

## Effectiveness of Inclusive Educational Treatment of Diversity

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**Abstract**  
**(100 words)**

This article describes the background and typical findings of an empirical study on core aspects of the implementation of educational treatment of diversity in inclusive or integrated contexts, on the methodological approach to a successful inclusive or integrated educational treatment of diversity and on how to implement inclusion with gifted students and with those proceeding from cultures different from the host ones. The collected and processed empirical data are based on information offered by involved people, mainly teachers, who filled in a questionnaire scale, and on the analysis of interviews to those who previously had answered this instrument.

The research offered here tries to offer detected attitudes, possibilities and advantages of educational treatment of pupils' and students' diversity in inclusive contexts that will allow for the particular treatment of all their personal educational needs. It also tries to discover requirements that define a successful educational treatment of diversity in inclusive contexts. To such purpose, the following core aspects are considered:

- Attitudes towards inclusion or integration of educational treatment of diversity;
- Requisites for an inclusive educational treatment of diversity;
- Organizational profiles of institutions assuming inclusion;
- Educational action accommodated to diversity in inclusive contexts.

**Key words**

Diversity, ordinary centres, specific centres, inclusion, integration, types of integration, diversity of different cultures, gifted students' educational treatment, attitudes towards inclusion or integration

## 1. Background

According to Snell (1998, p. 78), "inclusion means that students with deficiencies attend schools of their surroundings and individualized accommodation, curriculum adaptations and some other helps accompany such students within ordinary classrooms and in all the school activities (dining room, transport, meetings and others)" But the challenges of inclusive education demand well prepared teachers with positive attitudes towards the aims of integration, with a profound knowledge about the necessities and possibilities of integration or inclusion, and able to cope with the intricacy to implement it" (Thomas, Walker & Webb, 1998; Gento, 2002). These goals are promoted by the UNED (Universidad Nacional de Educación a Distancia, Madrid) that offers an international Joint Master course on "Educational Treatment of Diversity" (Conference of European Ministers Responsible for Higher Education, 2005, II, paragraph 8) As part of their methodological training, the participants in this course have to administer a questionnaire assessing the opinions and attitudes of people as regards the educational approach of inclusion (Hammersley, 1996; Newman & Benz, 1998). Afterwards each of the students has to interview one person ready to offer relevant information on the issue of inclusive education, who previously had filled in the questionnaire.

## 2. Sample, instruments and methods

A questionnaire was administered to more than 8000 parents, students, teachers, school administrators and experts in special education in Spain. The quantitative questionnaire results can be complemented by the results of a computer-supported qualitative analysis of 50 interviews with teachers available for analysis at the present time.

For the comparison of quantitative and qualitative data, we selected the questionnaire data of about 4000 teachers from the pool of over 8000 respondents (Gómez López, 2003). Table I shows the numbers of teachers and their type of school in our sample.

<i>Teachers</i>	<i>N</i>
of ordinary centres of Infant Education	869
of ordinary centres of Primary Education	2088
of ordinary centres of Obligatory/Lower Secondary Ed.	971
of Baccalaureate/Higher Secondary Education	106
of Vocational Education	98
of Special Education (with segregated pupils with sn)	67

Table I: Sub-samples of teachers

Participants were offered a five-point scale to mark the questionnaire answers to the various items. The meanings of these marks were defined as:

- 1 – never (for instance: attitude towards integration is *never* favourable.)
- 2 – scarcely
- 3 – frequently
- 4 – almost always
- 5 – always (for instance: attitude towards integration is *always* favourable.)

Since the interviews were semi-structured by a guideline following the main topics of the questionnaire, the design allows to differentiate the questionnaire results (Florian & Rouse, 2004; Lipski & Gartner, 1991; O'Brien, 2001; Salend, Garrick & Duhaney, 1999) in terms of frequency information by more profound information about the following seven main themes:

- Attitudes towards educational inclusion;
- Possibilities of inclusion;
- Suitable types of integration;
- Advantages of educational inclusion;
- Possibilities and requirements to improve inclusion;
- Educational treatment of students of different cultures (immigrants);
- Gifted students' educational treatment of.

This methodological approach reverses the usual sequence of qualitative and quantitative components in the design of empirical social studies, that is, here a representative quantitative study with a small-scale is followed by a qualitative study of interviews and case centred. Thus the interview data:

- Offer differentiating information that helps to better understand and interpret the meaning of the rating and frequency findings from the questionnaire data;
- The findings from the interviews supply new aspects of educational inclusion from the interviewees' point of view. These interesting issues were not covered initially by the questionnaire items, because they were either not foreseen during item construction or they were not included due to the inevitable limitations of questionnaire space and reasonable work load, i.e. respondents' time for filling in the items;
- In addition, in the interview situation the respondents were free to clearly point out inter-relations between the main themes, that is to express how their opinion as regards one particular aspect depends on the actual state of affairs in other areas of the educational domain, whereas the questionnaire format limits them to rate the item statements as they are and in the given order.

### 3. Results

The presentation of results shows the respondents' opinions about the main themes of the interview ordered into categories and compares these findings to the results from the questionnaire analysis. The focus is on the additional value of qualitative data determined by the deepening design described above. Thus, we receive information not only as regards the rating of critical issues, for instance positive or negative attitudes of teachers towards inclusive information,

but additional description of the nature of these attitudes and reasons for them. These aspects are of particular importance for future teacher's training and interventions in inclusive school settings (Pearmen, Huang, Barnhart & Melblom, 1992; Parrilla, 1992, 1997).

### 3.1 Attitudes towards educational inclusion

#### 3.1.1 Questionnaire results

In table II we see the questionnaire items together with the arithmetic means and standard deviations of the teachers' answers. We describe the attitudinal tendencies visible in these findings, but refrain from any tests of statistical significance, because with a sample of 4000 respondents almost any difference will be statistically significant. Instead, we concentrate on interpreting the meaning of these results.

Attitudes of	Arithmetic mean	Standard deviation
<i>Student's parents</i>		
without special needs	3,06	.937
with special needs	4,18	.810
<i>Pupils/students</i>		
without special needs	3,42	.954
with special needs	4,06	.823
<i>Teachers</i>		
of ordinary centres of Infant (Preschool) Education	3,87	.851
of ordinary centres of Primary Education	3,78	.860
of ordinary centres of Obligatory/Lower Secondary Ed.	3,13	.957
of Baccalaureate/Higher Secondary Education	2,90	.995
of Vocational Education	3,17	.977
of Special Education (with segregated pupils with sn)	3,66	.989
<i>Specialists</i>		
in Therapeutic Pedagogy/Special Education	4,43	.706
Advisors	4,39	.745
Members of psycho-pedagogical teams	4,22	.800

Table II: Teachers' ratings of attitudes towards educational inclusion

It is obvious that respondent teachers answered that both the attitudes of parents of children with special educational needs (4.18) as well as the attitudes of students with special

needs (4.06) are more in favour of inclusion than both the attitudes of parents of children without special needs (3.06) and the attitudes of these children themselves (3.42).

The teachers in our sample attributed the most favourable attitudes, with lowest variations between the respondents, to the educational specialists: The arithmetic means range from 4.43 (Specialists in Therapeutic Pedagogy/Special Education) to 4.22 (members of psycho-pedagogical teams), the standard deviations of the ratings range between .706 and .800.

Most interesting is the decline of teachers' positive attitudes towards inclusion of children with special educational needs with increasing age of their students and correspondingly growing curricular demands (see figure 1). Whereas pre-school teachers (3.87) are seen to be most in favour of educational inclusion, teachers on the second level of secondary education (2.90) are on the average below "frequent" (i.e. rating score 3) positive attitudes towards educational inclusion (See Agencia Europea para el Desarrollo de la Educación Especial, 2005). The picture is different for teachers of vocational schools (3.17) and teachers of centres of special education (3.66).

These differences remain almost stable, if we calculate the average ratings separately for the different sub-samples of teachers. There are two exceptions:

- Teachers of Secondary Education II rate their attitudes (3.38) and the attitudes of their colleagues in Secondary Education I (3.37) more positively than their attitudes are rated by all the teachers together;
- Teachers of Special Education generally rate the attitudes of teachers towards inclusion on a higher level.

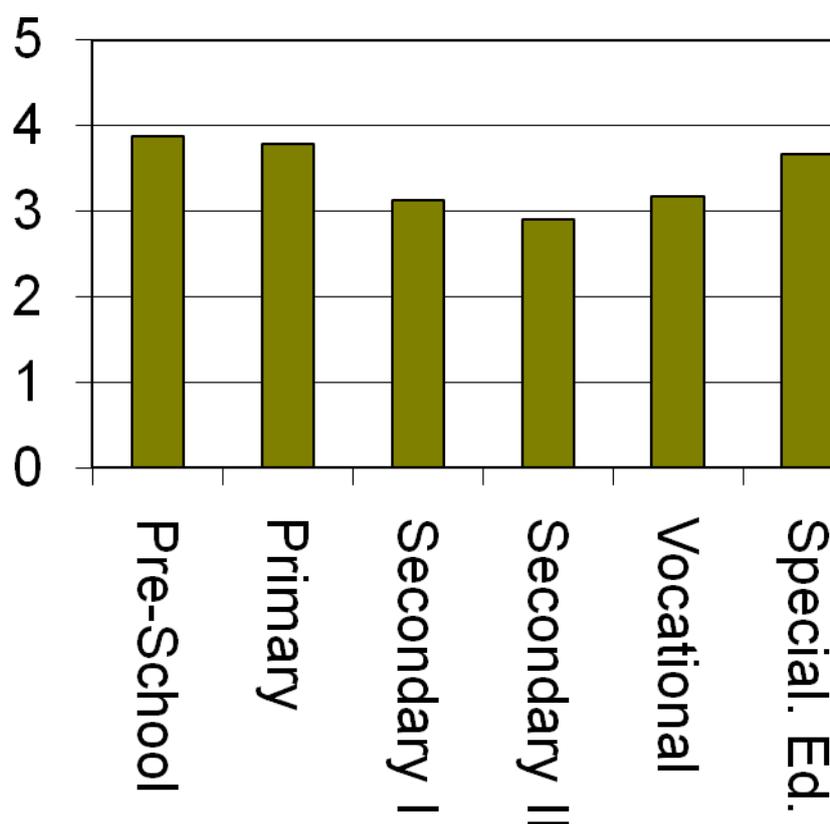


Fig. 1: Attitudes of teachers towards educational inclusion  
(all teachers' ratings)

### 3.1.2 Interview results

According to the general level of positive attitudes towards educational inclusion, the majority of answers to the first thematic part of the interview expresses strong beliefs in the necessity and adequacy of integration and inclusion of students with special needs in the classrooms of regular school centres. Typical statements are:

- Inclusion corresponds to democratic and constitutional principles;
- Inclusion is the adequate answer to diversity;
- In a society of equals, inclusion or integration must be the trademark;
- Inclusion is positive; all discriminative and segregationist concepts have to be eliminated to progress towards equality of opportunities;
- Inclusion rises the quality of education;
- Inclusion is a good idea.

However, the ratings in figure 1 all stay below the 4-point line on the 5-point scale, and statements like the last one imply that there may be differences between teachers' theoretical principles and practical actions in the classroom (Correa Piñero & Camacho, 1993; Gómez

López, 2003; Rodgiro, 1993). Therefore, the answers expressing some doubts in educational inclusion or formulating necessary conditions for the implementation of inclusion in schools are highly interesting.

These answers may explain the resistance of part of the teachers against inclusion of children with special educational needs in regular schools and classrooms. Additionally, these answers may show the direction towards how to overcome doubts and hesitation of teachers as regards educational inclusion.

Let us first study expressions of negative attitudes, then look for conditions that could promote inclusion in classrooms. Expressed negative attitudes were of the type of:

- Special school centers are a better solution:  
In Secondary Schools there is still a group of people who think that students with special educational needs should be in special centers.  
Inclusion slows down the rythm of learning.
- You need so much effort and a numerous staff to achieve just meager results:  
Many agree with the idea of inclusion, but act against it in the hour of truth.  
Many teachers feel alarmed if they experience that inclusion may be implemented in their classrooms.
- Integration is based only on a feeling of sympathy:  
There is a hidden attitude among teachers not to accept, in regular classrooms, inclusion of students with special educational needs;  
There are even teachers who oppose inclusion.
- Teachers understand inclusion or integration as a burden imposed by Administrative authorities;  
The educational system favors inclusion;  
The administration decided in favour of inclusion.
- Teachers avoid responsibilities because of lack of training.

Four reasons for lower ratings in the questionnaire become obvious in these statements:

- Many teachers are used to delegate the responsibility for children with special needs to specialized school centers;
- The incidence of educational efforts on achievement seems to be poor;
- There is hidden resistance among teachers against regulations imposed, by the authorities, without teachers' participation;
- Teachers do not feel trained and equipped enough to fulfill the demands of an integrated or nclusive classroom. This last argument against inclusion is expressed very differentiatedly in many statements that formulate conditions for a change of teachers' detached attitudes:

Conditions for an attitude change expressed by interviewed teachers are of the type of:

- My attitude is in favor of inclusion, although there are serious deficits, as the lack of resources;
- My attitude is positive, but it depends on the particular needs of the students;
- I have a positive attitude, but there are children whom you cannot integrate or include in regular classrooms because there are no resources;
- I try to care as much as I can, but I often have to chose between putting the group on the tracks and be occupied with these students -what I usually prefer-.
- The attitudes of teachers, parents, and students without special needs never is negative, but their grade of acceptance varies;
- Parents generally react quite well if they are informed about the inclusion project;
- The attitude depends on the training teachers have received;
- The attitude depends on the students' age -inclusion is easier in pre school and primary school-.
- The teachers could improve their attitudes and change their false beliefs, which they have about the difficulties of having a child with special needs in their classroom;
- Teachers' lack of training and information about students with special needs plays an important role;
- Cooperation of special teachers has improved the attitude towards inclusion;
- Teachers have to be really convinced.

The interviewees made the problems of educational inclusion and its acceptance quite clear: schools implementing educational inclusion need more resources than segregated schools - both material and personal resources-. Teachers must not be let on their own with the organizational difficulties to care for the needs of every student in their classrooms. Otherwise they feel forced to distribute their limited resources unequally between different groups of students ("I often have to chose between putting the group on the tracks") and may reject the "good idea".

Above all, teachers (as well as parents and students) must be well informed and prepared for the demands of inclusive classrooms. A major aspect of this preparation should be to create opportunities for them to actively participate in the process of implementation of educational inclusion at their schools and in their classrooms. Administration seems too often to follow the accustomed top-down line of "reforms" and to forget that it is best if those people, who finally have to carry out the decisions, are included and may participate in the process of decision-making. In other words: approaches to educational inclusion should not exclude the teachers.

Resuming the findings, we see in the answers of these teachers a perfect representation of the theoretical structure of the psychological construct of "attitudes": There are cognitive, affective, and behavioral components, which must not necessarily appear in harmony with each other. The main task in teacher training for inclusive education would be to detect attitudinal discrepancies and try to resolve them (Dendra, Durán y Verdugo, 1991; García, García, García y Rodrigo, 1992; Palacios, 1987).

## **3.2 Possibilities of inclusion**

### *3.2.1 Questionnaire results*

In the questionnaire the teachers were asked to mark their opinion about the possibilities of inclusion for various types of special educational needs under the item headline: "Students with special needs must be educated in an integrated and inclusive way, when they show needs of the following types (...)". The types of difficulties and needs then listed were:

- Intellectual;
- visual;
- of hearing;
- of motion;
- of behavior;
- socio-familiar.

In each one of these cases teachers had to give separate answers for "*light*," "*medium*," and "*profound*" difficulties, i.e. they had to mark whether inclusion was in every one of the mentioned types: never possible, scarcely, frequently, almost always or always possible (see above). The obtained results are listed in table III:

Type	Arith. mean	SD
<i>2.1.- Intellectual</i>		
2.1.1.- light	4.58	.751
2.1.2.- medium	3.90	.986
2.1.3.- profound	2.44	1.203
<i>2.2.- Of vision</i>		
2.2.1.- light	4.60	.756
2.2.2.- medium	4.20	.980
2.2.3.- profound	3.36	1.394
<i>2.3.- Of hearing</i>		
2.3.1.- light	4.60	.755
2.3.2.- medium	4.19	.960
2.3.3.- profound	3.34	1.371
<i>2.4.- Of movement</i>		
2.4.1.- light	4.60	.754
2.4.2.- medium	4.28	.910
2.4.2.- profound	3.51	1.351
<i>2.5.- Of behaviour</i>		
2.5.1.- light	4.37	.896
2.5.2.- medium	3.64	1.086
2.5.2.- profound	2.66	1.333
<i>2.6.- Socio-familiar deficiencies</i>		
2.6.1.- light	4.61	.777
2.6.2.- medium	4.40	.887
2.6.2.- profound	3.98	1.212

Table III: Teachers' ratings of possibilities of educational inclusion

According to data offered on table 3, the tendency is obvious: the more severe the students' special educational needs of any kind are, the less possible seems their inclusion in non-segregating classrooms. Considering the lack of supporting conditions that teachers complain about (see 3.1.2 above), this rating is no surprise. Figure 2 gives an overview:

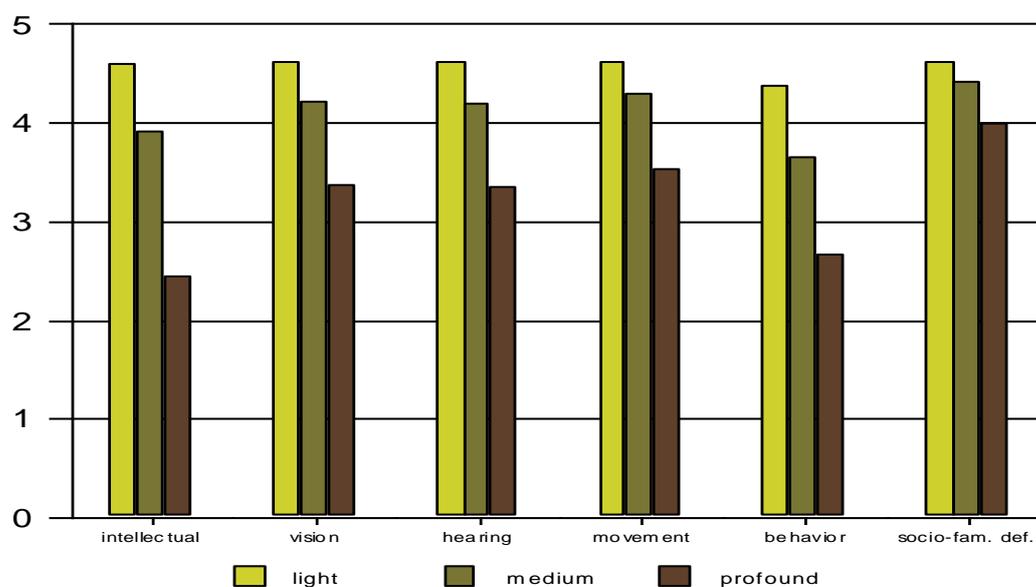


Fig. 2: Teachers' ratings of the possibilities of inclusive education

### 3.2.2 Interview results

The interview data strongly confirm the teachers' point of view that the possibility of integration or inclusion is declining with the seriousness of children's special needs. In 50 interviews we found 26 formulations saying that "inclusion is possible with all kinds of special needs, always under the condition that these needs are not too profound." However, ten interviewees particularly expressed that "inclusion of children with severe special educational needs of the intellectual type is not recommended," and five teachers expressed their opinion that "hyperactive students" and those with "character problems" are "most difficult" and their "inclusion should be discussed".

As already said, teachers miss training, resources, and support that would make easier their work in integrated or inclusive classrooms. When talking about the possibilities of inclusion, they nevertheless underline the significance of this approach: "Inclusion prepares all students for a true social integration"; but they also refer to the conditions necessary for this purpose. Subsequently we quote only those conditions mentioned more than once in the interviews (frequency numbers in parenthesis). This list seems to be highly important for the implementation of inclusion in schools:

- Inclusion demands teacher's training (11);
- What is needed is the help of psycho-pedagogical specialists in decisions about the type of schooling, both for school centers and for teachers involved in inclusion programs (11);
- School centers should have those personal, material, and organizational resources at their disposal, which are necessary to effectively implement the inclusion of students with

- special educational needs (10);
- Adequate organization and planning are necessary (5);
- Curricular adaptations are necessary (4);
- The students/teacher ratio must be reduced so that teachers be able to suitably treat students with special educational needs in inclusive classrooms (4).

### 3.3 Suitable types of integration

#### 3.3.1 Questionnaire results

In four items the teachers had to rate the appropriateness of four types of integration mentioned here:

- All the time in ordinary classroom assisted by ordinary teacher and by specialists of support (full integration or inclusion);
- Most of the time in ordinary classroom and some time in a segregated classroom assisted by specialists of support (partial integration);
- All the time in a segregated classroom (assisted by specialists) in the same ordinary center;
- Part-time in ordinary classroom of ordinary centers and part of the time in segregated specific centers.

Table IV shows a clear preference for types 1 and 2 of integration, i.e. full integration of students with special educational needs or a combination of inclusive classrooms with, and at some occasions, teaching/learning in separate classrooms.

Type of inclusion	Arith. Mean	SD
(1) Full integration or inclusion	3.63	1.165
(2) Partial integration	3.89	.967
(3) Segregated classrooms	2.24	1.031
(4) Combination of school centers	2.36	1.051

Table IV: Teachers' rating of suitable types of integration

#### 3.3.2 Interview results

When talking about adequate types of inclusion, 21 of 50 interviewed teachers confirm again that "total inclusion is the ideal situation," particularly because "inclusion promotes social integration." They explain, for instance, that "education in special centers should be an exception only for those students who cannot be in ordinary centers." However, they also mention a number of obstacles (see above), which have to be cleared away. Above all, teacher training must be offered, teachers need time for preparation, and they need support by psycho-pedagogues or other specialists. One interviewee demands that "the regular teacher and the specialist must be

together in the classroom." For eight teachers partial inclusion is the preferred type because , for instance, it "can give answer to a large number of problems".

It may be concluded from the answers to the preceding question (cf. 3.2), that total segregation in specialized school centers is preferred as most suitable type of schooling in cases of students with severe special needs: five teachers express this opinion explicitly. The answers generally confirm that the teachers assign students with special educational needs to various types of schooling according to the severity of their needs:

- Students with mild levels of deficiencies should be integrated in regular school centers;
- Students with medium levels of educational needs are also well placed in regular centers under the condition that adequate resources be available;
- For students with profound needs most teachers recommend a combination of ordinary centers and special centers.

Summarizing, we find a majority of approving opinions as regards total educational inclusion and in severe cases partial inclusion of students with special educational needs. However, the teachers also indirectly criticized in the context of this question the conditions of teaching in inclusive classrooms or formulated their demands for better pedagogical-didactic conditions.

### **3.4 Advantages of educational inclusion**

#### *3.4.1 Questionnaire results*

The questionnaire listed a series of potential advantages of educational inclusion and asked the teachers to rate advantages of educational inclusion for students with special needs (see table Va), for students without special needs (see table Vb), and for the functioning of the school center (see table Vc).

Advantages for pupils/students with special needs	Arith. Mean	SD
4.1.1.- They are accepted by society in general	3.73	.968
4.1.2.- They are accepted by part of the community where the center is situated	4.00	.842
4.1.3.- They are accepted by pupils without special needs	3.75	.938
4.1.4.- They are accepted by parents of pupils without special necessities	3.51	.981
4.1.5.- They are better accepted by their own parents	4.09	.917
4.1.6.- Their emotional development improves	4.14	.851
4.1.7.- Their intellectual development improves	3.73	1.021
4.1.8.- Their academic or school performance improves	3.59	1.030
4.1.9.- Their social development improves	4.13	.854

Table Va: Advantages of educational inclusion for students with special needs

According to the quantitative findings, the teachers see the greatest potential of inclusive education for students with special needs in the areas of social and emotional development and of social acceptance by their own parents and in their community, whereas the probability of improved academic achievement and intellectual development is seen somewhat less positive.

Advantages for pupils/students without special needs	Arith. Mean	SD
4.2.1.- Their social development improves	4.10	.914
4.2.2.- Their emotional development improves	4.07	.922
4.2.3.- Their behaviour improves	3.63	1.042
4.2.4.- Their intellectual development improves	3.10	1.114
4.2.5.- Their academic or school performance improves	2.92	1.101

Table Vb: Advantages of educational inclusion for students without special needs

The picture is the same for students without special educational needs in inclusive classrooms: teachers see the advantages of living and learning in inclusive classrooms for students without special needs in the areas of social and emotional development. More differentiated opinions will be seen below in the analysis of the interview answers.

Advantages for the center's functioning	arith. Mean	SD
4.3.1.- The professionalism of teachers improves	3.80	1.089
4.3.2.- The organization and the planning improve	3.46	1.115
4.3.3.- The use of spaces improves	3.47	1.114
4.3.4.- The use of didactic materials improves	3.72	1.090
4.3.5.- All pupils' evaluations improve	3.37	1.125

Table Vc: Advantages of educational inclusion for the functioning of the school center

All ratings range between "frequent" (3) and "almost always" (4): i.e. teachers expect that there are inclusion projects which do not affect positively the school center functioning. We will hear about their doubts in the analysis of their interviews.

### 3.4.2 Interview results

General advantages of inclusion the teachers mentioned are the following ones (frequency in parenthesis):

- Development of attitudes like tolerance, respect, mutual help (4);
- Higher acceptance of individual differences (4);
- People becoming accustomed to living together (3);
- Development and personal enrichment of life (2);
- Teaching to respect and accept individual differences (2);

Asked to think about advantages of inclusive education for students with special needs, the teachers mentioned above all those included next (frequencies in parenthesis):

- Promotion of social development and socialization (19);
- Improvement of self-esteem (5);
- Improvement of academic achievement (5);
- Better acceptance by society (4);
- Better interaction with peers (4);
- Promotion of affective-emotional development (4);
- Promotion of cognitive development (3);
- Promotion of intellectual development (3);
- Relationship with people without deficiencies (2);
- Development in a regular environment (2);
- Better acceptance by parents of children without special needs and by teachers (2);
- Better acceptance by other students without special needs (2);
- Adaptation to the reality (2);
- Promotion of autonomy (2).

Among the advantages for children with special needs only once mentioned in the interviews, the following seem to be the most important ones:

- Improvement of motivation and positive attitude towards school;
- Availability of positive models for imitation.

As advantages of inclusive education for students without special needs, the teachers, above all, talked (frequencies in parenthesis) about:

- Development of positive attitudes of solidarity, help, cooperation, etc. (11);
- Improvement of the development of respect, understanding, and tolerance (6);
- Acceptance and positive estimation of differences (4);
- Improvement of social development (3);
- Positive evaluation of social well-being (2);
- Benefits from support for classrooms with students with special needs (2);

As advantages of educational inclusion for the functioning of the school center the teachers mentioned the ones included next (frequencies in parenthesis):

- Improvement of human and personal resources (11);
- Support and enrichment of teacher's training (9);
- Better coordination among teachers (5);
- Application of new methods and teaching strategies (3);
- Rejuvenation of organizational, functional, and pedagogical components (2);
- Professional satisfaction for teachers (2);
- Improvement of social relations and cohesion within the center, which leads to better organizational functioning (2).

### **3.5 Possibilities of inclusion improvement**

#### *3.5.1 Questionnaire results*

The questionnaire offered five groups of items to rate various aspects on how to improve the inclusive educational treatment of diversity in classrooms (Ainscow, 2001). The general statements for these item groups were the following ones:

- Integration and inclusion will improve with the necessary material resources;
- Integration and inclusion will improve with suitable personal resources;
- Integration and inclusion will improve with the use of appropriate methodology;
- Integration and inclusion will improve as a consequence of more positive attitudes of the involved groups;
- Integration and inclusion will improve with suitable organization and planning.

The average ratings are demonstrated in the following tables VIa, VIb, VIc, VIId, and VIe:

Condition: material resources	Arith. Mean	SD
With less than 11 units of classes in the center	3.84	1.068
With adapted centers and classrooms without architectural barriers	4.55	.729
With facilities adapted to special needs	4.56	.705
With furniture adapted to special needs	4.57	.703
With didactic materials adapted to special needs	4.60	.703

Table VIa: Possibilities of improvement if material resources are available

While the number of integrated classrooms in a school center seems to be less important, teachers rate as extremely high the necessity of adequate material and architectonic conditions.

Condition: personal resources	Arith. Mean	SD
Teachers convinced of the opportunity of integration or inclusion	4.54	.765
Specialized personnel to support special needs	4.64	.646
Auxiliary personnel to help pupils with special needs	4.53	.754
Interventions by student's parents	4.10	1.027
Not more than two pupils or students with special needs per classroom	4.30	.912

Table VIb: Possibilities of improvement if adequate personal resources are available

Condition: appropriate methods	Arith. Mean	SD
Suitable diagnosis of pupils with special needs	4.59	.677
Acceptance that every pupil possesses knowledge to be taken as point of departure	4.43	.816
Pupils' environment and context used as bases to extend their knowledge	4.41	.804
Curriculum adaptations for pupils with special needs	4.50	.769
Pupils' activity	4.38	.808
Teachers working in teams (team teaching education)	4.45	.803
Pupils' participation during all phases of education and learning	4.23	.957
Collaborative learning	4.24	.908
Promotion of pupil's success	4.17	.951
Integral education of student's all personal dimensions	4.43	.814
Predominant use of formative evaluation	4.29	.856
Flexible timetable	4.05	1.037

Table VIc: Possibilities of improvement if appropriate methods are used

Condition: positive attitudes	Arith. Mean	SD
Of parents of pupils with special needs	4.48	.748
Of parents of pupils without special needs	4.36	.831
Of pupils with special needs	4.45	.784
Of pupils without special needs	4.40	.806
Of managing teams of educational centers	4.46	.783
Of ordinary teachers	4.37	.877
Of teachers specialist in Special Education	4.58	.701
Of other specialists (physiotherapists, assistants, etc.)	4.50	.761

Table VI*d*: Possibilities of improvement if relevant groups develop positive attitudes

Condition: organization and planning	Arith. Mean	SD
Information to parents of pupils without special needs	4.33	.871
Information to parents of pupils with special needs	4.48	.747
Information to pupils without special needs	4.31	.895
Information to pupils with special needs	4.34	.887
Information to the community where the center is located	4.30	.909
Personal assistance to students with special needs	4.59	.696
Adapted assistance in the classroom and center to pupils without special needs	4.37	.866
Collaborative planning of all the specialists and non-specialists	4.55	.734

Table VI*e*: Possibilities of improvement if there are adequate organization and planning

All conditions for the improvement of inclusive education listed in the questionnaire items are rated as highly relevant by the teachers. The average rating scores appear always in the range between "almost always" (4) and "always" (5), which means that teachers are convinced that the reality of inclusion will improve, with high probability, if the mentioned conditions are given.

### 3.5. Interview results

The situation for decision-making about steps to a better implementation of inclusive programs is, somewhat difficult, if the quantitative data show that all conditions are rated as almost equally relevant for an improvement of inclusion. Of course, the ideal solution would be to try to fulfill all necessary conditions at the same time. However, in the real world of education, resources are limited. Therefore, it would be helpful and interesting to find out which conditions seem to be most important for teachers.

In the interviews the teachers were not forced to react to a list of pre-defined possibilities, but could express their own concerns as regards the possibilities of improvement. The frequency of teachers' typical answers to the question on how to improve inclusion can serve as a guideline to decisions about the order of necessary changes and improvements. Subsequently, we list the conditions mentioned by our interviewees (table VII) and show them in the graphical representation of a Pareto diagram (figure 3).

No.	Condition of improvement	Frequency
1	Material resources	22
2	Appropriate methods	18
3	Teacher training	15
4	Organization and planning	14
5	Personal resources	13
6	Teachers' attitudes	11
7	Attitudes of parents, students, others	9
8	Political and legislative conditions	8
9	Coordination	7
10	Participation	6
11	Optimization of available resources	2

Table VII: Most frequently mentioned conditions for the improvement of inclusion

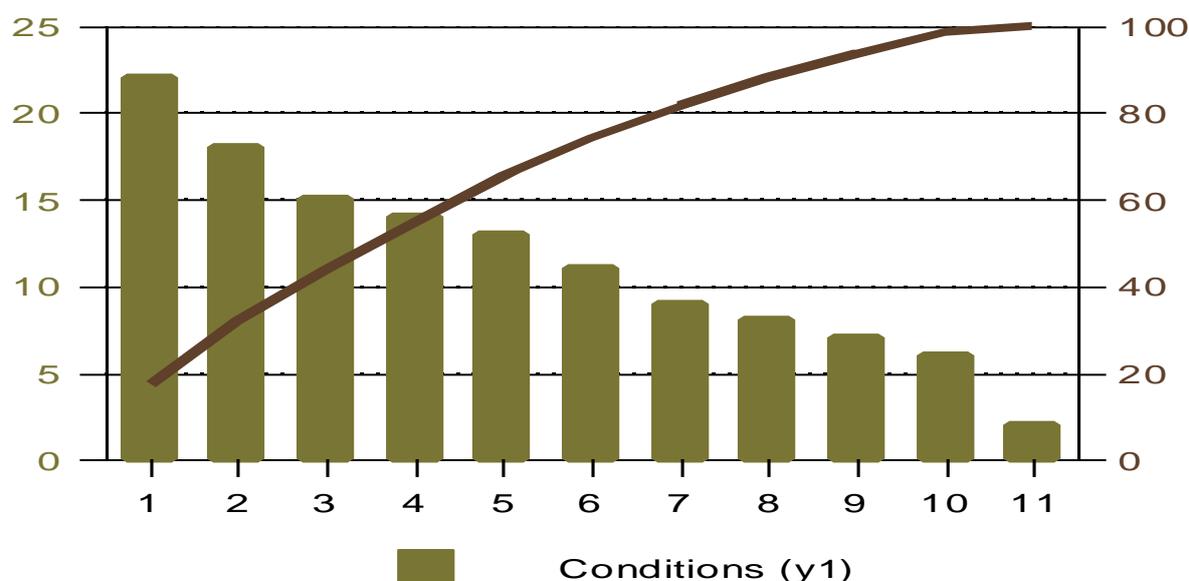


Figure 3: Pareto-Analysis of conditions of improvement

In figure 3 the 11 most frequently named possibilities and conditions on how to improve inclusive education are ordered according to their frequency. The left ordinate axis shows the raw frequencies, for instance, teachers talked about condition no.1 (material resources; see table VII) 22 times. The right ordinate axis shows the cumulative frequencies expressed in percent of altogether 125 statements. We can conclude from this graphic representation that about 75% or three quarters of all necessary conditions for the improvement of inclusion would be accomplished if the first six demands of teachers listed in table 7 were fulfilled. That is: sufficient material resources, application of appropriate methods, teacher's training for teaching in inclusive classrooms, better organization and planning in school centers, more staff -above all specialists-, and caring for the development of positive attitudes towards inclusive education would solve the majority of problems teachers complain about total integration or inclusion.

### 3.6 Educational treatment of students of different cultures

#### 3.6.1 Questionnaire results

In the questionnaire the teachers were asked to rate in which organizational form students of different cultures, i.e. immigrants, should be integrated into the host educational system. Table VIII shows the five possibilities offered and the teachers' average ratings:

Adequate school type	Arith. Mean	SD
In ordinary classrooms of ordinary centers with personalized support	4.27	.891
In segregated classrooms of ordinary centers	2.10	1.064
In totally segregated centers	1.59	.946
In transitory segregated classrooms (link or linguistic immersion classes) that prepare them to be integrated and included in ordinary classrooms	3.67	1.051
By elaborating "intercultural" contents of every culture, for all the pupils educated in ordinary classrooms	4.02	1.045

Table VIII: Ways of integration for students with various cultural backgrounds

The results show clear preferences. Teachers are in favour of having all students together in ordinary classrooms of ordinary school centers, but with personal resources that allow individual support of students with special needs. According to this preference, is the high rating of schools adopting an intercultural curriculum for all their students. Particularly in case of immigrant students' language problems teachers recommend "transitory segregated classrooms" for preparatory learning with the goal of later inclusion in regular classrooms. Segregated classrooms for children with different cultural background are seen as inadequate. Teachers expressed in their average rating of 1.59 that segregation contributes to social integration of these children somewhere between "never" and "scarcely."

#### 3.6.2 Interview results

The findings from the interviews confirm the general preference for inclusive education for all students and show interesting details: above all, they underline the necessity of preparing teachers and to provide school centers with adequate resources. A positive attitude towards integration of immigrant children is not sufficient for the success of inclusion programs.

Most frequently and in similar formulations, the interviewees expressed teachers' concern about those aspects of inclusion, which were also rated highest in the questionnaire, but now with including interesting proposals such as the following ones:

- Integration by means of activities of reception and acceptance (7):  
For instance, partly classrooms for reception of foreign students ("hospitality classrooms") within an ordinary center and part of the day with incorporation in their regular classroom within the same ordinary center;
- The curriculum should incorporate "intercultural contents" for all students at ordinary centers and cover specific aspects of every culture (5);
- Integration in their classroom in ordinary centers and individualized assistance (4);
- Implementing intermediate classrooms of transition, creating "connection" classrooms in all centers (4);
- By means of an assisting teacher for immigrants (2);
- Information to all parents (immigrants and non-immigrants) by means of parent schools where the goal is to learn about the existing social reality (2);
- Implementing the functions of student's tutors and mediating families (2).

The general opinion of teachers as regards the inclusion of students with different cultural background was appropriately summarized in the formulation: "*Primero compensar y luego integrar*" (compensate first and integrate afterwards). Compensation is perceived as necessary, primarily for language problems but also for the lack of general information about cultural dimensions and customs -both for immigrant and non immigrant parents and students-. A need to compensate for is also seen in deficits of teacher's training, curricular structures, time schedules for teaching and learning, and personal resources. All these problems solved, the implementation of inclusion of students with different cultural background does not bring up any questions.

Many of the teachers expressed, at this point of the interview, opinions about the linguistic aspects of immigrant students' inclusion. They formulated a series of suggestions on how to improve the process of integration or inclusion from the point of view of language problems:

- Teaching in classrooms of linguistic immersion (6);
- Initially, these children need classes of linguistic immersion to master the host language. Then, these students should progressively be incorporated into the activities of classrooms with their target group mates (3);
- They should be integrated in "wellcome" classrooms, where they learn Spanish as the vehicle of teaching/learning and preparation for their incorporation in regular classrooms. (3)
- In the case of pre-school and primary school, it is recommended that they are taught the language by the "wellcome" teacher. During the week, they should learn the language in a specific number of lessons; the rest of their itinerary they should be with their reference ordinary classroom (2).

### 3.7 Educational treatment of gifted students

#### 3.7.1 Questionnaire results

The questionnaire asked about how the educational treatment of gifted students should be implemented and offered in five items alternatives, which the respondents rated as it is shown in table IX.

Educational treatment	Arith. Mean	SD
In ordinary classrooms and centers with personalized support	4.32	.872
In ordinary classrooms and centers with acceleration programs	3.89	1.065
In ordinary classrooms and centers with enrichment programs	4.29	.839
In segregated classrooms of ordinary centers	1.96	1.081
In totally segregated classrooms and centers	1.57	.926

Table IX: Educational treatment of gifted students

The teachers' ratings clearly express a favoritism towards inclusion also of gifted students. However, successful integration is again seen as depending on critical conditions like individualized support, programs of curricular enrichment or acceleration programs. Segregation of gifted students in specialized classrooms ("scarcely" successful) or even specialized centers (between "never" and "scarcely" successful) is on the average rejected.

#### 3.7.2 Interview results

Within the answers to the interview question about the educational treatment of gifted students, we found 86 different suggestions, which we grouped into 11 categories. These categories and their frequencies are shown in table X:

No.	Suggestions	Frequency
1	Adaption of curriculum	25
2	Integration in regular classrooms	17
3	Early diagnosis	11
4	Positive attitudes of teachers	7
5	Effects on the socio-emotional dimension	6
6	Segregation	6
7	Acceleration	5
8	Effects on the personal dimension	5
9	Teacher's training	2
10	Parents' participation/involvement	1
11	Vague formulations	1

Table X: Educational treatment of gifted students

These findings confirm the questionnaire results: integration or inclusion in regular classrooms is explicitly mentioned as the most adequate treatment 17 times, implicitly in formulations referring to particular effects on social, emotional, and personal development as well as necessary conditions (curricular adaption, acceleration programs) 41 times. A graphical representation according to the approach of Pareto is shown in figure 4:

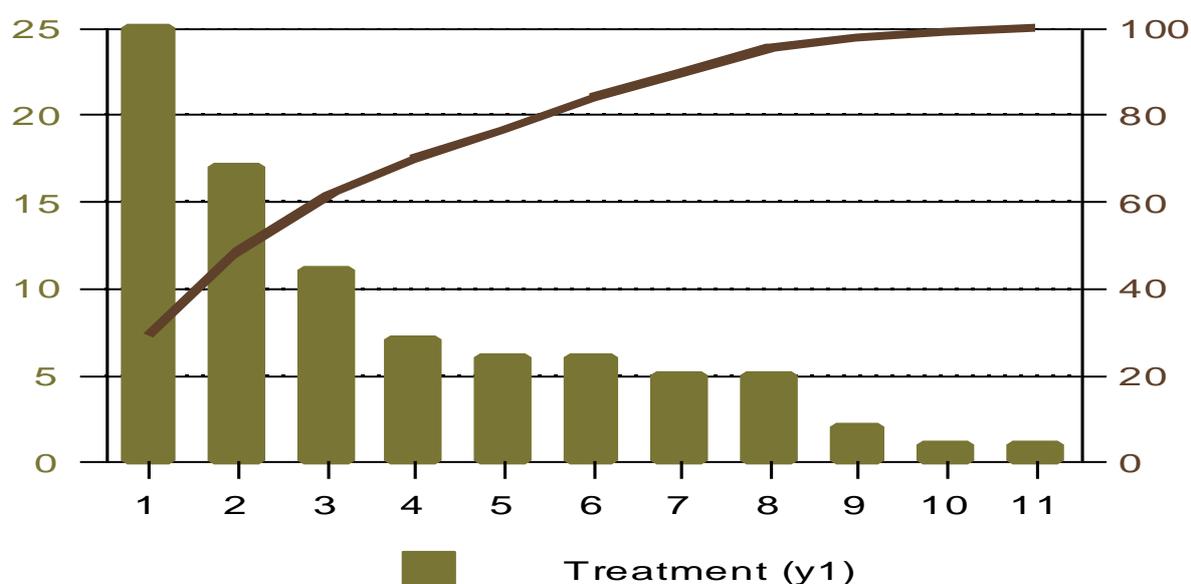


Figure 4: Pareto-Analysis of forms educational treatment of gifted students

The line of cumulative percentages demonstrates that more than three quarters of all

suggestions are covered by the first five categories in table 10. In other words, integration of gifted students in regular classrooms with necessary curricular adaptations, early diagnosis of giftedness, promotion of positive attitudes of teachers and attention to the socio-emotional development of gifted students are seen by the interviewees as the most important ones for the educational treatment of gifted students.

## Conclusion

According to the recent most relevant sources on educational treatment of diversity, most of the involved people in educational processes, and in particular the involved teachers, are in favor of advancing towards integration or inclusion of all students within their own target group centers and classrooms. But, the empirical data obtained by the research here presented, show that teachers claim that, apart from the need of reinforcing their own professional training to act in integrated or inclusive contexts, material and personal resources are necessary to attain effectiveness on inclusive educational treatment of diversity.

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