyzed simultaneously the coefficients remain significant for the principal age, and the teacher commitment with school.

#### 4. Discussion and conclusions

After more analytical overviews of the school and classroom factors associated with socio-

emotional outcomes, it is necessary to provide an overview.

Reviewing classroom factors associated with socio-affective achievement variables it is wide spread and even, in somehow, inconsistent. 16 factors contribute significantly to any of the models analyzed. None of them is common to the four product variables. Three out of the 16 factors are in three product variables, six factors appear in two product variables, and seven factors showed a significative contribution in a single product variable.

In a general overview these data, there are four main groups of factors associated with socio-affective achievement: the teacher's attitude, methodology, and efficient use of time and classroom climate. Examined in more detail:

1. The teacher's attitude toward school classroom is the factor that most affects the student emotional development. Teachers pleased with the school, committed with it, no doubt, are those who most contribute to the development of their students.

2. The teaching methodology appears associated with socio-emotional development. This factor refers to the attention to the diversity of students, use active methodology that uses non-technological teaching resources as well as conducting frequent assessments that enable students to be in their learning process
3. Efficient use of time. Three variables related to the regular classes in both the number of school days taught, timeliness of classes and few interruptions in the classroom.
4. The classroom climate as a variable associated with student satisfaction with their classmates.

It seems interesting to note the presence of the teacher's gender as a variable associated with

student behaviour. A first interpretation might refer to the way men and women value the behaviour of their students. That is, women seem to be more generous in their appreciation. A second, perhaps less superficial, and adjusted to other data already discussed, concerns the different ways in which women carry out their class. Elaborating this fact, we have obtained that there are the main differences by gender of teachers in promoting student involvement, the use of participatory methodologies in the classroom, the students' attention more individualized and not consideration of punishment as a way of maintain discipline in class, are factors that can cause these differences in student behaviour.

*Table 7. Contribution of the variables of classroom and school to achieve socio-affective*

	Behavior	Social Coexistence	Satisfaction with the school	Self-concept
<b>Classroom Factors</b>				
Teacher experience	-	-	-	XX
Teacher Seniority	-	-	-	X
Teacher defends the use of punishments	X	-	X	X
Teacher Satisfaction with school	XX	XX	XX	-
Classroom climate	X	X	-	-
Number of students in the classroom	-	-	-	X
Active Teaching methodology	-	-	X	XX
Participative teaching methodology	-	X	-	-
Cleanliness classroom	-	X	-	-
Assessment frequency	X	X	-	-
Classroom disruptions	-	XX	-	-
Number of school days missed	-	-	X	-
Attention to diversity	-	XX	XX	-
Punctuality	-	X	X	-
Traditional resource used in the classroom	-	X	X	XX
<b>School Factors</b>				
Goals Knowledge	-	XX	-	-
Frequency of addressing educational issues	-	XX	XX	-
Frequency planning meetings	-	X	X	X
Frequency planning meetings	-	-	XX	-
Parent involvement	-	-	X	-
Teachers commitment	XX	-	X	XX
Principal Age	-	-	-	XX
Educational Management style	-	-	XX	X
Participative management style	-	XX	-	X
Cleaning facilities	-	-	XX	-

Note: X: significant contribution individually.

XX: significant contribution individually and in models with level variables.

(\*) Inverse relationship.

School factors associated with achieving socio-affective reiterate that image blurring and poorly we have been consistently describing. Nine of the factors which seem to be related, but with a negligible contribution in the four product variables studied, presented in a hierarchical way, are:

1. The school concern for educational themes. These data are obtained based on the frequency with which issues teaching in the teachers meetings.
2. The teacher's commitment with the school: a factor with great explanatory power and is present in three of the variables studied.
3. The management style: a factor favouring the academic achievement of socio-affective students as it is educational and enhance the participation of the school community.

4. The existence of school objectives that are known and shared by the school community also contributes to the development of these achievements.

To them there are other factors that also are present in the results, although occasionally, they include: the parent's participation, the principal age, or the cleaning building and spaces. The school and classroom factors associated with socio-emotional goods found in this investigation are consistent with those found in research focusing on cognitive products. Indeed, both in reviews "classical" school effectiveness research (e.g. Cotton, 1995; Sammons, Hillman and Mortimore, 1995; Scheerens and Bosker, 1997), as in the research conducted in Latin America (Murillo, 2007) have found factors school and classroom that perfectly fit with those found in this study (Table 3).

*Table 3. Comparison of Results with revisions traditional international (Cotton, 1995; Sammons, Hillman and Mortimore, 1995; Scheerens and Bosker, 1997) and developed in Latin America (Murillo 2007)*

	<b>Cotton (1995)</b>	<b>Sammons, Hillman y Mortimore (1995)</b>	<b>Scheerens y Bosker (1997)</b>	<b>Murillo (2007)</b>
<b>Shared Goals</b>	Planned learning goals	Vision and Shared goals	Consensus and cooperation among teachers	Sense of Community
<b>Classroom climate</b>		Learning environment and positive feedback	School and classroom climate	School and classroom climate
<b>Pedagogical awareness</b>	School-wide empathies on learning	Concentration on teaching and learning	Performance orientation	
<b>Assessment frequency</b>	Evaluation	Progress Monitoring	Evaluative potential	Evaluation
<b>Teacher Commitment</b>	Professional Development and Cooperative learning.	A learning organization		Commitment, attitude towards innovation
<b>Educational and participative leadership</b>	Management and school organization, leadership and improvement, leadership and planning	Professional leadership	School Leadership	Leadership
<b>Parent Involvement</b>	Community involvement	Home-school relationship	Parent Involvement	Participation and involvement families
<b>Time optimization</b>	Classroom management and organization		Classroom management	Time management
<b>Teaching Methodology: Attention to diversity</b>	Curriculum design and planning	Teaching design with purpose	Quality of curriculum, instruction, structured, adaptive instruction	Curriculum Quality
<b>Students in the classroom</b>	Interactions Teacher-student	High expectations	High expectations	High expectations
<b>Resources</b>				Infrastructures and resources



However, there have also been three major differences. Firstly, it has been found that there is a greater profusion of classroom factors. This could be because this research has paid particular attention to that level. Thus, these results do not contradict the international research, but supplement it by providing more details.

Secondly, we have found factors associated with socio-emotional development, such as the number of students in classroom, teaching experience, or the use of educational resources related to the school resources available that do not appear in the classic reviews, but in the works developed in Latin America. As it has been demonstrated (Murillo and Roman, 2011), this may be because they are important resources in developing countries with large differences between schools and foremost lack in many of them.

Finally, we note the occurrence of a somewhat discordant data with earlier work but it has a particular significance: the teacher considers that the punishment is appropriate to the discipline problems. The results suggest that, in this case, the behaviour of students is worse, the same with their satisfaction of the school and their self-concept. It seems clear that positive feedback strategies are more effective, at least for the student's emotional development.

In any case, and perhaps the most important data, that the research has shown is that both the school as a whole, as each of the teachers have a significant effect on the students emotional development. But, beyond isolated factors, good schools have a way of being and behaving, a special culture that makes students learn not only language or mathematics, but also to develop a positive self-concept or to feel good: the so-called "welfare school" (e.g. Samdal, Wold and Bronis, 1999; Opdenakker and Van Damme, 2000).

This work has addressed such an important element, neglected by theory and research: the

desocio-affective development. In these times when the pressure on schools and teachers to improve cognitive outcomes is being multiplied, largely thanks to the hyper-development of regional national and international assessments, thus, it is necessary that research continue to emphasize that these results are no longer necessary but also not sufficient. To intend to have children with high performances in mathematics, for example, without dealing with their self, their sociability or well-being at school is not only difficult, it is an aberration.

This research has made a first approach to a better understanding of school and classroom factors that contribute to the student emotional development from Latin America. We wanted to provide some ideas for improving a more generally school effectiveness theory, in a double sense: that is consistent with the comprehensive development approach advocated, and which is suitable not only for developed countries but also for countries with social, economic and cultural backgrounds.

Only through education which works towards Social Justice will we achieve a more equitable, fair and inclusive society. To know which school and classroom factors are associated with student socio-emotional development facilitate to implement innovations in schools to improve them and thereby fostering a quality education, an education in and for Social Justice.

## References

- Arancibia, V., Maltés, S., & Álvarez, M. (1990). *Test de Autoconcepto Académico. Estandarización para escolares de 1º y 4º años de Enseñanza Básica*. Santiago: PUC de Chile.
- Arthaud-Day, M.L., Rode, J.C., Mooney, C.H., & Near, J.P. (2005). The subjective well-being construct: a test of its convergent, discriminant, and factorial validity. *Social Indicators Research*, 74, 445-476.

- Blanco, B. (2008). Factores Escolares Asociados a los Aprendizajes en la Educación Primaria Mexicana: Un Análisis Multinivel. *REICE. Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 6(1), 58-84.
- Cervini, R. (2002). Desigualdades Socioculturales en el Aprendizaje de Matemática y Lengua de la Educación Secundaria en Argentina: Un modelo de tres niveles. *RELIEVE*, 8 (2). Consultado en [http://www.uv.es/RELIEVE/v8n2/RELIEVEv8n2\\_1.htm](http://www.uv.es/RELIEVE/v8n2/RELIEVEv8n2_1.htm)
- Cervini, R. (2004). Influencia de los factores institucionales sobre el logro en Matemática de los estudiantes en el último año de la educación Media de Argentina. Un modelo de tres niveles. *REICE. Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 2(1).
- Cotton, K. (1995). *Effective schooling practices: A research synthesis. 1995 updated*. Portland, OR: Northwest Regional Educational Laboratory.
- Cuttance, P. (1987). *Modelling variation in the effectiveness of schooling*. Edinburgh: Centre for Educational Sociology, University of Edinburgh.
- Edmonds, R. (1979). Effective schools for the urban poor. *Educational Leadership*, 37(1), 15-24.
- Engels, N., Aelterman, A., Schepens, A. & Van Petegem, K. (2004). Factors which influence the wellbeing of pupils in Flemish secondary schools. *Educational Studies*, 30, 127-143.
- Escudero, T. (1997). Enfoques modélicos y estrategias en la evaluación de centros educativos. *RELIEVE*, 3(1). Disponible en [http://www.uv.es/RELIEVE/v3n1/RELIEVEv3n1\\_1.htm](http://www.uv.es/RELIEVE/v3n1/RELIEVEv3n1_1.htm)
- Fuller, B. & Clarke, P. (1994). Raising school effects while ignoring the culture? Local conditions and the influence of classroom tools, rules and pedagogy. *Review of Educational Research*, 64(1), 119-157.
- Goldstein, H. (1997). Methods in School Effectiveness Research. *School Effectiveness and School Improvement*, 8, 369-395.
- Gray, J. (2006). La Eficacia Escolar y Otros Resultados de la Enseñanza Secundaria: una evaluación de tres décadas de investigación británica. *REICE. Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 4(1), 16-28.
- Harber, C. & Davies, L. (1997). *School management and effectiveness in developing countries: The postbureaucratic school*. London: Cassell.
- Hofman, R.H., Hofman, A.H. & Guldemond, H. (1999). Social and cognitive outcomes: A comparison of contexts of learning. *School Effectiveness and School Improvement*, 10(3), 354-366.
- INEE (2007). *Factores escolares y aprendizaje en México: El caso de la educación básica*. México: INEE.
- Knuver, J.W.M. & Brandsma, H.P. (1993). Cognitive and affective outcomes in school effectiveness research. *School Effectiveness and School Improvement*, 4(3), 189-204.
- Konu, A.I. (2006). School well-being in Grades 4-12. *Health Education Research*, 21(5), 633-642.
- Konu, A.I., Litonen, T.P., y Autio, V.J. (2002). Evaluation of well-being in schools: a multilevel analysis of general subjective well-being. *School Effectiveness and School Improvement*, 13, 187-200.
- Konu A.I., Rimpelä, M.K. & Lintonen, T.P. (2002). Factors associated with schoolchildren's general subjective well-being. *Health Education Research*, 17, 155-65.
- Kristof, A.L. (1996). Person-organization fit: an integrative review of its conceptualizations, measurements, and implications. *Personnel Psychology*, 49, 1-49.
- Leonard, C., Bourke, S. & Schofield, N. (2004). Affecting the affective: Affective outcomes in the context of school effectiveness, school improvement and quality schools. *Issues In Educational Research*, 14.

- Levine, D.U. y Lezotte, L.W. (1990). *Unusually effective schools: a review and analysis of research and practice*. Madison: National Center for Effective Schools Research and Development.
- Marjoribanks, K. (1980). *School environment scale*. Adelaide: Jai Press.
- Marsh, H.W. (1988). *Self Description-Questionnaire I. SDQ-I manual and research monograph*. San Antonio, TX: The Psychological Corporation.
- Marsh, H.W., Craven, R.G. & Debus, R.L. (1991). Self-concepts of young children aged 5 to 8: Their measurement and multi-dimensional structure. *Journal of Educational Psychology*, 83, 377-392.
- Mortimore, P., Sammons, P., Stoll, L., Lewis, D., y Ecob, R. (1988). *School matters: The junior years*. Somerset: Open Books.
- Muñoz-Repiso, M., Murillo, F.J., Barrio, R., Brioso, M.J., Hernández, M.L. & Pérez-Albo, M.J. (2000). *Investigación sobre Mejora de la Eficacia Escolar: un estudio de casos*. Madrid: CIDE.
- Murillo, F.J. (Coord.) (2003). *La investigación sobre Eficacia Escolar en Iberoamérica. Revisión internacional del estado del arte*. Bogotá: Convenio Andrés Bello.
- Murillo, F.J. (2005). *La investigación sobre eficacia escolar*. Barcelona: Octaedro.
- Murillo, F.J. (2007). School Effectiveness Research in Latin America. En T. Townsend (Ed.), *International Handbook of School Effectiveness and Improvement* (pp. 75-92). New York: Springer.
- Murillo, F.J. & Román, M. (2011). School infrastructure and resources do matter. Analysis of the incidence of school resources on the performance of Latin American students. *School Effectiveness and School Improvement*, 22(1), 29-50.
- Opendakker, M.C. & Van Damme, J. (2000). Effects of schools, teaching staff and classes on achievement and well-being in secondary education: similarities and differences between school outcomes. *School Effectiveness and School Improvement*, 11, 165-196.
- Pascual, R., Villa, A. & Auzmendi, E. (1993). *El liderazgo transformacional en los centros docentes*. Bilbao: Mensajero.
- Purkey, W.W. & Cage, B.N. (1973). The Florida Key: A scale to infer learner self-concept. *Educational and Psychological Measurement*, 23, 979-984.
- Purkey, S.C. & Smith, M.S. (1983). Effective schools: a review. *Elementary School Journal*, 4, 427-452.
- Raczynski, D. y Muñoz, G. (2005). *Efectividad escolar y cambio educativo en condiciones de pobreza en Chile*. Santiago de Chile: Ministerio de Educación.
- Reynolds, D. & Teddlie, C. (2000). *The International Handbook of School Effectiveness Research*. London: Falmer Press.
- Rutter, M., Mortimore, P., Ouston, J. & Maughan, B. (1979). *Fifteen thousand hours*. London: Open Books.
- Samdal, O., Wold, B. & Bronis, M. (1999). Relationship between student's perceptions of school environment, their satisfaction with school and perceived academic achievement: an international study. *School Effectiveness and School Improvement*, 10, 296-320.
- Sammons, P. (2007). *School Effectiveness and Equity: Making connections*. Reading: CfBT.
- Sammons, P., Hillman, J. & Mortimore, P. (1995). *Key characteristics of effective schools: a review of school effectiveness research*. London: OFSTED.
- Scheerens, J. & Bosker, R.J. (1997). *The foundations of educational effectiveness*. Oxford: Pergamon.
- Seligman M.P. & Csikszentmihalyi, M. (2000). Positive psychology. *American Psychologist*, 55, 5-14.
- Smyth, E. (1999). *Do Schools Differ? Academic and Personal Development among Pupils in the Second -Level Sector*. Dublin: Economic & Social research Council.

Thomas, S., Smees, R., Sammons, P. & Mortimore, P. (2001). Attainment, Progress and Added Value. En J. MacBeath & P. Mortimore (Eds.), *Improving School Effectiveness* (pp. 51-73). Buckingham: Open University Press.

Townsend, T. (Ed.) (2007). *International Handbook of School Effectiveness and Improvement*. New York: Springer.

Tymms, P. (2001). A test of the big fish in a little pond hypothesis: an investigation into the feelings of seven-year-old pupils in schools. *School Effectiveness and School Improvement*, 12, 161-181.

Van Petegem, K., Creemers, B.M.P., Aelterman, A. & Rosseel, Y. (2008). The importance of pre-measurements of wellbeing and achievement for students' current wellbeing. *South African Journal of Education*, 28, 451-468.

Villa, A. & Villar, L.M. (Coords.) (1992). *Clima organizativo y de aula. Teorías, modelos e instrumentos de medida*. Vitoria/Gasteiz: Gobierno Vasco, Servicio Central de Publicaciones.

Willms, D. & Somers, M.A. (2001). Family, classroom, and school effects on children's educational outcomes in Latin America. *School Effectiveness and School Improvement*, 12(4), 409-445.

---

### Notes

Research financed by Convenio Andrés Bello, international cooperation organism formed by: Bolivia, Chile, Colombia, Cuba, Ecuador, España, México, Panamá, Paraguay, Perú, República Dominicana and Venezuela.

---

### ABOUT THE AUTHORS / SOBRE LOS AUTORES

**Murillo, F. Javier** ([javier.murillo@uam.es](mailto:javier.murillo@uam.es)). Profesor titular del Área de Métodos de Investigación y Diagnóstico en Educación de la [Universidad Autónoma de Madrid](#). Fue Coordinador General del [Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación](#) (LLECE), de la UNESCO, y Director de Estudios del [Centro de Investigación y Documentación Educativa](#), (CIDE) Ministerio de Educación de España. Es Coordinador de la [Red Iberoamericana de Investigación sobre Cambio y Eficacia Escolar \(RINACE\)](#), Director de la [Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación \(REICE\)](#); y co-director de la [Revista Iberoamericana de Evaluación Educativa](#). Ha trabajado como consultor experto en Investigación y Evaluación Educativas en diferentes países de América Latina, y con distintas agencias internacionales - UNESCO, OCDE y Convenio Andrés Bello-. Su dirección postal es: Facultad de Formación de Profesorado y Educación. Universidad Autónoma de Madrid. Avda. Tomás y Valiente. Campus de Cantoblanco. Crta. de Colmenar Viejo Km. 15500. 28049 Madrid. [Buscar otros artículos de este autor en Scholar Google / Find other articles by this author in Scholar Google](#)



**Hernández-Castilla, Reyes** ([reyes.hernandez@uam.es](mailto:reyes.hernandez@uam.es)). Profesora Contratada Doctora de Métodos de Investigación y Diagnóstico en Educación, [Universidad Autónoma de Madrid](#). Coordinadora del Máster Oficial en Calidad y Mejora de la Educación. Ha sido coordinadora de estudios de evaluación de carácter internacional como el TIMSS y el IAEP. Directora de estudios de la empresa DATAGRUPAL, dedicada a Evaluación e Investigación en Educación (Ministerio de Educación y la Consejería de Educación Comunidad de Madrid, Instituto Nacional de Calidad y Evaluación, del Programa de Nuevas Tecnologías). Miembro del grupo de Investigación Cambio Educativo para la Justicia Social. GICE\_UAM. Codirectora de la Revista Internacional de Educación para la Justicia Social. RIEJS. La autora de contacto para este artículo. Su dirección postal: Facultad de Formación de Profesorado y Educación. Universidad Autónoma de Madrid. Avda. Tomás y Valiente. Campus de Cantoblanco. Crta. de Colmenar Viejo Km. 15500. 28049 Madrid. [Buscar otros artículos de esta autora en Scholar Google / Find other articles by this author in Scholar Google](#)



## ARTICLE RECORD / FICHA DEL ARTÍCULO

<b>Reference / Referencia</b>	Murillo, F. Javier & Hernández-Castilla, Reyes (2011). School factors associated with socio-emotional development in Latin American Countries. <i>RELIEVE</i> , v. 17, n. 2, art. 2. <a href="http://www.uv.es/RELIEVE/v17n2/RELIEVEv17n2_2eng.htm">http://www.uv.es/RELIEVE/v17n2/RELIEVEv17n2_2eng.htm</a>
<b>Title / Título</b>	<i>School factors associated with socio-emotional development in Latin American Countries.</i> [Factores escolares asociados al desarrollo socio-afectivo en Iberoamérica].
<b>Authors / Autores</b>	Murillo, F.Javier & Hernández-Castilla, Reyes
<b>Review / Revista</b>	RELIEVE (Revista ELectrónica de Investigación y EValuación Educativa), v. 17, n. 2
<b>ISSN</b>	1134-4032
<b>Publication date / Fecha de publicación</b>	2011 ( <b>Reception Date:</b> 2011 June 15 ; <b>Approval Date:</b> 2011 September 13. <b>Publication Date:</b> 2011 September 13).
<b>Abstract / Resumen</b>	<p><i>We present the results of an international research that intends to identify key factors associated with school and classroom socio-emotional achievement of Primary Education Students in Latin America countries. This Multilevel Study has been conducted with 4 analysis levels; we studied 5,603 students from 248 classrooms from 98 schools in 9 countries. We worked with 4 product socio-affective variables (self-concept, academic behaviour, social interaction and satisfaction with the school). The results showed a series of classroom and school factors that explain the socio-emotional development, consistent with those found in research on school effectiveness to cognitive factors.</i></p> <p>Se presentan los resultados de una investigación internacional que pretende identificar los factores de escuela y de aula asociados al logro socio-afectivo de los estudiantes de Educación Primaria en Iberoamérica. Se realizó un estudio Multinivel con 4 niveles de análisis, se analizaron 5.603 alumnos de 248 aulas correspondientes a 98 escuelas de 9 países. Se trabajó con cuatro variables de producto socio-afectivo (Autoconcepto, Comportamiento académico, Convivencia social y Satisfacción con la escuela). Los resultados arrojaron una serie de factores de aula y escuela que explican el desarrollo socio-afectivo, coherentes con los hallados en la investigación sobre eficacia escolar con factores cognitivos.</p>
<b>Keywords / Descriptores</b>	<i>School Effectiveness, Socio-emotional factors, Education Quality, Latin America.</i> Eficacia Escolar, Factores Socio-afectivos, Calidad de la Educación, Iberoamérica
<b>Institution / Institución</b>	Facultad de formación del profesorado y educación. Universidad Autónoma de Madrid (España).
<b>Publication site / Dirección</b>	<a href="http://www.uv.es/RELIEVE">http://www.uv.es/RELIEVE</a>
<b>Language / Idioma</b>	Español e Inglés (Title, abstract and keywords in English & Spanish)

## RELIEVE

**Revista ELectrónica de Investigación y EValuación Educativa**  
*E-Journal of Educational Research, Assessment and Evaluation*

[ISSN: 1134-4032]

- © Copyright, RELIEVE. Reproduction and distribution of this articles it is authorized if the content is no modified and their origin is indicated (RELIEVE Journal, volume, number and electronic address of the document).  
 © Copyright, RELIEVE. Se autoriza la reproducción y distribución de este artículo siempre que no se modifique el contenido y se indique su origen (RELIEVE, volumen, número y dirección electrónica del documento).