

PAPELES DEL PSICÓLOGO

LA EDUCACION A DEBATE: LA LEY ORGANICA DE EDUCACION



COMO MEJORAR LOS PROCESOS DE ENSEÑANZA Y DE APRENDIZAJE
LAS RELACIONES ESCUELA - FAMILIA

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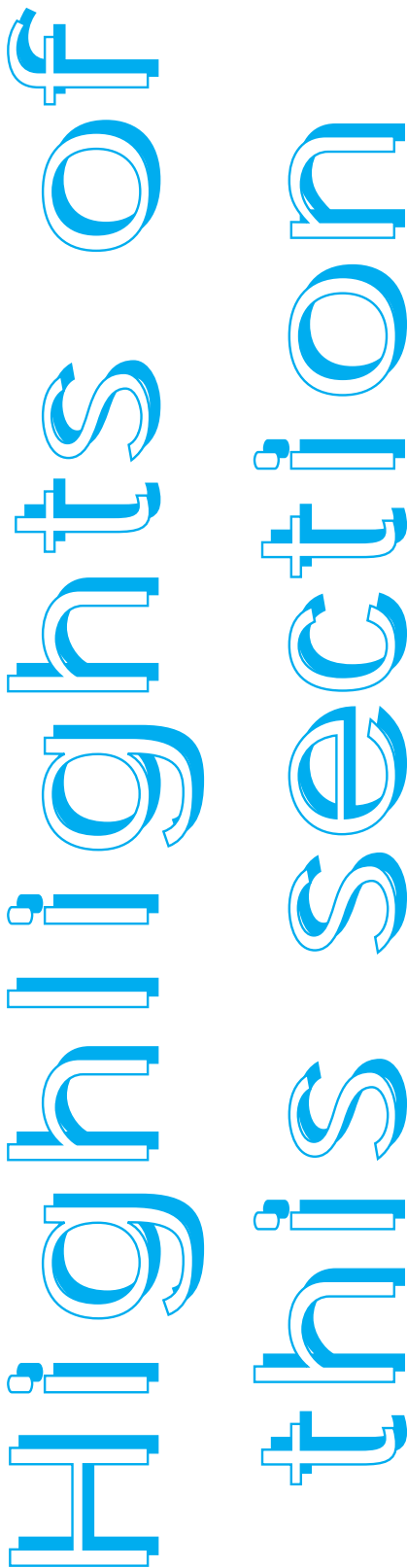
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A

t the beginning of 2006, the Spanish Ministry of Education published a new Education Act (*Ley Orgánica de Education, LOE*), whose provisions will be implemented over the coming years, and whose basic aim is to offer an education capable of responding to the changing needs and new demands of our society. This aspiration to achieve an education system that serves to improve society and the lives of individuals is not in itself a novel one; rather, it has been present throughout the many phases in the evolution of the education system, each of which has sought to respond to the priorities and challenges of the particular historical moment. This evolution, which has proceeded through the passing of successive education acts, has brought with it crucial advances for the whole of society.

For example, the concept of learning was the object of significant changes over the course of the twentieth century, as testified by the enormous quantity of educational research and the underlying practical work. From an initial "mechanistic" conception, associated with behaviourist interpretations and confining learning to a process of the acquisition of responses, there progressively emerged more dynamic conceptions of the act of learning (Mayer, 2004).

The student, conceived in the first half of the 20th century as a mere machine for acquiring facts for regurgitation, gradually comes to be considered as a data processor who receives, transforms, utilizes and recovers information. Later, and especially in the 1990s, students begin to assume a central role in the teaching-learning process. They are the artisans, the authentic actors in the process, becoming understood as active constructors of knowledge.

Following this logic, the process of the construction of meaning emerges as the central element in the teaching-learning process. The learning of content and concepts and the understanding of physical and social phenomena, norms and values occurs when, and only when, the student is capable of attributing a personal meaning to them. Under this assumption, the focal point of learning, which was previously the teacher and his or her instructional methodology, now becomes the knowledge built up by the student, and moves towards the cognitive, motivational and behavioural dimensions s/he activates during the learning process (Rosário & Almeida, 2005).

Considering students as carrying the main burden of responsibility for learning does not mean that "they must be given everything on a plate"; rather, it means that "everything has to be done by them (and with them)". Thus, in order to make progress in the school context, as in any other area of life, it necessary to act, to question, to understand and to transform – in short: to work!

Students must make the first step so that studying and learning become substantive and transformational activities for them, insofar as they change their understanding of reality. School must fulfil the decisive role of "creating the conditions for the student to be able to construct meanings", not only to acquire content, and of promoting the development of the competencies necessary for achieving meaningful learning (acting, understanding, questioning, transforming, self-regulating, etc.). Parents are expected, at least, to impress upon their children the importance of studying, providing them with the physical and psychological conditions for study, and accompanying them both as they make progress and when they encounter difficulties. The teacher, the fam-

ily and the rest of those involved in education are thus required to play a mediating role between the child and education.

However, the facts contradict all of this theory. Students who succeed in entering university present, in general, a series of characteristics that fall well short of the pretensions of educational approaches and theories and the systems established by legislation.

First of all, the shortcomings with which many students enter, and even leave university are striking (Armengol & Castro, 2003-2004). And the deficiencies in question concern not only the level of knowledge, but also, and above all, its quality. Thus, there are considerable shortcomings in relation to matters as basic as understanding texts in a critical manner, arguing a case or view, or taking notes. Indeed, research has reported findings as alarming as the following: (1) 70% of students take notes in a purely mechanical, reproductive way, and have no strategies for doing otherwise (Barberá, Castelló & Monereo, 2003); (2) a lack of predisposition and ability for comprehensive understanding of scientific texts (Mateos & Peñalba, 2003); (3) mediocre results in skills related to critical thinking and argumentation (Correa, Ceballo & Rodrigo, 2003), (4) teachers' concern with students' incapacity to apply or utilize their knowledge in other contexts (Pérez & Carretero, 2003).

Secondly, the majority of students arrive at university without the necessary ability to learn independently, with serious shortcomings in the way they learn and in relation to control of the variables that influence their learning. Thus, the learning approach of many university students is characterized by a low level of strategy, reflecting a failure to develop the specific aptitudes necessary for profound and comprehensive learning.

Thirdly, university students present frankly unsophisticated notions of learning, which in the majority of cases takes place at only the most superficial of levels (Monereo & Pozo, 2003; Martí, 2003). The epistemological conceptions of most students are confined to the consideration of knowledge as reproduction. This shallow conception of learning affects all the dimensions of their academic life.

Thus, there is clearly a failure of successive education acts, or of the way in which their stipulations are carried out, to achieve the intended educational results. It is beyond doubt that the efforts to improve the education and training of our young people have failed to bear the desired fruit. The data from PISA (Programme for International Student Assessment) reports have repeatedly borne witness to this fact. So, exactly what is happening?

In this special issue we present a series of studies car-

ried out by teachers and researchers at our universities whose ultimate aim is to promote discussion about what can be done to improve students' learning in our schools and in higher education, and about how to enhance the personal and contextual conditions that will increase competencies for future independent learning.

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REFLECTING ON MOTIVATION AND LEARNING IN THE NEW SPANISH EDUCATION ACT (LOE): TALKING VS. DOING

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The widespread lack of motivation among schoolchildren is probably one of the most crucial factors in the explanation of some of the problematic situations found in school education. Lack of student motivation may be seen as both a consequence of the changes and transformations that society has undergone in recent years and the educational system has not yet been able to assimilate, and as a triggering factor of certain problems and conflicts that occur in schools. In this article we reflect on some the variables that most clearly contribute to pupil motivation (or its absence) in Spanish primary and secondary schools.

Key words: Motivation, academic learning, academic failure.

Probablemente, la falta de motivación académica de muchos estudiantes se ha convertido en uno de los factores centrales que pueden explicar algunas situaciones problemáticas que se están viviendo en la educación escolar. Y es que la desmotivación de los alumnos puede ser tanto una consecuencia de los cambios y transformaciones que ha sufrido la sociedad en los últimos años y que el sistema educativo todavía no ha sido capaz de asumir, como también un factor desencadenante de ciertos problemas y conflictos que se producen en los centros escolares. En este artículo se reflexiona sobre algunas de las variables que más contribuyen a la motivación (o desmotivación) de los estudiantes de las escuelas e institutos de nuestro país.

Palabras clave: Motivación, aprendizaje académico, fracaso escolar.

Various studies and reports on the state of Spain's education system, above all the PISA (Programme for International Student Assessment) Report, situate our students at the bottom of the OCDE rankings in reading, writing and mathematics. If we consider that in addition to this around 25% of students fail to complete secondary education, the situation of our education system for the present and the immediate future is clearly none too promising. Although the problem is a highly complex and wide-ranging one that affects students' level of knowledge, their academic performance, the organization of schools, disciplinary issues, students' lack of motivation and interest, and so on, there must obviously be certain factors to be identified that have contributed in one way or another to the current situation.

Spain's most recent Education Act (*Ley Orgánica de Education, LOE*), passed by Parliament on 15th December, 2005, constitutes a normative framework intended to provide solutions to many of the problems of our educational system and to make it possible to attain optimum levels of quality in education. Although this will depend on many other factors beyond the reach of the Act itself, the priority is to ensure that the legislation

adequately addresses the causes and provides routes for the solution of the most serious problems currently affecting education.

The coordinator of the OECD's PISA Report, Andreas Schleicher, stressed in an interview at the end of 2005 that "the success of the education system lies in achieving greater motivation in the student. Students should learn that what they study serves not only for school itself, but opens up new opportunities for the future". Thus, one of the most important motivational sources is the necessary connection between what is taught in the school and what happens outside it. The greater the extent to which students perceive a relationship between what they learn and the real world, the more meaningful they will find academic work, the more interest they will have in learning and the more pleasure it will give them (Stipek & Seal, 2004).

The widespread lack of motivation among schoolchildren is probably one of the most crucial factors in the explanation of some of the problematic situations found in school education. Indeed, pupil demotivation can be both, on the one hand, a consequence of the changes and transformations that society has undergone in recent years and the educational system has not yet been able to assimilate and, on the other, a triggering factor of certain problems and conflicts that occur in schools.

In the introduction to the LOE it is stated that the responsibility for pupils' success lies not only with schoolchildren themselves, but also with their families, the teaching staff, schools, educational administration and, finally, society, which is ultimately responsible for the quality of the educational system. Therefore, what is required is a joint effort from all the parties involved. It adds, moreover, that schools and teachers should strive to build rich, motivating and demanding learning environments.

Is sufficient effort being made to create these rich, motivating and demanding environments? While it is clear that schools, teaching staff and students themselves have to apply themselves to achieving such conditions, it is also evident from the current reality and from experience in relation to previous education legislation – particularly the LOGSE (*Ley de Ordenación General del Sistema Educativo*) of 1990 – that it is not enough to talk about school settings that are motivating, rich, demanding, and so on for them to appear automatically.

Indeed, in the education system as it is today, the general sensation is that none of these adjectives – rich, motivating or demanding – can be considered to apply particularly to either schools or the teaching and learning that go on in them. In fact, many professionals involved in education consider that students are learning less and less and showing ever-decreasing interest in learning (Valle, Cabanach, Rodríguez, Núñez & González-Pienda, 2006). But this lack of interest is the result above all of teaching methods that generate little or no enthusiasm in the majority of students. Moreover, such methods have changed relatively little over many years, and even in the best of cases the changes that have occurred are insignificant compared to the profound cultural changes our society has undergone in the last few decades. Bearing all of this in mind, the first problem to be addressed is one of motivation related to educational content and its teaching.

CONTENT AND ITS TEACHING

Although all human beings are born with the desire to learn and an enthusiasm for discovering the world around them, the positive experiences associated with learning progressively decrease as children move through the school system. Learning experiences, which were initially fun and exciting, become after a few years at school monotonous, boring, and even sometimes unpleasant. Therefore, something must happen to make pupils who start out with a desire for learning and enthusiasm for schoolwork gradually lose them as they progress through their education.

Thus, the question that arises is as follows: why is it that large numbers of pupils do not want to study or are not at all interested in what they are taught at school? Clearly, part of the answer has to do with the scarce utility the students themselves perceive in what they are taught. The general opinion is that what they learn at school has little to do with their lives, their interests, their concerns or their curiosities. The knowledge imparted at school is, in most cases, highly theoretical, removed from reality and with little possibility of application; it is what experts call "inert knowledge", which has strongly negative effects on motivation.

Therefore, if we wish to stimulate in pupils the desire to learn, the first thing to be done is to attempt to relate what we teach in schools to the real world – to give it sense and meaning and to show how it can be useful. The greater the students' perception of this link between real life and what they are taught, the more interest they will have in learning and the greater the satisfaction that learning will produce. And a second, highly important point is that what is taught should be in close correspondence with what is learnt. That is, if we want our pupils to understand what they are taught, we must bear in mind at all times that learning has its limits and its optimum pace, and in general, that quantity is one of the chief enemies of quality, so that teaching too much material almost always leads to reproductive and low-quality learning.

But in addition to questions of content is the problem of how that content is taught. In general, teachers tend to focus their activity on the transmission and assessment of knowledge, and in either case the same procedures have been in use for several decades. In spite of the enormous transformations in the media through which information can be discovered and assimilated, the transmission of knowledge in schools has hardly changed. Moreover, given that the focus of interest in education is no longer teaching and the teacher, but rather learning and the student, the principles of learning should become the basic point of reference that guides the work of the teacher. All of this implies substantial modifications in the form of teaching, in interpersonal relationships, in the way of dealing with individual differences between pupils, and so on, but the current reality suggests that such changes have not yet made themselves felt in a comprehensive way in our education system.

THE STUDENT

As stressed above, apart from aspects related to content and its teaching, it should not be overlooked that changes

in relation to education over recent years have resulted in a significant shift in the way learning is understood and with regard to the student's role in the education process. The centre of attention is no longer the teacher and teaching; now the protagonist is the student and learning itself, which has ceased to be conceived as a process of mechanical reproduction of what is taught, becoming considered as a process of the construction of knowledge. From this perspective, motivation is also no longer conceived exclusively as something external to the student, as a kind of entity that should be present in every task, as something that can be dispensed in measured doses by the teacher; now it becomes something that is within the students themselves. Therefore, we face a new problem of motivation, in this case linked in a personal way to each student.

In the same way that constructivist approaches to learning consider it to be the student who ultimately gives sense and meaning to what is learnt through a process of personal construction, with regard to motivation it can be asserted, as mentioned above, that motivation is internal to the student, so that it is the students themselves who actually decide to take an interest or not, become involved or not, show enthusiasm or not, in relation to a given learning task. But this decision taken by the student is not as simple as it might appear; rather, it requires at least some degree of balance in the individual between three factors considered by experts as the three basic pillars on which academic motivation rests: self-efficacy beliefs and perceptions of control, personal reasons and goals, and the emotions elicited by learning situations.

With these considerations in mind, and in line with the most current approaches to school learning, it is time to reappraise our understanding of academic motivation and, above all, to change the way we influence it and work with it. The key is in helping the student to generate mechanisms of self-motivation, and in relation not only to study, but also to coexistence with schoolmates and to life in general (Beltrán, 1998). In fact, it has been demonstrated that self-motivated students not only learn more, but also show higher levels of comprehension and recall of information. Moreover, enjoyment of academic work tends to be associated with lower levels of anxiety and distress in the school context. If this can be achieved, we shall almost certainly be stimulating in our students the desire to keep on learning, a goal advocated over half a century ago by the philosopher, psychologist and educator John Dewey as one of the major objectives of education.

SOCIO-CULTURAL FACTORS

But lack of motivation also has other determinants beyond those directly associated with teacher and learner, factors situated at another level, probably easier to identify but much more complex to try and act upon. We are referring here to determinants of a cultural nature, related to profound changes that have occurred in our society in recent years and that have to do with way of life, family relationships, new technologies, predominant values, interpersonal relations, and so on. These socio-cultural factors add an extra dimension to the form of dealing with students' lack of motivation, which in turn raises a further motivational problem different from those already discussed.

In today's world, education is not exclusively the province of the family and the school, as was previously the case. Indeed, the school has ceased to be the principal source of knowledge; there are other educational routes and agents with much more powerful and determinant influence than that which can be exercised by school and family, among other reasons because they use resources that are far more efficient for arousing the interest and enthusiasm of the young, and even of the not-so-young. The borderless and globalized world is a clear reflection of the impact on our lives of the era of telecommunications, in which television and the Internet are probably the most potent and influential media. Indeed, some experts (see, e.g., Seoane, 1998) consider that the Internet, more than a technology and a product at the disposition of modern society, is something that represents it, a kind of model of the society in which we live.

Therefore, the most important changes at a social and cultural level in recent years are directly or indirectly related to the technologies of information and communication. This technological revolution has accelerated and radically altered the way we communicate and access information, resulting in significant changes in the sphere of work, in human relations and in the way we learn. Given that the principal resource handled by the new technologies is information, they have come to constitute a first-order educational instrument, which, moreover, tends to generate enormous interest in the majority of students, making it a substantial source of motivation. The attractiveness and the power of fascination of everything associated with these new technologies is something of which education should not fail to take advantage.

Even so, we should not be so naive as to see the new technologies as the magical resource that will radically

change education or solve its main problems overnight. We must be clear about the fact that they represent nothing more than an instrument at our service, so that they key to the impact of these resources on education must be found in the educational model behind their use and, of course, those who guide their use (Beltrán, 2001).

Thus, the new technologies can be at the service of a pedagogical model centred on teaching and the teacher, in which learning is conceived as the mechanical reproduction of information, or, on the other hand, they can be assimilated into a model that is much more flexible, more focused on students and their learning, in which this learning is understood as a process of the construction of meanings. Whether the new technologies are used on the basis of one educational model or the other implies taking advantage or not of an instrument with enormous potential and with incredible motivational power.

Previous experience of education legislation has demonstrated that there is no possibility for change if teaching staff do not identify with or involve themselves in the application of its principles. Moreover, one of the great failures of the previous Education Act, the LOGSE (1990), and which made it quite unpopular, was that it did not fully involve the teachers, among other reasons because it was excessively interventionist with regard to their teaching activity and it failed to take into account that education legislation cannot establish just a single route for achieving its objectives, but needs rather to offer a high degree of organizational and educational independence that makes it possible to attend to the peculiarities and specific characteristics of each learning context.

With this in mind, and given that the success or failure of the LOE will depend to a large extent on teachers themselves, it focuses closely on the development of proposals in relation to their training and to social recognition of their work. Encouraging and aiding the use of information technologies and promoting the learning of foreign languages, together with support for training activities oriented to educational research and innovation, are some of the basic pillars of the ongoing training of teachers proposed by the LOE.

All of these proposals, and especially those related to teachers, will be fulfilled if the different organs of educational administration make sufficient effort and invest the necessary resources, but also if all those involved in education have the optimism, the interest and the will necessary for changes to take place. Therefore, as was the case with previous legislation, in the LOE there are many positive aspects, but everything will depend on

how it is implemented and, above all, on whether it is accompanied by effective funding that gradually brings us closer to the mean level of investment of the OECD countries. Even so, if we consider the PISA Report of 2003, spending on education would not appear to be one of the most important factors in relation to the quality of the education system. It is more likely that the way the money is invested and the resources that are prioritized largely determine the cost-effectiveness of funding.

Moreover, given that a highly important factor in the success of an education system is the improvement of student motivation, Brophy's (1998) pertinent proposal of "bringing the classes to the students", offering them opportunities to learn and to recognize the importance of real learning for their lives, complemented by the idea of "bringing the students to the classes", requiring from them effort and involvement in learning tasks, constitutes an appropriate frame of reference for achieving those rich, motivating and demanding learning environments to which the LOE refers in its introduction, and which may be essential indicators of success or failure in the application of the Act.

If these objectives are achieved, we can all congratulate ourselves on a great success; if, on the other hand, the proposals of the LOE fail to bring about substantial changes in education, we shall be obliged once again to lament the fact that "there's many a slip 'twixt cup and lip".

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SELF-REGULATED LEARNING AS A RESOURCE AND A GOAL OF EDUCATION

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Today, at the dawn of the 21st century, there are basically two main needs to be met by the educational system and the legislation that underpins it, and which the Spanish Education Act of 2005 (Ley Orgánica de Education, LOE) attempts to address. Firstly, the provision of quality education at all levels of the system, which involves the substantial challenge of ensuring educational success for all young people. This essentially implies improving educational standards across the board and ensuring that students develop all their abilities to maximum potential. Secondly, education must today more than ever prepare students appropriately for living in the modern knowledge society and for coping with the challenges it raises. In the present article we examine this topic that is central to all educational levels, analyzing essentially what having the capacity for self-regulated learning means, and how such capacity can be promoted in the classroom.

Key Words: Self-Regulated Learning

En la actualidad, en los comienzos del siglo XXI, las principales necesidades a las que deben dar respuesta el sistema educativo y las leyes que lo amparen, y a las que trata de dar respuesta en la LOE son básicamente dos. Por un lado, proporcionar una educación de calidad a todos los niveles del sistema educativo, lo que conlleva la necesidad de asumir un importante desafío: conseguir el éxito escolar de todos los jóvenes, que se traduce básicamente en mejorar el nivel educativo de todo el alumnado y lograr que alcancen el máximo desarrollo de todas sus capacidades. Por otro lado, actualmente, más que nunca, la educación debe preparar adecuadamente para vivir en la nueva sociedad del conocimiento y para afrontar los retos que de ella se deriven. En este artículo se aborda este tema central a todos los niveles educativos, analizando, principalmente, qué implica estar capacitado para un aprendizaje autónomo y cómo promover dichas competencias en el aula.

Palabras clave: Aprendizaje autorregulado.

Today, at the dawn of the 21st century, there are basically two main needs to be met by the educational system and the legislation that underpins it, and which the recent Spanish Education Act (*Ley Orgánica de Education, LOE*) attempts to address. Firstly, the provision of quality education at all levels of the system, which involves the substantial challenge of ensuring educational success for all young people. This essentially implies improving educational standards across the board and ensuring that students develop all their abilities to their highest potential. Secondly, education must today more than ever prepare students appropriately for living in the modern knowledge society and for coping with the challenges that involves.

The fundamental principles underlying the LOE primarily address these demands. The main focus of this legislation is the need to understand education as a permanent process, thereby encouraging lifelong learning. This

aspect is considered so central to the LOE as to merit a separate article in its introductory protocol.

This perception of lifelong learning and the need to achieve it across all areas of education is held at every level. The Spanish university system, for example, is currently undergoing a process of structural convergence with other European countries in what has been called the "European Higher Education Area" (EHEA). This implies a series of modifications and profound changes at organizational, legal and administrative levels, and, above all, entails adopting a new educational paradigm (Michavila, 2001).

This new focus will include not only the teaching-learning process, but also the assessment and maintenance of quality in higher education, and will involve a restructuring of universities at two closely linked levels. Firstly, at the legal and administrative levels, since the integration of Spain's university system into the EHEA requires concrete proposals for putting into practice the different conceptual elements as defined in the European declarations and reflected in the latest legislation on universities (*Ley Orgánica de Universidades, LOU*, 2001).

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Secondly, at the paradigmatic or conceptual level, the EHEA implies a new vision of the teaching-learning process at university level, embracing the educational paradigm shift taking place across education as a result of the new characteristics of the society of knowledge and learning (González & Wagenaar, 2003).

The pivotal element on which this new paradigm turns is that students achieve lifelong learning. The new educational model, at university as well as at lower levels, therefore highlights the need to stress *learners' personal involvement in and commitment to their own learning, as well as the need for students to be capable of autonomous learning*. The backbone of the new educational approach can be summed up by the need to empower people to learn autonomously and in a lifelong fashion. In order to achieve this, academic training needs to overcome the paradigm that saw education as a process of acquisition and transmission of knowledge, and adopt a new paradigm, becoming a generator of new ways of thinking and acting better suited to the modern era, training those competencies and skills that make possible ongoing or constant education throughout the whole of one's life.

TOWARDS AUTONOMOUS AND LIFELONG LEARNING

In the field of the Psychology of Education, this goal is based on the idea of learners as active and fundamental participants in the learning process. It is focused on the learners, not only on what they are learning, but above all on how they learn (Cochram-Smith, 2003). From a psychoeducational perspective, therefore, autonomy refers to the skill of *learning how to learn* (Martín, 2003; Pozo, 1990), or the ability to regulate one's personal knowledge construction process (Schunk & Zimmerman, 2003; Zimmerman, 2002). The most characteristic feature of an education whose goal is to help students continue learning autonomously throughout their lives is that it must provide them with the skills necessary for *learning how to learn*. As Pozo and Monereo (2002, p. 11) point out, "if we had to choose a slogan, a mantra that would inform the objectives and goals of 21st-century education, that which would undoubtedly be most widely accepted [...] among educators and researchers [...] would be that education has to be aimed at helping students learn how to learn". More specifically, this learning skill is included in one of the main research areas in educational psychology today, namely, *self-regulation of learning*.

The construct of *self-regulated learning* is linked to independent and effective methods of academic learning that involve metacognition, intrinsic motivation and strategic action (Perry, 2002). It is defined as an "active process in which students set the objectives that guide their learning, attempting to monitor, regulate and control their cognition, motivation and behaviour with a view to achieving them" (Rosário, 2004, p. 37). It refers to a conception of learning focused on the cognitive, motivational and behavioural components that provide individuals with the capacity to adjust their actions and goals so as to achieve the desired results, given the changes in environmental conditions (Zeidner, Boekaerts & Pintrich, 2000). In this perspective, the focus of educational analysis shifts from a perception of the learner's ability and learning environments as invariable elements to processes and actions shaped and carried out by students in order to enhance their skills and performance, taking into account the learning environment (Zimmerman, 1989, 1990). Thus, self-regulated learning attempts to explain "how people improve and increase academic achievement by systematically applying a learning method" (Zimmerman, 2001, p. viii).

The essential characteristics of such self-regulating students show that they participate actively in their learning process, monitoring and regulating the learning process in a results-oriented way (Pintrich & Schrauben, 1992), acting in a strategic manner and maintaining motivation towards important goals (Blumenfeld & Marx, 1997; McCombs & Marzano, 1990). To achieve this, self-regulation of learning could be described as an open process requiring a cyclical activity on the part of the learner that occurs in three main phases, each of which includes a series of processes and subprocesses (Schunk & Zimmerman, 1998; Zimmerman, 2000) (see Figure 1). All of these processes, as well as the subprocesses involved in each one, are not only interlinked, but also display a cyclical structure in response to the continual adjustments required as a result of fluctuations in the personal, behavioural and contextual components.

The forethought phase of the cyclical model of self-regulation is divided by Zimmerman (1998) into five types of aspects or beliefs. *Goal setting* "cements" the student's intention to achieve specific learning outcomes (Locke & Latham, 1990). There is evidence of improved academic performance for pupils organizing their learning tasks by setting proximal goals, such as subdividing the subject

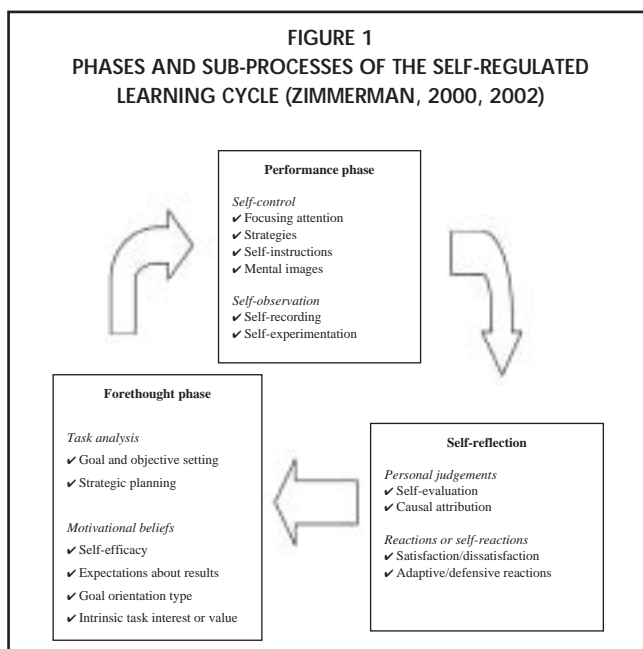
matter to be studied into time slots. The literature describes how students with learning-focused goals concentrate more on their own learning progress than on competition with peers, and tend to learn more efficiently than those students who focus on completing the task. In *strategic planning*, students select a range of learning strategies or methods that allows them to achieve the goals set (Zimmerman & Martínez-Pons, 1992). These two strategies (goal setting and strategic planning) are affected by many personal beliefs, such as perceived self-efficacy, *type of academic goals*, or the value attached to the task by the student (Rosário, 2004). *Perceived self-efficacy* – the belief in one's own capacity to learn or to achieve certain levels of academic performance – is one of the most important variables in the forethought phase, given that it conditions the level of involvement, and usually the academic results of the students (Bandura, 1993). The final variable, called *intrinsic interest* in the task, is a feature of the behaviour of those students who persist in their learning efforts even in the absence of tangible rewards (Zimmerman & Martínez-Pons, 1990).

The second phase, volitional control, includes the processes that help students focus their attention on the learning task, thereby maximizing academic performance. Kuhl (1985) sees attention focusing as a need to protect students' intention to learn from the distractors competing with the learning task in hand. Students with low academic performance are more easily distracted from their activities and tend to focus more on the errors committed than those students with high academic performance (Corno, 1993; Heckhausen, 1991). "Research on academic learning shows that students able to regulate their own learning in the face of multiple distractors and difficulties in the classroom achieve better results and learn more rapidly than those students who do not display such self-regulatory competencies" (Pintrich & Zusho, 2002, p. 249). Self-instructions are verbalizations of the steps to be taken while carrying out school tasks (Schunk, 1998). Research suggests that self-instructions improve learning, since vocalization of rules (e.g., algorithms, chemical formulae) contributes to a reduction in the number of errors made (Schunk, 1984). Self-monitoring provides information about progress and failures relative to specific reference criteria (e.g., school grades, curriculum goals, academic achievement of peers) (Winnie, 1995). As learners acquire more academic skills and make problem-solving routines more automatic, self-monitoring of learning tasks

becomes less necessary and decreases. This increases the likelihood of errors, since students relax the attention they pay to the task in hand, allowing themselves to be distracted by concurrent secondary tasks.

The third phase, self-reflection, comprises four different types of process. Self-evaluation of academic results is normally one of the first self-reflective processes and involves comparing the information monitored with a concrete educational goal (e.g., contrasting the results obtained in an exercise with the answers given in the textbook). Causal attribution processes play a fundamental role in self-reflection processes, since attributions of failure at school and low levels of cognitive competence can bring about negative reactions and a lack of commitment to school work (Zimmerman & Paulsen, 1995; Zimmerman & Kitsantas, 1997). As with the other processes described, causal attributions are influenced by personal and contextual factors (e.g., the academic goals that students set themselves, or the atmosphere and competitiveness prevalent in the learning context). Students that self-regulate their learning take their academic results as a consequence of their efforts, attributing a specific poor result to causes that can be changed, for example by increasing the time invested in private study. Causal attributions focused on learning strategy also help students identify sources of error and reorganize their learning strategy profile. Self-regulating learners are normally better equipped to adapt to learning tasks because they evaluate their performance

FIGURE 1
PHASES AND SUB-PROCESSES OF THE SELF-REGULATED
LEARNING CYCLE (ZIMMERMAN, 2000, 2002)



more frequently and effectively. Finally, we can complete our overview of the phases of the self-regulating process with the observation that favourable self-reactions encourage positive beliefs about oneself as a student, raise perceptions of self-efficacy, promote orientations more focused on learning objectives, and boost intrinsic interest in schoolwork. Self-reactions also take the form of defensive or adaptive responses to learning (Rodríguez, Valle, Cabanach, Núñez & González-Pienda, 2005). The former relate to efforts to protect self-image, avoiding exposure to learning and performance activities (e.g., skipping exams, delaying the handing in of work), while the adaptive reactions refer to adjustments aimed at increasing the effectiveness of learning methods, changing or simply modifying a learning strategy that is not helping to meet the goals set (Pintrich & Schunk, 2002). Increase in personal satisfaction in learning raises motivation, while a decrease in task satisfaction undermines the learning effort (Schunk, 2001). As previously mentioned, these self-regulatory processes are cyclical, and as such tend to have a knock-on effect, either facilitating or hindering subsequent phases of the cycle (Zimmerman, 2002).

To sum up, the forethought phase prepares the student for and influences the volitional control phase. This in turn affects the processes employed in the self-reflection phase, which interact with the next forethought phase, boosting the quality of learning.

WAYS OF PROMOTING TEACHING THAT PREPARES STUDENTS FOR AUTONOMOUS LEARNING

In 1997, Simpson and colleagues presented a review of the literature on programmes and interventions in the field of study skills, using the transfer of established learning strategies to other contexts as an organizing principle. They presented a taxonomy organized in five general categories. The first included learning how to learn courses, covering interventions focusing more on their development than on the reduction of the deficits in the area of learning strategies. The type of courses included in this category are oriented towards the development of processes and towards the encouragement of self-regulation through the use of a repertoire of learning strategies that are adaptable to the task in hand. Students are taught the skills for identifying and employing strategies appropriate for different learning tasks and contexts. This orientation aids the transfer of learning to other contexts insofar as students develop a metacognitive awareness of the conditions

associated with each specific learning task and practice using different options according to their objectives and contextual limitations. The literature reports that participants on courses under the general title of learning how to learn show an improvement in their academic performance (Weinstein, 1994).

The second category includes courses similar to those above, but centred on the mastery of specific content. These courses also focus on how processes are developed, training the application of learning strategies, but in a specific field of study or knowledge, without working deliberately towards the transfer of this learning to adjacent contents or contexts. In accordance with this, no evidence was found to show that these competencies were transferred to other fields of study (Hattie, Biggs & Purdie, 1996; Simpson Hynd, Nist & Burell, 1997).

The third category includes specific, "one-off" interventions, summer courses or bridging courses between educational levels (e.g., secondary to higher), aimed at filling skills gaps. These courses are characterized by remedial aspects, focusing on improving isolated strategic aspects (e.g., reading techniques or writing skills). Research shows that the frequency of such courses/modules does not favour the transfer of the skills learned and practiced to adjacent fields. The explanation for this may be related to both the duration of the interventions (generally short courses) and the low level of specific training in strategic application to other fields.

The fourth category groups courses that integrate the exercise of reading and writing skills, aimed at boosting efficiency in writing and thus academic performance. However, as Ackerman (1993) points out, these programmes do not present consistent results.

The fifth category includes support services in the field of study skills offered by specialized departments or consultants. Such services are usually isolated and non-theoretical, since they are neither based on a theoretical framework nor have an evaluation system that allows conclusions to be drawn regarding their impact on students' academic performance (Simpson et al., 1997).

Inclusion in the curriculum is another method, not described in the typology outlined, used for helping students to develop effective learning strategies. Teachers and educators who choose this methodology instruct their students in motivational aspects and cognitive strategies related to their field of study (Entwistle & Tait, 1992). In a review of the literature on different interventions related to learning strategies, Hattie and colleagues (Hattie et al.,

1996) suggest that these programmes are more closely linked to academic success when they are focused on a specific context or mastery of specific content. The literature (Simpson, 1997; Hadwin & Winnie, 1996; Hattie et al., 1996) suggests the importance – indeed, the urgency, in our opinion – of incorporating the teaching of learning strategies in teacher training courses to ensure that they can later be included in the respective curricula of subject areas.

FINAL COMMENTS

Self-regulated learning has become a fundamental concept in both research and educational practice (Pintrich, 2000; Reynolds & Miller, 2003), since it offers solutions to the psycho-educational needs involved in enabling individuals to adopt a considerable degree of autonomy in their training and to develop a series of tools that will allow them to continue learning beyond their formal education. It is also a unifying concept, given that it links different research fields (cognition, learning strategies, motivation, etc.), which together provide a coherent framework of how a student manages the complex activities inherent in academic study. Furthermore, all of these self-regulation skills constitute a crucial factor for the student's learning and academic performance (Paris & Paris, 2001; Pintrich & DeGroot, 1990; Pintrich & Schrauben, 1992; Zimmerman & Martínez-Pons, 1990; Rosário, 2004; Rosário, Núñez & González-Pienda, 2004; Schunk & Zimmerman, 1998). Thus, as well as permitting autonomous and lifelong learning, these self-regulation skills enable students to improve their performance and academic success through the use of different strategies, to control and regulate many aspects of their cognition, motivation and behaviour, to select and structure learning environments, mediating between contextual and personal characteristics, and to set goals and monitor their achievement.

The capacity to self-regulate is considered to play a key role in academic success and in other important contexts (Nota, Soresi & Zimmerman, 2004). Therefore, it is necessary for students to arrive at university with these skills so that they can learn autonomously and independently. However, at present it is all too clear that the vast majority of students entering higher education are not adequately prepared for what is required of them at university, since they are unable to self-regulate their own learning process (Allgood, Risko, Álvarez & Fairbanks,

2000), and this shortcoming in relation to learning strategies is seen as being largely to blame for failure at university (Tuckman, 2003).

Despite the fact that research results and current educational legislation highlight the importance of students being taught to self-regulate their learning on the basis of deliberate and systematic training, few teachers actually instruct their students in the skills that would permit them to learn in a customized and independent manner (Zimmerman, 2002).

Furthermore, as mentioned previously, the application of educational proposals along these lines has in reality not been sufficiently successful. Advances in cognitive research frequently fail to result in an improvement in students' quality of learning, and not because the recommendations lack epistemological validity, but rather because they have been formulated without properly taking into account the way in which schools and their constituent elements (students, teachers, departments, management, etc.) work. At present, the research community is making great efforts to remedy this situation, and many researchers have started to employ "collaborative research" (e.g., Confrey, Castro-Filho & Wilhelm, 2000) as a means of linking cognitive research and the teaching-learning process. The basic idea is that cognitive research should guide educational reform with regard to the teaching-learning process, but this will only be possible if we are capable of carrying out applied research with the involvement of schools and university or laboratory research teams on equal terms.

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TWO DECADES OF «MULTIPLE INTELLIGENCES»: IMPLICATIONS FOR EDUCATIONAL PSYCHOLOGY

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This article presents a review of Gardner's Theory on multiple intelligences, twenty years after it first appeared. It consists of three parts. The first is introductory, and describes the nature, bases, criticism, and results of the theory. The second discusses the contributions of the theory to variables of Educational Psychology: student and teacher role, learning, and instructional model. Finally, there is a brief description of the theory's applications to counselling, technology and special education.

Key words: multiple intelligences, educational intervention, self-regulated learning.

En el artículo se hace una revisión de la teoría de Gardner sobre las inteligencias múltiples cuando han pasado más de veinte años de su publicación. Tiene una parte introductoria en la que se expone la naturaleza, bases, crítica y resultados de la teoría. La parte central está dedicada a comentar las aportaciones de la teoría a las variables de la Psicología de la Educación: papel del alumno y del profesor, aprendizaje y modelo instruccional. Por último, se hace una breve descripción de las aplicaciones de la teoría a la orientación, la tecnología y la educación especial.

Palabras clave: inteligencias múltiples, intervención educativa, aprendizaje autorregulado.

Four books played a prominent role in the way intelligence was conceived in the last two decades of the 20th century: Frames of Mind, Gardner (1983); Beyond IQ, Sternberg (1985); The Bell Curve, Herrnstein and Murray (1994); and Emotional Intelligence, Goleman (1995). Gardner's book, the first of them all, did not cause any particular stir on its publication, and remained discreetly in the background. That of Sternberg raised some dust due to its harsh criticism of the use of IQ tests. The work by Herrnstein and Murray, ironically the most classical of them all, following as it did the traditional psychometric line, provoked a lively scientific debate that brought considerable fame (and notoriety) to the book. It argued that intelligence was a unitary and largely hereditary capacity distributed among the population in the form of a bell curve; it claimed, moreover, that many of the ills of our society are due to the behaviour and shortcomings of people with relatively low intelligence. Goleman's book, which appeared the following year, went further insofar as it became the best-selling social science book (despite being the least scientific of the four) in history. Nevertheless, in the cold light of day, after all the press attention has died down, the book that has truly left a mark on society, and partic-

ularly on the Psychology of Education, is that of Gardner who, flying in the face of the traditional thesis of a single intelligence, declared the existence of multiple intelligences in human beings.

Gardner (1983, 1999) refused to accept the monolithic and stable conception of intelligence, and came to the conclusion that there were just two possible alternatives: to continue with the traditional ideas of intelligence and of how it should be measured, or to find a new way of interpreting and developing what we understand by this construct. He chose the second option. But the challenge for Gardner – and this is where, as so many times before, the shadow of humanity's past creeps onto the scene – is not only to discover the true nature of intelligence or how it can be developed, but to find how to combine intelligence and ethics to create a world in which we all wish to and are able to live. After all, a society run by intelligent people could quite easily end in disaster or finish the planet off altogether. Intelligence is valuable, but personality is more important (Gardner, 1999).

And dissatisfaction with the psychometric interpretation was not confined to psychologists; neuroscientists were sceptical about psychology's assumptions on intelligence, and thought it more reasonable to conceive of the brain as housing an indeterminate quantity of intellectual capacities whose relationship required clarification (Pinker, 1997). Likewise, professionals in information technology

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and artificial intelligence have rejected the notion of a single intelligence of a general nature. The development of a machine with a general intelligence today seems an impossible goal.

In any case, what can be stated is that Gardner's theory, which initially had a low profile, gathered considerable ground to become, today, the most influential in the field of education. The aim of the present article is to review this theory and describe the different applications deriving from it in this field.

THE THEORY OF MULTIPLE INTELLIGENCES

Gardner's theory of Multiple Intelligences (MI) (1983), among others, has contributed to changing the traditional perspectives on human intelligence, previously focused excessively on IQ, thereby opening up new areas of psychoeducational intervention, with the hope of providing better-quality education and, above all, of improving students' cognitive functioning. A more complete view of the theory can be obtained by consulting at least three of three of Gardner's published works: *Frames of Mind* (1983), *Intelligence Reframed* (1999) and *The Multiple Intelligences after Twenty Years* (2005b).

Gardner has repeatedly expressed his profound dissatisfaction with the definition of the power of the human mind reduced to the orthodox view of a unitary intelligence based on IQ, which seems to be revised every 25 years or so by American psychologists. Like other psychologists (Guilford, 1967; Thurstone, 1939), and especially Sternberg (1985) – who defends the triarchic nature of intelligence –, Gardner goes far beyond the monolithic conception of intelligence, adopting a pluralist view that describes cognitive ability in terms of a set of perfectly defined intelligences. Moreover, in contrast to those who see intelligence as stable and unmodifiable from birth (Herrnstein & Murray, 1994), Gardner conceives of intelligence as something that changes and develops in accordance with the experiences the individual may have throughout his or her life. In line with other researchers (Feuerstein, Rand, Hoffman & Miller 1980), he maintains that intelligence is the result of the interaction between biological and environmental factors, and can therefore be "taught". Like other personal attributes, intelligence depends in some way on context (Brown, Collins & Duguid, 1989; Resnick, 1976), hence the importance of contextual and educational elements for its development.

Gardner not only distances himself from the orthodoxy of a single intelligence, but also from the identification and measurement of intelligence through tests, and breaking with this orthodoxy he makes his most important proposal in asserting that humans are better defined by saying that they possess a series of relatively independent intelligences than by saying they have just a single intelligence defined by IQ. His, then, is a rational approach, resting not on empirical and quantitative research, but rather on subjective factor analysis. More specifically, Gardner (1983, 1999) argues that there are many forms of being intelligent, indeed, at least eight: Linguistic Intelligence, Logical-Mathematical Intelligence, Spatial Intelligence, Bodily-Kinesthetic Intelligence, Musical Intelligence, Interpersonal Intelligence, Intrapersonal Intelligence and Naturalist Intelligence. He recently identified another (Existential Intelligence), and admitted that he is working on the conceptualization of more (Gardner 2005b). Likewise, he maintains that everybody has all eight intelligences and the majority of people can develop each intelligence to an adequate level of competence. Finally, he asserts that the intelligences usually work in conjunction in a complex fashion, always interacting with one another. All intelligent human activities demonstrate that all the intelligences are activated in their execution. The intelligences are independent of one another, but act in conjunction. For example, a dancer can only excel if she has good musical intelligence for working with the music and rhythm, interpersonal intelligence for understanding how to "reach" the audience with her movements, and bodily-kinesthetic intelligence to give the necessary agility and grace to her movements.

On speaking about his theory, Gardner says he does not actually know when the idea arose. He merely refers to what he considers remote and immediate memories. Among the remote memories he mentions his love of the piano and his surprise, during his time as a student of psychology, that there was no room in that discipline for the arts. But what really fascinated him was the description by the neurologist Geschwind of what happened when normal or gifted individuals were unfortunate enough to develop a tumour or suffer a brain haemorrhage. This fascination led him to work in a neurological unit trying to understand the organization of human abilities in the brain; indeed, he spent twenty years there. The theory as we know it began coming to fruition in a draft manuscript for a book,

Kinds of Mind, which was never published, but laid down the bases for the fully-developed theory that appeared in *Frames of Mind*.

As for his direct memories, those linked explicitly to his theory, the most important, according to Gardner, concerns his work on the Human Potential project thanks to a grant from the Bernard Van Leer Foundation in 1979. His task within the Project was to write a book about the discoveries made throughout history in relation to human cognition. Out of this came the research programme that would lead to the MI theory. In his work within the programme, Gardner made a close examination of studies from psychology, anthropology, genetics and brain science in an attempt to identify and define human capacities. Though he is not sure exactly when, at some point he conceived the idea of calling the abilities or faculties identified “multiple intelligences”. Indeed, he admits that his book *Frames of Mind* would never have met with the same success if instead of talking about multiple intelligences he had talked about talents.

Likewise, Gardner reflects on another crucial moment, that of his definition of intelligence and the establishment of the criteria underlying that definition. According to the author himself, this is the most original part of all his work. Gardner (1983) defines intelligence as the human capacity to solve problems or to fashion products that are valued in one or more cultural setting. Nearly two decades later (Gardner, 1999) offered a more refined definition, as a biopsychological potential for information processing that can be activated in a cultural setting to solve problems or fashion products valued by a culture. The modification means that intelligences are not something that can be seen or counted, but rather neural potentials that may be activated or not depending on the values of a particular culture and the decisions made by each person, their family, their teachers and others.

Although Gardner began writing about his research and his ideas as a psychologist, he realized he should say something about the educational implications of his theory. This he does in the final chapters. By 1981 he had prepared the first draft of his book; he had also fully developed his position in relation to the definition of human beings as endowed with multiple intelligences and of the distinguishing profile of these intelligences in each person. He never expected he would have such success with *Frames of Mind*, but this was indeed the work that (with a nod to Warhol) gave him his “15 minutes of

fame”, and sealed his place in history as the father of multiple intelligences.

In the first ten years after the publication of the book, Gardner watched amazed at the numbers of teachers who set out to revise their approach in the light of his MI theory, and, while remaining a psychologist, he spent time working with them. Subsequently, though, he agreed to work on research projects arising from his theory. The most tangible result was Project Spectrum, whose objective was to create a battery of measures for determining the intellectual profile of primary school pupils. Also of note was his collaboration with Sternberg – author of the triarchic theory and, like Gardner, critical of the idea of a single intelligence based on IQ – on the study of applied intelligences in the school.

Three main activities have occupied Gardner’s time in recent years. First, he produced an important triad of books: *Creative Minds* (1993), *Leading Minds* (1995) and *Extraordinary Minds* (1997), taking advantage of the marketing potential of the word “mind”. At the same time he continued to develop his definition of intelligence. But in the 1990s he had to deal with some wrong interpretations of his theory, taking special pains to distinguish his own interpretation from that of some people who were applying it. This situation led him to become involved in educational reform, especially from his position as Co-Director of Project Zero at Harvard University, focusing on teaching for understanding. Through this work he became convinced that MI should not be an educational objective in themselves, but rather a support for a better quality of education.

Gardner has indicated three objectives for the future: a broader view of human intelligence; the elimination of standardized instruments with short questions and their replacement by real-life demonstrations or virtual simulations; and utilization of the multiple intelligences concept to permit more effective teaching and assessment. And he suggests three topics as examples for this utilization: the theory of evolution, the music of Mozart and the Holocaust.

BASIS AND IMPLICATIONS OF THE THEORY OF MULTIPLE INTELLIGENCES

Gardner maintains that the basis of intelligence is twofold: on the one hand, biological, and on the other, cultural. According to neurological research, different types of learning crystallize in synaptic connections in

different parts of the brain, so that a lesion in Broca's area leads to loss of the capacity for verbal communication, but does not eliminate the capacity for syntactic comprehension. But culture also plays an important role in the development of intelligence (Gardner 1983). Indeed, all societies value different types of intelligence. Thus, while certain intelligences may be developed to a high degree in certain people within a culture, these same intelligences may not be so well developed in individuals from another culture.

Despite being accused of doing so, Gardner did not base his theory on pure intuition. It was based on a series of criteria for the rigorous determination of what is and what is not an intelligence. Eight of them passed the tests set. Table 1 shows the determining criteria.

After twenty years of the theory's development, Gardner (2005b) expressed some ideas, desires and motivations in relation to it. First of all, the desire to promote new intelligences. Secondly, his fascination with a certain phenomenon: the way in which areas of knowledge emerge, and how they become configured periodically – that is, how the human mind deals with interdisciplinary studies. And finally, the continually confirmed biological evidence of multiple intelligences. Human minds and brains are highly differentiated entities that do not fit comfortably with the

notion of an intelligence defined by IQ. Gardner confesses that if he were given another life he would be happy studying the nature of intelligence with regard to our biological knowledge, on the one hand, and our social knowledge and practice on the other.

CRITICISMS

Controversy was not slow to appear, stemming above all, in Gardner's view, from psychologists' nervousness about the proposal of doing away with tests, and widespread reservations about calling intelligences what could simply continue to be called talents.

Gardner himself discusses the criticisms (1999), which have emerged from all political, psychological and pedagogical points of view. His theory is discredited for its multicultural (open) nature and for being elitist (coming from Harvard); it is considered too flexible (because it accepts artistic activities) or too rigid (because it maintains that everything should be taught in various ways); it is accused of going against norms or of imposing too many. In response, Gardner tries to avoid defensive reactions, listen to what is reasonable in the criticisms and take on the challenge calmly, learning from his critics.

One of the most serious criticisms received by Gardner is that his identification of intelligences has been based

TABLE 1
CRITERIA FOR DETERMINING AN INTELLIGENCE

CRITERION	RECOGNITION
1. Potential withdrawal due to brain damage.	For example, language skills may or may not be affected by brain strokes.
2. Existence of prodigies or gifted individuals.	These individuals permit the intelligence to be observed in a relatively isolated way.
3. An identifiable nuclear operation, or a set of identifiable operations.	Musical intelligence, for example, consists in people's sensitivity to melody, harmony, rhythm, timbre and musical structure.
4. A characteristic developmental history within an individual, together with a definable nature of expert performance.	The abilities are examined of, for example, an expert athlete, salesperson or naturalist, together with the steps to achievement of such expertise.
5. A developmental history and developmental credibility.	One can examine forms of spatial intelligence in mammals or musical intelligence in birds.
6. Support from experimental psychological tests.	Researchers have designed tasks that indicate specifically which abilities are related to one another and which are discrete.
7. Support from psychometric findings.	Batteries of tests reveal which tasks reflect the same underlying factor and which do not.
8. Possibility to be coded in a symbolic system.	Codes such as language, arithmetic, maps and logical expression (among others) reveal the important components of the respective intelligences.



more on intuition than on comprehensive and rigorous empirical research. Moreover, critics point out that there is still no battery of tests for identifying and measuring the different intelligences. Even some of Sternberg's (1985, 1996) comments appear to echo this dissatisfaction with Gardner's theory. For researchers and teachers who have identified intelligence as "that which is measured by tests", Gardner's work will always be problematic. These can invoke a lengthy and substantial research tradition that demonstrates a correlation between different capacities and supports the existence of a general factor of intelligence. John White (1998), confessing his doubts over the theory, remarks that he has not found a satisfactory response to those doubts in any of Gardner's writings.

Gardner (1993) contests this supposed traditional evidence on the subject, and argues that it is not yet possible to know the extent to which intelligences correlate. It is true that he considered at one point creating a battery of tests, with a view to determining the correlation between scores in different tests. But he never really wanted to rely on tests, since, in practice, they lead to stigmatization and labelling.

In spite of the criticisms, the criteria mentioned above offer sufficient basis for categorizing the possible intelligences. On many occasions Gardner has acknowledged that there is an element of subjective judgement in his conception of intelligence. But it is reasoned judgement with an empirical basis. In fact, research on the functioning of the brain continues to support the idea of multiple intelligences (though not exactly those specified by Gardner).

A further criticism frequently associated with the previous one, but even more vehemently delivered, is that Gardner calls intelligences what in psychological language have always been called skills or talents. This criticism is levelled particularly at the intelligences identified as musical and kinesthetic because they are more generally considered as talents. Skills are the result of abilities, and hence should not be confused with them, nor, consequently, with intelligence. In this context, then, the majority of Gardner's intelligences would be skills or talents, rather than abilities, and in the opinion of his critics it is reckless to start relabelling peoples' talents as intelligences.

But Gardner was not intimidated by this criticism (Gardner, 2005b). He stated, indeed, that he would

have no objection to continuing calling these intelligences talents as long as logical or linguistic reasoning were also referred to as talents. Gardner and advocates of his theory point out that intelligence has never been rigorously defined, thus inviting new efforts to do so, though Gardner (1983) claims to accept that certain human capacities are intelligence and others are not.

Throughout the history of science, no author has escaped criticism. Indeed, the greater the relevance of the topic in question, the more vehement the criticism. Gardner (2005b), has spent more than two decades thinking about multiple intelligences, and is aware, more than anyone, of the deficiencies of his own theory, but he states that he in no way considers it to have been refuted, or to have been subsumed into a new holistic, unitary or genetically determined view of human intelligence.

Thus, alongside the criticisms, the downside of Gardner's theory, we should consider its value, the points in its favour. One of these, and perhaps the most significant from the point of view of the Psychology of Education, is that it highlights inter-individual variability in the classroom. Theoretically, individual differences are universally accepted; they are even respected. But few focus on them and develop them. Gardner's merit in having acknowledged and confirmed this variability is to have underlined the fact that there are many ways of learning – at least as many as there are forms of human intelligence (Bransford, Brown, & Cocking, 2000). And by the same token, there are many different ways of teaching. With so many different forms of learning and teaching, the possibility of improving academic performance is obviously multiplied. Furthermore, if as Gardner argues each pupil, in the course of his development, builds and makes combinations to fashion his own intelligent form of learning, he becomes unique, and this opens up new pathways for educational innovation of enormous significance in relation to the demand for individualized teaching designs. In this regard, the intelligences would be the most appropriate categories for identifying differences of mental representation.

Another advantage of Gardner's theory is that it has many direct applications to educational practice. The first of these is that while traditional education focused almost exclusively on the development of the two classic intelligences, verbal and logical-mathematical, Gardner's highlights the fact that education should develop the whole person, and should therefore activate all the exist-



ing intelligences. Thus, the task of educational psychologists is broadened and enriched, discarding the narrowness of purely logical and verbal considerations to extend their field of attention to the rest of the intelligences, previously marginalized. Concentrating exclusively on linguistic and logical abilities during schooling may mean that those pupils with capacity in other intelligences are cheated (Gardner, 1995). But this does not necessarily imply indefinitely increasing the content of the curriculum. On the contrary, what is required is the selection of those elements of the curriculum that are truly significant in the classroom context so that they can be approached from many different points of view. It should be borne in mind that Gardner has always favoured depth, as opposed to breadth, and understanding over the mechanical memorization of information. Consequently, educators should change their traditional model of presenting teaching material. If, as the theory proposes, each pupil has an idiosyncratic intelligence profile, the product of the unique combination of all the different types of intelligence throughout her life, then the way in which classes and, especially, content are structured cannot continue to be based on the intelligence model of traditional teaching; rather, it will have to attend to all the intelligences so as to reach the maximum number of pupils.

Furthermore, Gardner's theory has succeeded in connecting with the educational *zeitgeist* and the new paradigm focused on learners and their learning rather than on teaching and the teacher (Banathy, 1984; Beltrán, 1993), and on its most immediate derivations, such as situated knowledge (Brown, Collins & Duguid, 1989), learning styles and approaches (Biggs, 1987), learning to learn programmes (Nickerson, Perkins & Smith, 1985) and self-regulated learning (Zimmerman, & Martínez Pons, 1988; González Pienda & Núñez, 1998, 2002), among others. The theory has gained ground, moreover, at a time of generalized demoralization among teachers, in desperation over how to assimilate the enormous individual differences they encounter in educational practice. This has made it easier for them to understand Gardner's criticisms of the single intelligence model and IQ tests. Within this new framework, teaching and helping learners can take place in a more promising and stimulating educational scenario. As Gardner stresses in one of his numerous forewords (Gardner, 1994), the essence of the theory is to respect the many differences between individ-

uals: the multiple variations in their manner of learning, the different forms in which they can be assessed and the near-infinite number of ways in which they can make their mark on the world. The theory has also provided educators with new assessment criteria, models and instruments that permit them to identify with a high degree of accuracy what constitutes a developed, educated person, in a constant state of growth.

Finally, the theory offers sufficient resources for pupils to discover their true intellectual profile and, consequently, go on with hope and anticipation to sketch out their career project, since, with the help of their teachers, they will be able to identify the strengths they should capitalize on and the weaknesses they must compensate for if they are to achieve personal satisfaction and professional success. In sum, the plus side of the Gardner's theory gives grounds for optimism about improvements in educational practice: individualized designs, diversified and enriched teaching, clarification of the teacher's role, instruments for authentic assessment and adequate intellectual profiles for personal growth.

RESULTS

Advocates of the theory, groups led by Gardner himself within Project Spectrum (Gardner, Feldman, & Krechevsky, 1998), report that the results of the most rigorous assessment so far are promising: excellent documentation of materials has been achieved, along with high levels of quality in the development of innovative measurement instruments for assessing strengths and weaknesses related to intelligence; a natural, stimulating environment has been constructed so that children's performance is optimum; and great investments of time and money have been made. There are few precedents of the development of scoring systems that go beyond the traditional linguistic and logical criteria and with these conditions.

The results obtained are, moreover, reasonably consistent with the proposals of the multiple intelligences concept. For young children, performances in the Spectrum activities were broadly independent and revealed relative strengths and weaknesses; there was a significant correlation between performance of pre-school children in the Spectrum activities and in the Stanford Binet test. These results lend some degree of support to the main proposals of the theory, since children aged 3 to 7 show profiles of relative weaknesses and strengths. But the data also



indicate that the MI notion may be more complex than predicted, with three foci of attention emerging for future research: developmental adequacy of materials, level of social class and precise deployment of the Spectrum materials in the classroom.

Some observations have suggested that the theory cannot be disconfirmed. But the results discussed here indicate some of the ways in which the central objectives can be challenged. Gardner himself (1993) has admitted that if future evaluations do not reveal strengths and weaknesses within a population, if performance in different activities prove to be systematically correlated, and if constructs (and instruments) such as IQ explain the preponderance of the variance in activities designed to register specific intelligences, then the theory will have to be reformulated. Even so, the objective of detecting different human strengths and using them as the basis for commitment and learning may be worthy and relevant, regardless of the scientific fate of the theory.

Furthermore, Gardner's theory has been warmly received by those working in education. Soon after its publication, professionals in this field began testing its effectiveness in schools. The research projects, studies, masters theses and doctoral dissertations that have tried to put Gardner's ideas into practice all over the world are far too numerous to mention, though the first studies carried out in American schools (Christison, 1996; Fogarty & Stoehr, 1996; Gahala & Lange, 1997 & Haley, 2001) would serve as examples. In Spain, the theory has also been tested in practical situations. Those interested can consult the findings from two universities that have spent some years applying Gardner's model, in Murcia and Madrid, under the respective directions of Professors Prieto and Pérez. In either case the results highlight more points in favour of the theory than against it (Prieto & Ferrándiz, 2001; Prieto & Ballester, 2003; Ferrándiz, Prieto, Bermejo & Ferrando, 2006; Pérez, 2000, 2005; Pérez & Domínguez, 2000, 2005).

SOME PSYCHOLOGICAL KEYS FOR EDUCATIONAL CHANGE

In order to understand all the innovatory implications of Gardner's work for the world of educational psychology, it is useful to take into account three factors that explain Gardner's interpretation of education and help us to understand how he sees educational problems from the psychological perspective. The first of these is that he

considers himself a psychologist, but within an educational context. Psychology was possibly what changed his life, when he was intending to become a lawyer, and instrumental in this was his mentor Bruner, with whom he worked at Harvard University on the MACOS Project. Within psychology, and more specifically cognitive and learning psychology, Gardner was attracted by the subject of child development. He wanted to know how the mind of a child worked. This led him to Piaget, whose ideas he readily accepted at first, but later refuted on finding what he considered to be shortcomings in his research. The second factor is Project Zero (Arts in Education), in which Gardner worked with a group of distinguished psychologists, including Perkins, with whom he has since co-directed the project at Harvard for many years. This provided him with extensive pedagogical knowledge that has been superimposed on his original psychological background. And the third factor is his work at the Boston University Medical School, where he has been able to accumulate sufficient empirical support for his intuitions on the functioning of intelligence.

Although Gardner has not formulated a specific pedagogical theory, it is worth considering some of the most lucid analyses he has made as contributions to the Psychology of Education.

a) The dilemmas of education

Gardner (2001) sees education from the perspective of the psychologist and the student of mind and brain, and raises two dilemmas affecting the *what* and the *how* of education. The *what* dilemma clearly refers to content. Gardner argues that if we have to teach everything: facts, material, processes, and so on, we would break the backs of our students and our teachers. Moreover, the body of knowledge currently doubles every two years, so that it would be necessary to increase classroom hours, and even then it would be difficult to cover the programmes.

With regard to this first dilemma, Gardner is in favour of a limited number of truly important subjects – for example, the theory of evolution in biology, the concept of political revolution in history, or mastery of an art or trade. But the problem continues to concern *how* to teach so that the pupil understands. To favour understanding, Gardner (1999) proposes a comprehensive differentiated pedagogical strategy with four paradigmatic approaches: observation, confrontation, systemic approach and



approach derived from MI. The clearest example of observation is that of crafts or trades, where the relationship between teacher and learner permits the learner to observe the teacher closely and gradually participate in workshop practice. Children's museums or science museums would constitute other examples. The confrontation approach involves facing up to obstacles to understanding – stereotypes, memorization, and so on. For example, if a pupil tends to think in a stereotyped way, she can be encouraged to consider each historical event from different perspectives. The systemic approach is characterized by focusing explicitly on the exercise of comprehension, and involves teachers setting clear comprehension objectives – tasks that indicate to students their achievement – and sharing the perspectives of their students. This is the approach employed successfully for some years by a group of researchers within the Harvard Project Zero. This model has three parts:

- *Access routes.* There are seven routes of access to understanding a topic, largely corresponding to the multiple intelligences. These routes offer students seven ways of understanding the material so that they can choose the most attractive, familiar or productive one: narrative, quantitative, logical, existential, aesthetic, practical or social.
- *Instructive analogies.* The access routes place students "inside" the topic, arousing their interest and desire to explore, without offering specific forms of comprehension. For this there are instructive analogies based on material already understood. For example, in the case of evolution one can find analogies in history (social processes can be likened to biological processes).
- *Dealing with the essence.* The access routes open the way, motivate students; the analogies transmit revealing aspects of the concept, but comprehension still has to be dealt with. And here Gardner refers to two styles characterizing teachers: either they have provided explicit instruction and assessed understanding according to linguistic mastery of the material (evolution is...), or they have provided abundant information in the hope that students will in some way make their own synthesis (based on what you have read, what would you do if...). Some teachers indeed use the two styles, simultaneously or successively.

However, the fundamental step is to recognize that a person can only properly understand a concept and demonstrate it if he can develop multiple representations

of its essential aspects. The ultimate objective is to synthesize the diverse representations as exhaustively as possible. But this involves devoting sufficient time to each topic, describing each unit in different ways and explicitly directing the tasks towards a spectrum of different intelligences, aptitudes and interests.

The theory of multiple intelligences provides the opportunity to examine a topic in depth to determine which intelligences, which analogies and which examples have most probabilities of transmitting the essential aspects of a topic to the greatest possible number of pupils. Gardner (1999, 2005a) acknowledges the "artisanal" aspect of education, as opposed to the rigidity of the algorithmic approach. The pleasure of teaching resides in this artisanal approach because it offers the opportunity to re-examine a topic and find new ways of transmitting its essential aspects to different minds.

b) Role of the student

For many decades, throughout most of the 20th century, educational research was based on the assumption that a child's mind was a kind of *tabula rasa* that absorbed experiences which in turn shaped the child's development. Dissatisfaction with this view led some psychologists to explore other perspectives and theories of development. For example, Piaget (1946) focused on the intellectual and cognitive development of the child, whilst Gibson (1959) concentrated on the development of perception in the child. Although these two theories were different, they modelled a new perspective on children as active beings, capable of setting goals, planning and reviewing.

Gardner's image of the child, and of the student in general, derives largely from Piaget's theory that sees intelligence as a process of construction of ever more powerful cognitive structures. What interested Piaget, more than individual differences, were the principles governing the mental development of all human beings, that is, intelligence as a universal property that develops in qualitatively different stages through which all children pass: sensory-motor, pre-operational, concrete operations and formal operations. According to Piaget's theory, which destroyed traditional myths about the child, children are not adults in miniature, but rather subject to the mental processes peculiar to their age.

But Gardner, influenced by Bruner (1960), soon became convinced that intelligence did not develop automatically,



as Piaget had thought. There was something more that drove and directed development. And this factor was none other than culture, which selected and reinforced children's natural capacities. In this, both were influenced by Vygotsky (1978), who demonstrated that the availability of tools and techniques transformed human development, thus broadening the perspective of human intelligence.

Moreover, Piaget had overlooked things, focused as he was on logical-mathematical intelligence. He had forgotten about the Arts, as well as the mechanism through which developmental change occurs, the reasons for diversity between individuals and, perhaps most importantly, how education can influence development. Likewise, he proposed that development took place in all intellectual areas in the same way and in the same proportion – a notion firmly refuted by Gardner.

But what truly motivated Gardner's research on pupils' learning was the failure of attempts to apply the different behaviourist and psychometric psychological models to the field of education, on conceiving the student as passive, reactive and dependent. With his theory, Gardner (1983, 1999) sketches a different type of student, active, propositive and independent, who possesses, in different quantities, each and every one of the existing human intelligences, though the way in which he combines them and utilizes them generates an idiosyncratic and original pattern of intelligence that defines him as unique and different from others. This fits in with the actual school context, in which, despite teachers' attempts to impose uniformity, pupils resist directive instruction, clearly displaying their individuality.

According to Gardner's theory, everyone is born with all the intelligences, but the pupils in a teacher's class have all arrived there with different sets of intelligences developed. The significance of this is crucial for teaching design, since each child will have to learn with a unique set of intellectual strengths and weaknesses that determine whether it will be difficult for her to learn classroom material in a particular way, that is, according to a specific learning style. It is true that teachers cannot adjust to all the different learning styles, but they can show each of their pupils how to use their most developed intelligences to better understand material for which they would normally employ their weakest intelligences.

Gardner has argued vehemently that the purpose of education is to enhance pupils' understanding, not just their

memories. But this development of understanding must occur taking into account the strengths and weaknesses of each pupil in the complex mental network of the multiple intelligences. Understanding thus attained will permit pupils to apply it to new situations different from the original educational one, and even to new situations in their lives. That is, they will be able to transfer what they have learned because it has previously been understood and assimilated, and not just acquired in a mechanical way. This new view of the pupil who understands and transfers knowledge in accordance with his personally constructed set of mental representations or intelligences may lead to radical changes in education (Gardner, & Hatch, 1989).

c) Role of the teacher

If the image of the pupil changes, so should that of the teacher. And if the pupil, far from being interpreted in the classroom as a passive, reactive and dependent being, is seen as active, propositive and independent, the role of teachers should change in the same line because they are at the service of the pupil and her learning.

And this is indeed what happens in the educational context configured by MI. The teacher's role in this kind of classroom differs markedly from that of the teacher in the traditional classroom. In the traditional context, the teacher sits or stands facing the class, gives the lesson, writes on the board, asks the pupils questions and waits for them to finish their work. In the MI classroom, teachers, far from following a linear expositional script, are constantly changing their method of presentation, moving from the linguistic field to the musical one, from there to the logical-mathematical one, and so on successively with all the intelligences, combining them imaginatively. And more importantly, the teacher in MI offers her pupils direct experiences, which oblige them to get up and move around the classroom or to pass around some object so that the material in question comes to life; she might also ask her pupils to construct something tangible so as to reveal their understanding of the topic. The teacher favours cooperative learning by encouraging her pupils to interact in different ways (in pairs, in small groups, in large groups). But she does not forget the rhythm, the pace and the personal conditions of each pupil. With this in mind she plans to allow sufficient time for pupils to reflect, to do tasks at their own pace or to relate their experiences to the material being studied (Armstrong, 1994).



Teachers have traditionally been interested in assessing *what* children learn, and not *how* they learn. Focusing on how they learn gives the child a comprehension-based approach to teaching and learning. Children are actively involved in their learning, and work closely with their peers and their teachers to make decisions and solve problems. Thus, according to Gardner (1999), teachers' tasks would be dual, and present a dual challenge. The first is to make pupils understand the great monument to humanity constituted by the traditional disciplines and the forms of learning that have emerged throughout the years. And the second is to help pupils take an active role in deciding how to attain this understanding given their intellectual strengths and weaknesses and their own role at this point in history.

The new role of the teacher, and his power, for good or ill, are represented by what Gardner (1993) calls a "crystallizing experience", consisting in a strong affective reaction by the child to a pleasant situation that makes a profound impact on her, as was the case of the musician Yehudi Menuhin when, as a child, he heard the first violinist in a concert. His reaction was to want to be like him someday. But there is also the "paralyzing experience", when children observe unpleasant, unfair or upsetting behaviours and attitudes.

d) Learning mechanisms

Three fundamental ideas, among others, appear to pervade Gardner's theory in relation to learning. First, Gardner (1999) believes children have a propensity for learning and problem-solving in particular ways, in accordance with their specific intelligences. And this fits in with the natural motivation or inclination they display towards specific or preferred types of learning. But secondly, he stressed the importance of culture and environment, and how both educate the manner of learning in a predisposed child. This aspect of Gardner's model is in line with the proposals of Vygotsky (1978) that the child develops in the social context in which he lives. And thirdly, if the child is allowed to concentrate on the strengths and abilities corresponding to his intellectual make-up, he is being provided with the motivation and opportunity to learn most suitable and favourable for children's learning. Gardner thus views learning through his multiple intelligences model. His is a pluralist view of learning because it recognizes that each person has different cognitive strengths and weaknesses.

How does this set of transformations involved in learning in the context of multiple intelligences occur? To answer this question it is necessary to consider a series of terms current in the field of education and psychology that explain this learning process from the inside and highlight the complementarity of two theories, that of Vygotsky (1978) and that of Gardner (1983), which are mutually enriching.

Zone of proximal development. Vygotsky's conceptualization of learning in social situations is reflected in his well known model of zone of proximal development (ZPD). He defines the ZPD as the distance between current level of development – as determined by the independent solution of problems – and the potential level of development – as determined by the solution of problems under adult guidance or in collaboration with more capable peers (Lloyd & Fernyhough, 1999). Gardner has stressed the relevance of having knowledge of the initial spectrum of intelligences and abilities of each child before learning, and above all, the potential strengths for her future development. Likewise, he has acknowledged the power of the educational context as a catalyst and consolidator of the child's natural tendencies and the shaping role played by classmates.

Scaffolding. This idea of Bruner's has been extended and developed by many other authors. Tharp and Galimore (1988) define scaffolding not as a simplification of the task, but as the *simplification of the child's role* in the task through the assistance of an expert or adult. Some examples of scaffolding are the classic *shaping* or dividing the task into smaller units. Through the process of shaping, the child is at first able to carry out the task with help, and then to do it alone. Gardner believes that teachers tend to teach children in the way they best learn themselves. This can also be applied to children. Working together, children will have the opportunity to gain more skills and will learn new ways of understanding our world.

Intersubjectivity. An important learning concept related to that of the ZPD is intersubjectivity: shared understanding, based on a common focus of attention and common goal between a child and a more competent person. Intersubjectivity can occur between two children when they understand the process in their work and the goal to which they are working. When there is such a focus of attention, children are able to expand their existing knowledge and apply it to new situations or activities.



Children learn not only from previous experiences but also from one another. When there is subjectivity between a child and an adult, learning is reciprocal: the child can affect the adult's behaviour just as the adult's behaviour can affect the child's.

Process of internalization. Vygotsky proposes that a process of internalization begins when an operation, which initially represents an external activity, is reconstructed internally. Thus, each function in the child's development occurs twice: first at the social level (intermental) and second at the psychological level (intramental). When a child is learning something for the first time she is at the social level (intermental). As the child has more and more experiences she will begin to understand the social significance of the culturally mediated action. The process of internalization in a child is the result of a long series of developmental events. This may affect the way children learn. But one of the ways of explaining these events that favour the internalization process is that offered by Gardner through the concept of multiple intelligences.

e) Instructional model

There has always been – though more so in the last few years – a generalized concern about the quality of education, and hence the proliferation of proposals for reform of the system that range from the most moderate to the most radical. But underlying such calls for educational reform are two different philosophies. One, classical, is based on the belief that intelligence is an innate, general and relatively unchangeable feature that can be precisely quantified (even though modern psychometricists do accept the existence of a set of capacities strongly related among themselves). On the basis of this view it is attempted to attain academic excellence through the establishment of uniform norms, and recommended that all children learn the same material in an identical way. The other philosophy, based on the developmental cognitive theory advocated by Gardner, seeks to achieve academic excellence by adapting the programme to the pupils' different abilities and ways of learning. But if education focuses on the few abilities revealed in pencil-and-paper tests, many children will be condemned to years of frustration and disillusionment, if not indeed to resounding failure.

But Gardner has never wanted to associate his theory with a particular teaching system. His point of view is

psychological, though he is aware that many educators have accepted his postulates and attempted to apply them in their classrooms. When asked how to put his theory into practice he has confined himself to indicating that the most important aspects of the teacher's work are to take individual differences seriously, focus his interest on the pupils and ensure that they use their mind well.

Gardner, moreover, has absorbed influences from prestigious educators and experts such as Montessori and Decroly, which have contributed to shaping his views on education. With Decroly (1906) he coincides, for example, in the value he attributes to discipline and the maintenance of norms, self-help systems and the capacity for personal and collective self-government, the observation of nature and the responsibility of parents. Many of the instruments developed for the evaluation and training of cognitive abilities in Project Spectrum have their antecedents in the methodology of Decroly; Gardner also coincides with Montessori (1932) in defending pupils' spontaneity, in the belief that development is idiosyncratic for each one, and in giving great importance to the classroom environment and to the creation of rich and evocative learning materials, with a view to cultivating and perfecting the activity of the senses.

Since teachers need more specific guidelines, their imagination, stimulated by some of Gardner's ideas, has produced different criteria, models and formats with the aim of translating into action the spirit of this new educational movement. As classic authors, sometimes endorsed with a foreword by Gardner, we might cite Lazear (2003) and Armstrong (1994). Gardner's conception of the school takes its inspiration from two main models of reference:

1. Science museums, in which there is an adequate manual context, a marked interdisciplinary character and a systematic basis of enquiry.
2. Artisanal social learning, which guarantees learning based on shaping, motivational and with high possibilities of success.

The school day in this type of school is divided in two halves. In the morning pupils work on traditional subjects, not in the traditional way, but in the form of projects, and with focus on the eight intelligences. In the afternoon the pupils go out into the community, where they broaden and strengthen their understanding, working with experts in schools, museums and educational institutions created by the community for this purpose.



Three types of professionals work in the school:

1. The *psychologist*, whose tasks include diagnosing the intellectual strengths and weaknesses of each pupil and their priority interests in each field, with a view to helping teachers and pupils in their teaching-learning tasks. In order to do their work properly the psychologists should keep detailed records of the school experience of each pupil, with observations, periodic assessments and systematic gathering of information.
2. The *expert in curriculum* serves as a bridge between the pupil's abilities in the multiple intelligences and the resources of the school. The task of these professionals consists in allocating pupils to the appropriate courses and informing teachers about how to approach each pupil so as to capitalize on their strengths and maximize their learning potential.
3. The *expert in social resources* is the link between the school and the community. Her work involves relating the pupils' intellectual tendencies with the resources created by the corresponding community or region. For this purpose she should be well acquainted with both the personal conditions of the pupils and the learning resources outside the school, be they other schools, courses, workshops, or educational and cultural meetings or experiences.

The multiple intelligences school also includes other innovative educational features and initiatives, such as school extension projects, learning groups organized by preferences or "enrichment classrooms" that pupils can visit several times a week.

f) Assessment

Gardner's (1999) theory proposes, among other things, a fundamental restructuring of the way in which educational psychologists assess pupils' learning progress. It suggests a system that depends less on standardized, formal or norm-based tests and much more on authentic assessment or assessment in context. It is called authentic assessment because its tasks are similar to real-life tasks; it is called assessment in context because intelligence cannot be conceptualized out of context, since intelligence is always an interaction between a biological potential and a learning opportunity in a given cultural environment. This assessment serves, above all, to compare the pupil's performance with his own previous performances.

This conceptualization is coherent with Gardner's (1993) notion of distributed intelligence, whereby humans do not work intellectually using only the head (this recalls all too well the myth of Athena, goddess of wisdom, emerging from the head of Zeus), but rather use other corporal or technological media that help them to think, calculate or discern, and constitute their own intellectual architecture. All of this implies a new approach to assessment whose essential features are as follows: emphasis on assessment more than on examinations, use of neutral instruments with regard to intelligence, use of multiple measures, sensitivity towards individual differences and developmental levels, and use of motivational material.

Authentic assessment covers a wide range of instruments, measures and methods. The most important requirement is observation. Gardner (1983, 1999) has suggested that we can better evaluate students' multiple intelligences by observing them manipulating the symbolic systems of each intelligence. Observing pupils as they solve problems, for example, in natural contexts provides the best image of their competencies in the sphere of the topics taught in school. The second necessary component in the application of authentic assessment is the keeping of records on the student's productions and on the processes used in problem-solving. These records can be taken using some or all of various methods, including: the noting down of daily occurrences, interactions, samples of work, files or audio-cassettes.

The principle that should govern the chosen assessment system is that if children have different intelligences or forms of mental representation, then they have different ways of learning, and should therefore be assessed in accordance with them. Consequently, professionals should create a profile of intelligences for each one. If we know how they learn we shall be able to make informed decisions about what and how to teach each pupil and how best to assess their progress (Lazear, 2002).

Gardner (1999) reveals the shortcomings of some conventional forms of assessment and the dangers of the thinking habits rooted in them. Many of these forms are inadequate for measuring certain kinds of intelligence. Therefore, in collaboration with Feldman and Krechevsky (Gardner, Feldman & Krechevsky, 1998), he conceived a different assessment method, called Spectrum. There are also other, similar approaches, such as KEY School, Pifs Units, (practical intelligence in the school) or Arts PROPEL.



Gardner has warned of some risks, and even abuse, that can occur in relation to assessment. First of all, interest in an intelligence should not be confused with manifest ability in that intelligence. Another potential risk concerns the tendency to label children as “linguists”, “spatials”, etc. Labels can be stimulating, but equally they can be restrictive. Also to be avoided is the belief that everyone should receive the same treatment, that is, should study the same subjects, with the same methods and the same assessment system. At first sight this seems fair, but the injustice it involves soon becomes apparent – related to the mistaken idea that all of us are the same and that teaching reaches us all equally and in an equitable way. The reality is quite different, since we have different mentalities, different characters, and above all, different intelligences and ways of learning. We have to know each individual. And it is here that multiple intelligences function as a first-order organizing principle, as they represent the interests, strengths, weaknesses, preferences, learning styles and experiences of each student. Gardner even proposes going beyond MI, because it is necessary to continually

MULTIPLE INTELLIGENCES AND COUNSELLING

The theory of multiple intelligences may be of enormous help for educational counselling. First of all, it is extremely useful for drawing up a complete profile of the pupils’ intelligences, making possible the achievement of an ed-

ucational utopia, which is individualized teaching designs. Secondly, it offers psychologists a comprehensive map of each pupil’s strong and weak points that serves as a frame of reference in their direct contact with them. Thirdly, it provides children with a mirror that shows them their approximate image as students and the way in which, both at school and in general life, they can develop and exploit their strengths and compensate for their weaknesses. And finally, the profile of intelligences is a sufficiently objective instrument for considering pupils’ vocational and professional impulses, at least in the early stages of their decision process.

However, there is no “megatest” that can provide a diagnosis of students’ intelligences. The best way of diagnosing the intelligences is observation. This observation may be complemented by a type of questionnaire that serves as a guide for observation, or can even be completed by the students themselves.

A practical way of diagnosing students’ intelligences is to observe their “deviant behaviours” in class. For example, the strongly linguistic pupil will normally be talking without permission, the spatial child will be daydreaming, the interpersonal one will be socializing, the kinesthetic one moving around, and so on. These pupils are expressing metaphorically their way of learning through their deviant behaviours, and asking for these channels to be used if they are to achieve their potential in the most appropriate way.

TABLE 2
DIFFERENCES BETWEEN ASSESSMENT THROUGH STANDARDIZED TESTS AND AUTHENTIC ASSESSMENT

STANDARDIZED TESTS	AUTHENTIC ASSESSMENT
Reduce the child’s life to data and scores	Offers an image of the child as a student
Create norms that require failure by some	Offers settings in which the student can triumph
Emphasize tests with measurement based on scores	Offers an accurate and global framework of performance
Focus on errors and low grades	Highlights the strengths and weaknesses of each student
Emphasize data when making decisions	Offers multiple sources of assessment to observe progress
Treat students in a uniform way	Treats each student as a unique being
Judge the child without offering suggestions for improvement	Provides information useful for learning
Focus on the correct answer	Considers processes and products
Place students in artificial settings	Places students in natural settings
Generally prohibit student interaction	Favours cooperative learning



Another good way of assessing pupils' inclinations is to observe what they do in free time during classes, what they do when nobody tells them what they have to do. And what do pupils do when they are given a choice between different activities? The linguists might tend towards books, spatialists towards drawing, interpersonalists towards games in a group, and so on. It would be advantageous for psychologists to keep some kind of records of these choices in order to adjust their support to the intelligence styles of each student.

The most rigorous way, up to now, of assessing the multiple intelligences is that carried out within Project Spectrum, by a team headed by Gardner himself. Project Spectrum had two basic objectives: to broaden conceptions of the intellectual potential of small children and to provide practical techniques for assessing as many areas of potential as possible. It is true that the assessments were never intended to completely substitute standardized tests, but they can provide a complementary picture that reveals the most outstanding capacities of each child. The Spectrum assessments were designed to detect notable abilities and, to a lesser extent, dormant abilities, in a way that was comprehensible for parents, teachers and children, and to act on them. The idea was to help educators get to know their pupils better, acknowledging the great diversity of capacities present in the youngest ones, and to redesign curricula and teaching approaches. To this end, the project constructed 15 instruments related to the corresponding domains or classes of intelligence.

MULTIPLE INTELLIGENCES AND TECHNOLOGY

We live in a society in which technology has transformed all dimensions of human life – social, sporting, economic, scientific, and of course educational. But technology, despite its immense power, is not everything. Moreover, its power is merely instrumental, so that it should be at the service of educational objectives. But how? Gardner's theory invites us, indeed challenges us, to go beyond the available technologies and focus on the fact that it is a question of teaching children rather than of providing information. Teachers today have more choice than ever, but how can they identify the most appropriate media for a given learning task?

As with any teaching design, the starting point is the student (basic knowledge she brings to the class; technological skills she possesses; intelligences developed and

for developing, etc.) All this information helps teachers to adjust the lesson so as to place students at the level in which they are prepared for learning. The second consideration in the selection of media is the objective of the lesson (whether or not it is appropriate; what the teacher expects them to learn; way of structuring the lesson; form of measuring success). It is then necessary to consider the intelligences deemed important to develop in order to achieve this objective, that is, the intelligences to plan for with this aim in mind. Finally, teachers should consider which technologies are suited to these intelligences. In this way they will achieve the most suitable technologies for each lesson.

The psychoeducational approach can be improved considerably if in addition to the traditional media (paper, pencil, books and documents) we introduce new technologies. Today there are sufficient technological media to offer individualized services to teachers and to learners. We can design computer programs aimed at specific intelligences that provide access routes, permit students to demonstrate their own comprehension using different mental representations (linguistic, numerical, musical, etc.) and help teachers to assess students' work in a rapid and flexible way.

The history of teaching designs is linked, in part, to the use of technology (projectors, conference rooms, films, telephone, television and computers). Gardner (1999) notes that the technologies appear to be made to measure for MI. But this is by no means guaranteed. Many technologies have disappeared, and others have been wrongly employed, such as in the Holocaust. And no educational approach should be based on purely instrumental aspects: the purpose of education is to improve comprehension. However, this comprehension can be employed in many different ways. Physics can be used to build bridges or to produce bombs – and this applies to all types of knowledge. The goal is for students to understand the world better, not to satisfy their curiosity, but to contribute to making it a better place.

The only way of determining which intelligences are stimulated by a technology is to observe the task that the technology is being employed to complete. The technology itself is not a teaching goal; it is merely an instrument to help achieve the goal. It is the process of instruction corresponding to the learning objective that reveals the true nature of any technology and its relationship to the intelligences.

MULTIPLE INTELLIGENCES AND PSYCHOLOGICAL INTERVENTION

Gardner's theory also has numerous implications in the field of special education. First of all, it contributes to contextualizing this education within a much broader area than that opened up by classical intelligence: that of multiple intelligences, which identifies the strengths and weaknesses of all human beings. According to this theory, we all have some deficiencies and some strengths within our intellectual repertoire. Therefore, children with some deficiencies are no longer marginalized, labelled, but rather, like the rest, have strengths and weaknesses distributed across the whole intellectual spectrum.

Secondly, if we all have strengths and weaknesses, Gardner's theory makes it possible to change the traditional educational paradigm focused on deficit for one focused on growth or development. It is educationally much more advantageous for all students if attention at school is concentrated not on what each one lacks, but rather on that which is valuable in each one, since this highlights the possibilities of each child for the future.

This new paradigm does not conceal the reality; it acknowledges weaknesses or deficiencies, but it does so within a context that considers pupils with special needs as basically healthy people. Indeed, on diagnosing all the pupils in a school, learning difficulties can appear in any of the seven intelligences. And these deficits are often present in a relatively independent way in the midst of other dimensions of the individual's learning profile which are more or less intact and healthy.

An interesting strategy for intervention in special education in this context is to study the biography of eminent persons from history who have struggled against difficulties of one kind or another. Such study can provide examples of people with all kinds of special needs who are also exceptionally gifted in one or more of the eight intelligences. The MI theory is an excellent context in which to talk about such persons and apply an understanding of their situation to the lives of pupils who have to deal with similar problems.

The theory suggests many strategies for planning the special education of children with difficulties or deficiencies. First of all, it is convenient to have a diagnosis of the eight intelligences with a detailed description of strengths and weaknesses distributed across the intelligences spectrum.

Once the diagnosis has been made it is necessary to

design an individualized plan that takes into account the specific characteristics of the pupil and permits maximum development of her abilities. This is the openness of possibilities provided by the theory of seeking positive channels through which pupils can learn to handle their difficulties. Educators who see the difficulties within the framework of the seven intelligences will observe that they occur only in a part of pupils' lives. Thus, they can concentrate their attention on the strong points of special needs pupils as a prerequisite for developing appropriate helping strategies. The Pygmalion effect is well known as an illustration of the influence on a person's success of the way she is seen by her educators.

Educators should also keep a watchful eye on the strengths of MI in the lives of pupils with difficulties in school. This is a highly effective strategy because it can reveal positive solutions to their special needs. That is, pupils who due to one type of difficulty or another are not having much success in certain fields of intelligence can get around the obstacles in their way. This they can do by using alternative routes that take advantage of their more developed intelligences (Gardner 1983). The best examples are Braille for people with visual problems and sign language for those with hearing difficulties; in either case people have taken advantage of alternative symbolic systems of intelligence.

But the implications of Gardner's theory go well beyond mere corrective strategies and interventions. If the theory is appropriately applied many positive effects will be achieved, including improved performance and self-concept in students, greater work satisfaction in teachers and better understanding and appreciation from classmates.

FINAL COMMENTS

Gardner's theory contributes a series of original and interesting analyses that help to clarify some important variables in the Psychology of Education. For example, it offers valid solutions to the two great dilemmas of education today, the *what* and the *how*, proposing two strategies of undoubted practical value, thematic selection and in-depth comprehension, with the use of multiple intelligences as an appropriate categorization tool. The student's image has been thrown into the spotlight more than by any previous theory: students are active, independent, propositive, and endowed with eight important potentials, thanks to which they can comprehend reality

in many and different idiosyncratic ways. Teachers' role has been enhanced – and not before time –, on their being understood not so much as mere routine presenters of information but rather as what they really are: discoverers of intelligences, facilitators of learning and catalysts of crystallizing experiences throughout the process of the student's growth and maturation.

Within the learning process, the perspective of the theory of multiple intelligences clearly and practically reveals the mechanisms of scaffolding and the interiorization and negotiation of meaning that permit the student's understanding and the acquisition of the mentality corresponding to a biologist, historian, poet or mathematician. Gardner presents no specific educational model, but the central shafts of the approach he endorses are individualized teaching design, contact with life and the solutions our ancestors have found to their problems, and collaborative learning. For Gardner, assessment only makes sense within a context, with material that is familiar to and motivating for the student, and with authentic tasks close to those of real life. Finally, Gardner stresses as crucial: the diagnosis of the intelligences from an early age with instruments that permit identification of the personalized profile of each student with its corresponding map of strengths and weaknesses; the use of new technologies as cognitive instruments that contribute to the development of multiple intelligences; and the demand for a radical change in the model of special education, which should shift from focusing on deficits to focusing on growth.

Talking about a theory after twenty years means that the theory in question has managed to resist the sternest judge of all, which is time. And if this occurs in the field of psychology, and in a 21st century in which ideas are changing at an unprecedented pace, such resistance has even greater value. Clearly, as shown in the present article, Gardner's theory has some less attractive aspects or weak points. But it must also be acknowledged as one of the psychological theories that has had most influence on education in recent years. Its message has had a profound impact on the world of teaching, and has led to changes in many of the psychological principles applied there. It suffices to glance at all the editorials, journals or archives of doctoral theses on it to realize just how clearly Gardner's message has been received.

Gardner has been harshly criticized by many psychologists, but he has received the applause of many others

and of the majority of educators. Doubters would do well to attend one of the summer courses on Thinking, organized for the last 15 years or more by psychologists from the top US universities, including Harvard and Yale, and watch Gardner address more than 20,000 psychologists and educators, explaining his theory and how to improve education through it.

Rarely has a psychological theory penetrated so deeply into the very architecture of education as this one. In any case, and whatever the fate of this approach in the future, maybe one day many students, psychologists and teachers will thank Gardner for his intelligent psychological insight into education.

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INTELLECTIVE VERSUS EMOTIONAL EDUCATION: CONFLICT, LIMITATION OR INCOMPETENCE?

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A review of the Spanish educational system, as that of any other country, nowadays cannot only be centred on knowing more, on knowing in order to do or on knowing in order to think, but also on knowing in order to live and live together. Not only because it is an important personal and social objective, but because it is empirically demonstrated that certain values and cognitive strategies or "mental molds" are better predictors than the IQ for the improvement of academic achievement.

Key Words: Subjective well-being, Socio-affective education, Mental molds, School achievement, Educational reform, Values.

La revisión del sistema educativo español, como el de cualquier otro país, hoy día no sólo puede estar centrado en saber más, en saber para hacer o saber para pensar, sino también en saber para vivir y convivir. No sólo porque sea un objetivo personal y social importante, sino porque se demuestra empíricamente que determinados valores y determinadas estrategias cognitivas o "moldes mentales" son predictores superiores al CI para mejorar el rendimiento académico.

Palabras clave: Bienestar subjetivo, Educación socioafectiva, Moldes mentales, Rendimiento escolar, Reforma educativa, Valores.

THE PISA REPORT AND MORE

Curiously, those who express greater distress with respect to a materialistic, problematic world without principles, and who call for an education in values, are at the same time, those who are the most demanding in increasing curricular contents and students' efforts. Is this contradictory? Initially not, but it could be if we do not aim at the real objectives of an education of quality that responds to the needs of people, of living together and of efficiency, both professional as well as that required for getting along in the world.

On the other hand, when we talk about efficiency, we cannot confuse it with "more of the same", that is: more contents, more information or more "blind" exigency.

The PISA report does not as much show the Spanish students' low results as being due to lack of conceptual or "declarative" knowledge, as to lack of procedural knowledge, especially, skills for the comprehension of written texts, for solving mathematical problems in practical life or knowing how to apply scientific elemental principles to mundane reality.

This fact is a constant throughout the Spanish educational system, at primary, secondary and post-secondary levels. There is a contradiction in that some of our students, the most outstanding, excel in knowledge

and being "jacks-of-all-trades" with respect to students from other American or European schools or universities; but it is also true that our students in general, in a first contact with other academic realities, feel defenceless when they are subjected to work in tasks of critical analysis, elaboration, investigation or application.

Montaigne's claim "better a well-made head than a well-filled head" has been ringing throughout this debate since the XVII century. It is still difficult to assume a school that teaches "learning to learn" and "learning to think". Many thinkers have been saying the same thing, and it has become a problem and a challenge for all current and future reforms.

This has to do with students' autonomy for learning. However, in all traditional education students have been "excessively autonomous"; so autonomous that they have been the only ones responsible for having to acquire and demonstrate their learning. Nevertheless, autonomous learning is another matter. For example, if we go to universities such as Cambridge or Oxford, we could think that students there are like preschoolers because they have their tutors, whom they visit twice a week for guidance and for work guidelines. Hence, autonomy is not letting each one get by the best they can. Our autonomy is usually translated as "every man for himself!" How often do we see that a student does not have the strategies to solve problems and is not guided in how to solve them? But not only the student who attends university, also the student who is learning plumbing or

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how to express himself or write. Many times we encounter the complaints of literature professors alarmed at how their students do not know how to write. "Very well, they do not know how to write –we tell them– but what strategies are you teaching them so that they learn how to express themselves and write?"

TEACHING ADAPTED TO RESOURCES AND CURRENT PROGRESS

Is our school, our educational system assimilating all the technological advances that are developing nowadays? At this moment, advances are impressive and diverse: hundreds of television channels, mobile phones, mini radios, personal computers, digital recorders, internet as an on-line teaching resource, videoconferences, etc. Is the school making these resources profitable in order to promote education? Will it be able to readapt them? Will it be able to canalize and move this scenario to adapt it to education? It is also true that in all periods, there have been important resources and nevertheless, they were not made profitable. What better resources than those of nature itself and of general reality? Let us think of the resources of the countryside, of animals, of towns, of churches, of factories or of museums. Have they been made profitable? Only by a minority of teachers in spite of being the most useful lesson in order to understand and get along in the everyday world. At bottom, lies the idea that the school has been excessively monastic, and when I say this (from monastic life or convent), it is because it has almost always been divorced: the school on one side and the needs of the world and life on another.

INTELLECTIVE EFFICIENCY AND DEFICIENCY

Ausubel's proposal in the sixties in which he asked for only instruction in the classroom not wasting time with anything that was not knowledge or intellect, is at present, for many reasons untenable. An education centred only on efficiency would be truly deficient.

In the first place, in our current reality there are many problems of important social demand. Society is in general concerned about drug addiction, individualism, hedonism, consumerism, stress, violence or abuse, to quote some of the most outstanding issues. The young do not frequently talk about values, but when they become parents they are the most concerned about what values their children will acquire. At this point, the question of values becomes the strongest standard because matters which were not previously considered begin to cause preoccupation. When parents choose a school, they are not only worried about its quality regarding academic

results, but they are also worried about the environment that exists in the centre: bad friends or risks of drug abuse. All this is worrisome because they are problems that are intensified by the media, economic development, destructuring of the family, the social loss of all ideologies and, therefore, the social change in values. Regarding all of this, the school cannot excuse itself. We can understand that it is a difficult environment but we cannot look the other way, among other reasons, because the school has to compensate for all these deficiencies. There are deficits in the family and in society, therefore, the school, as the depository and administrator of culture and values, must compensate or attenuate these limitations through education.

HAPPINESS IN SMALL LETTERS

Individual Subjective Well-being (ISW) is the term with which we designate "happiness" in psychology. It is investigated from different perspectives and different theories are developed. The question is: Will school help us learn how to live? Traditional schooling was concerned about "knowing". Later, in the fifties and sixties, the behaviourist model was concerned about "learning how to do". After that, the cognitive model was concerned about "learning to learn" and "learning to think". Today we begin to see a school worried about "learning to live" and "learning to live together" This has been demanded for different reasons.

One of these reasons is the disillusionment with progress. Thinkers from the XVIII and XIX centuries promised a happy world through science and technology, which would provide goods for everyone and where the school would be the administrator of culture. This promise is in part fulfilled but very far from reality. Although it is true that research indicates that in general people from the richest and the most advanced countries seem happier than those from poorer countries, it is also true that in India, and above all in Bali, people seem happier than in Japan, which is one of the top countries in development according to UN indices.

Aside from the generalized subjective well-being of a country, there are indices of social dissatisfaction. It is not only the issue regarding drugs, delinquency, domestic violence or destructuring of the family but above all something like suicide, particularly in men (in the case of Spain, in one of our studies we observed that since 1982, the suicide line in men curiously shoots up in accordance to the increase in the GDP (gross domestic product), although in women, because of their supposed greater adaptive capacity, the line is more or less flat). That is,

when development increases, the number of suicides and marginality increases in all these aspects. But well, this is only one reason.

The second reason is that there has been a drastic change with respect to the role of women, marriage, the educational role of family, the permanence and duration of children in educational centres...All of this has been causing concern about knowing how to teach how to live.

With all this, there is no stronger reason than to consider that individual subjective well-being is the most important profound goal of all human beings reflected in that phrase by Neill: "Better a happy street cleaner than a neurotic scholar".

Another influence is the importance that emotion has on one's own efficacy and performance, highlighting in this sense, the interest of the business world regarding emotional issues. Today we know that socio-emotional issues bear a great relation to efficacy. For this reason, high-quality companies are preoccupied with improving their socio-affective level because it is highly related to performance and efficacy. This has been highlighted with the paradigm that we could denominate "emotional-personalizing". In fact, there, we have the current movement of alternative intelligence, especially after Goleman's book "Emotional Intelligence". And not only as an individual help approach, but especially from a business standpoint for its importance in productivity.

CONTRIBUTION TO COMMUNITY WELL-BEING

Besides Individual Subjective Well-being (ISW), we usually evaluate Contribution to Community Well-being (CCW) since the emphasis of all current psychology investigation is centred on individual subjective well-being which is no more than a typical approach of our essentially individualistic society. I think that it should be complemented with another reality-community subjective well-being-. Specifically, what do I contribute to community subjective well-being? One thing is that I am happy, but what do I offer so that others are happy since both aspects complement each other?

Happiness and altruism. In this sense, the consistency of the CCW scale indicates that people with a greater contribution to community well-being stand out in aspects such as: personal respect, norm compliance, social skills, collaboration, altruism, social interest, and ethical perspective. However, are they happier than the rest? No, they are not, and that seems surprising. But yes, we must say that individuals with the highest level of happiness are characterized for also having a high CCW. This means that contributing to community well-being is not in itself a

guaranty for being happy, but it is a condition for acquiring great happiness. Therefore, it is an added value for happiness. We are also saying that contributing to community well-being can be a trap for not being happy, that is, many people feel fulfilled through altruism without solving their problems. They often drag along their insecurities, fears, perfectionisms, complexes, stories, and they are not going to feel good no matter how much dedication they offer because deep down lies an element of weakness, insecurity, and dissatisfaction. Well now, when one is well adjusted dedication to others has a multiplier effect on happiness. At bottom, we are repeating from the Gospel: "You shall love your neighbour as you love yourself"; and you cannot love your neighbour if previously you do not love yourself. These are two fundamental things, love for another implies love for oneself, and when they are not found together there could be a breakdown. All this is making an allusion to values.

WHAT VALUES SHALL WE TEACH?

The development of values is the central theme of education through all ages and societies. To the extent that there has been education, there has been transmission of values. Another matter is the type of values that are transmitted. Sometimes the direction those values take, is in overcoming elemental values representative of nature and that are the only ones that small children show. Other times, the direction is in instilling dominant values in society. And other times, it is in fighting against those social values because they are considered inadequate, and in creating alternative values. But, what is it that characterizes values?

- a) Value is expressed by the qualities that things have for us (resistant, beautiful, pleasant, useful...) or by the qualities that our actions have for us or for others (behaving with confidence, being creative, generous, polite...).
- b) Value, however, is constructed in accordance with our own theories, needs, influences, etc. Therefore, value is formed between the objective and cultural reality of the world and our own subjective reality.
- c) Value has different levels of expression and commitment. A value on the declarative plane is not the same as an experienced value, and less a practiced value:
 - In a declarative mode through an explicit or tacit thought (judgement).
 - In an affective mode, associated to an affective and preferential tone (attitude).

- In a connative mode which is apparent in behaviour itself (habit).
- d) Value is an indispensable criterion in order to choose and, in consequence, to exercise our own freedom. This means that each person and each society constructs their own relatively stable system of values that will serve as a preferential menu from which to choose.
- e) Value, in spite of being a more or less stable criterion, is situational and dynamic, since, apart from each one having their own system of predominant values (referential guide), those values are adapted and reinterpreted as a function of each circumstance, context or situation (flexibility, readjustment).
- f) Value is acquired and developed by individuals through an educational process, especially, in the family and school environment, and also, through their group of friends and the influence of the communication media, assimilating the system of values that is predominant in each of those environments.
- g) All individuals and societies, although possessing a system of values, are also self-critical with their system of values at a given moment. This is what allows change and perfectionism to take place.
- h) Value is hierarchical and comparative. Everything has value in itself. The problem is in determining in general terms which values are more valuable than others. This way, a value can become, at a given moment, a counter value in competition with a value of a superior level.

But, what indicates that one value is superior to another? Without doubt, the good that it provides to people and to society. In the last instance, the maximum values are ISW and CCW. What each individual seeks is to find the maximum satisfaction, happiness or Individual Subjective Well-being (ISW). What happens is that not all values or goals lead to happiness. Then, this obliges one to question the system itself. In addition, happiness is not only a matter of one individual but of many; on the contrary the law of the jungle would reign which would mean happiness for only a few. This explains that values also have a social aspect, operationalized through CCW (Hernández, 2002, 2005a).

From the perspective of our Pentatriaxios model (five areas and three levels), the most important challenge of education is the transit from "what is pleasant to what is adequate" and "from what is adequate to what is full". That is, from the primary level (values of immediate satisfaction) to the adaptation level (values of control for efficiency and avoidance of conflict). And, finally, from this last level to that of self-fulfilment, enjoying tasks

through the involvement of pupils in projects characterized by being significant and having a significant goal to achieve.

We cannot overlook any of these planes, each one proves important, although that of adaptation is the most inexcusable.

- The *primary* plane provides elemental, spontaneous enjoyment in affinity with nature, the senses, instincts and impulses of the self, which is an incentive for others.
- That of *adaptation* prevents suffering, brings possibilities for being efficient and facilitates living together.
- That of *fulfilment* helps one dream, be a creator of one's own life, make sense of one's footsteps and feel fulfilled.

Many times, adaptation and fulfilment overshadow primary values. Fulfilment can also be a subterfuge for evading those of adaptation. For example, people that are intensely dedicated to an altruistic job can do it with all their heart, but on the contrary, may be annulling their own selves, which is a sign of lack of adaptation, and keeps them from real happiness.

EMOTIONAL INTELLIGENCE AND MENTAL MOLDS

Values, in the very end, are desirable goals, but how do we develop them? What do they depend on? No doubt, on the emotional intelligence of each person. Nevertheless, from the perspective of several authors, Goleman's exposition of emotional intelligence leaves a lot of gaps due to its indiscriminate character since it embraces not only cognitive aspects but also personality traits and motivations (Mayer, Salovey & Caruso, 2000), and also to its generic character or of product, just as these authors originally proposed (discriminate, channel and make profitable one's emotions and those of others), whose level of prediction for satisfaction, adaptation and performance criteria is still poor. That is why we defend an approach more of process than of product, just as what happened with rational intelligence, highlighting the cognitive-emotional strategies committed to the way of anticipating, reacting and reinterpreting reality through what we denominate "mental molds". But, what are mental molds?

In the movie "The Sea Inside", Amenábar focuses on several occasions on the cover of our book "Mental Molds: Beyond Emotional Intelligence", especially when Rosa attempts to make the tetraplegic Ramón Sampedro, in his desire to die with dignity, change his molds: "I saw you on T.V. and I noticed your eyes, which are wonderful,



those eyes full of life and I thought: how can somebody with those eyes want to die? ... We all have problems and you cannot escape from them, you know? ... I've come here to tell you that life is worth living". In this attempt to change his molds, Sampedro replies, exploring her profound motivations" Why don't we talk about the real reason you are here? Why don't we talk about how you are clearly a frustrated woman who has woken up today, Saturday feeling like finding a meaning to your own life?"

The theory of Mental Molds (Hernández, 1997, 2002, 2005a, 2005b) defends that through reiterative situations, we create thinking formats that are the key pieces for a better understanding of the puzzle of emotional intelligence. Mental molds are cognitive-emotional approaches or strategies constructed in the interaction between genetic dispositions and learning. They are like human "psychoma", responsible for our beliefs, emotions and behaviour. Through factorial analysis, starting from a group of assertions about the way of thinking before, during and after emotionally implicating situations, we have extracted *thirty mental molds* that seem the most dominating in our way of reacting, interpreting or valuing reality (Hernández, 2002). For example, attributions, following Weiner's model, are like a type of mental mold or a "thinking format", as a usual manner of explaining failures and successes.

A mental mold is a "dynamic and flexible format" with which we "configure" the contents that we interpret in a peculiar and usual way. Thus, for a job interview, people generate types of thoughts with a similar format or mold even if the situations are very different (consistency). Examples of these thoughts and formats are: "I am going to dazzle the interviewer and she will accept me as soon as she hears me speak" (Inflation-deception); "And what if I get tongue-tied when they ask me? (Aversive anticipation); "The interviewer will probably try to demoralize me" ("Hostiligenic" predisposition); "I prefer to not think that I have an interview" (Cognitive obliquity); "Why show up? In the end everything is the same...(Devaluative anticipation); "I will remain calm when they ask me an unexpected question" (Anticipatory emotional control); "Go for it! I am sure that after the first few minutes everything will go fine!" (Proactive motivation); "I have to realise that there could be some difficult questions but also some easy ones, in any case everything will go fine and if not, it will be one more experience" (Prudent constructive anticipation), etc.

Cognitive-affective mental molds have as their closest references causal thought in the Attribution Theory (Weiner, 1972); logical errors in Beck's Cognitive Model

of Depression (1974); coping self-regulation in the Cognitive-emotional Theory by Lazarus (1968), as well as the working models based on the processes of affective regulation (Mikulincer, 1998).

Each mold constitutes a loose piece of great value that when assembled with others responds to certain objectives. Specifically, we observe that a mold such as anticipatory hypercontrol can be related to greater academic achievement, but not with greater enjoyment of life. There is a group of molds that perfectly predict happiness or community subjective well-being, others predict greater community subjective well-being, while others predict greater efficacy, distinguishing between efficacy in business, in study or in chess.

All this indicates that using cognitive-affective molds, we are able to better intervene on them, since they are specific and operative strategies of easy diagnosis and modification. Also, that we have material that is more flexible in order to understand personality and human behaviour.

WHEN THE AFFECTIVE IS EFFECTIVE

Different investigations are demonstrating how these molds predict to a high degree adaptation and subjective well-being (Hernández, 2002), how they are related to the educational style of parents (Hernández, 2005c), and what is most surprising, how they predict academic achievement in a manner that stands out. Initially, we can say that most molds are related to learning and performance. In our investigations it is confirmed that the predictive capacity of mental molds with respect to performance in mathematics is superior to the predictive capacity of rational intelligence measured by Raven's test (Hernández, 2005b, c). Students with worse performances are characterized for having negativistic molds, such as focalization on shortcomings and selective negative evaluation; non-operative molds, anticipating effort and costs; evasive molds, disconnecting from problematic reality (emotional dissociation and inhibitory self-conviction); reactant molds, showing lack of emotional adjustment; molds of external attribution of success or failure ("hostiligenia" and of social dependence); impulsive molds or molds of vital implication; as well as impoverishment of optimizing molds (prudent constructive anticipation and volitive self-conviction).

In addition, it was confirmed that Mental Molds and Intelligence distinguish those who improve their performance and those who do not from one evaluation to the next. Specifically, the variance explained by intelligence was of 5% while the variance explained by the group of mental molds was of 39%, grouping correctly



76% of the cases in the discriminant analysis performed (canonical correlation = .63; Willis'Lambda = .61; Significance level = .002) (Hernández, 2005b).

This highlights that mental molds are a sort of "emotional intelligence" that regulate learning and that are independent of "rational intelligence", showing us the importance of strengthening and self-regulating certain cognitive-affective molds in order to be efficient.

These results do not correspond to one sample, one study or one subject matter, but they correspond to different subject matters, different situations and different students, using diverse measures of performance (Hernández, 2005b). Now then, mental molds have an influence in general but also in a differential manner. All this shows its functional value for explaining and improving performance in different contexts. The most evident proof is the superiority in competition of chess players who had undergone a program for the modification of mental molds compared to those who did not undergo this program despite having started from an equal level measured by the ELO rating (Hernández & Rodríguez-Mateo, 2005b).

These facts demonstrate the power, not only the predictive power of mental molds with respect to performance, but also the importance of taking them into account and improving them in order to optimize school achievement. Likewise they suggest that the school should not be centred only on intellectual competencies to achieve efficiency but also on emotional self-competencies or mental molds. The school is no different than life since many aspects that help us learn how to live also help us be more efficient.

THE RESPONSE OF THE SCHOOL

Considering the importance of socio-affective education from both the perspective of values and mental molds, will the school become involved in this? Where is the greatest difficulty? In its inertia, focalized on the merely intellectual, but, above all, the greatest difficulty lies not so much in that teachers be well-balanced and full of values, but more that teachers, school centres and society in general become conscious of its importance and get enthusiastic about an exciting project for the transformation of people and society, including in that process the teachers' own personal change. It is not about requesting competences for doing this, but is more about living a school project of greater meaning.

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SCHOOL-FAMILY: IS A RECIPROCAL AND POSITIVE RELATIONSHIP POSSIBLE?

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Student education is not only the responsibility of the school. In this article, we reflect on the relationship between parents and school, understanding this as one of the foundations on which the success or failure of any educational system is based. Initially, we provide information about the diverse research lines developed on this topic; then, we concentrate our analysis on the role homework plays as an indispensable resource to promote parental involvement in children's academic development.

Key Words: Homework, family-school relationship.

La educación de los estudiantes no es sólo responsabilidad de la escuela. En este artículo se reflexiona sobre la relación entre escuela y familia, entendiendo ésta como uno de los pilares sobre los que se fundamenta el éxito o fracaso de cualquier sistema educativo. Inicialmente, se aporta información sobre las diversas líneas de investigación que se han desarrollado sobre este tema para, posteriormente, centrar el análisis sobre el papel de las "tareas para casa" (TPC) como un inmejorable recurso para promover la implicación de la familia en el desarrollo académico de los hijos.

Palabras Clave: Tareas para casa, relación familia-escuela.

In this article an analysis is made of how family conditions influence student motivation, behaviour, and school learning. Initially, we describe some of the most important results that research has provided regarding the influence of family variables on children's academic achievement. In the second part of the article we focus on "homework" as one of the best resources we have in order to link family-student-school.

FAMILY INVOLVEMENT AND ACADEMIC ACHIEVEMENT

The results of numerous studies on the teaching-learning process have shown that a significant relationship exists between family involvement and students' academic success (González-Pienda y Núñez, 2005). In this manner, it is known that positive family involvement has an influence on students' conditions for optimal learning, regardless of school level (Muller, 1998), and reduces the probability of students dropping out of secondary education (Martínez y Alvarez, 2006).

On one hand, research has been done trying to explain how different parental behaviours influence children's motivation, self-concept, concentration, effort, attitude, etc., assuming that such variables are fundamental

conditions that, sensitizing the individual towards using his processes and cognitive strategies, will significantly affect future learning and achievement (for example, Castejón & Pérez, 1998; Fantuzzo, Davis & Ginsburg, 1995; García-Linares & Pelegrina, 2001; González-Pienda, Núñez, González-Pumariega, Alvarez, Rocés & García, 2002a; Kim & Rohner, 2002; Patrikakou, 1996; Seginer & Vermulst, 2002; Shumow, Vandell & Kang, 1996). For example, from this perspective, González-Pienda et al. (2002a) have found evidence that certain dimensions of parental involvement with respect to their children's education (expectations regarding performance, expectations regarding their capacity to attain significant achievement, interest in their children's school work, degree of satisfaction or dissatisfaction with the level attained by their children, level and type of help that parents offer their children when doing academic work at home and, parents' reinforcement of behaviour with respect to children's achievements) significantly affect children's academic performance, not directly as is logical, but indirectly through their influence on personal variables such as the student's self-concept, the usual pattern of attribution of causality for particular successes and failures (e.g., exams results), etc.

On the other hand, it has also been investigated how parents get involved favouring or interfering with the learning process itself through their influence on self-regulating conducts (González-Pienda, Núñez, Alvarez,

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González-Pumariega, Roces, González, Muñiz & Bernardo, 2002b; Martínez-Pons, 1996; Zimmerman, Bandura & Martínez-Pons, 1992). The change of perspective regarding school learning, from the classical cognitive model to the self-regulated learning model, has also brought about a new orientation for research on family involvement in children's study and school learning. Martínez-Pons (1996) defines family involvement in the self-regulating process through four types of conduct: modelling (when parental conduct offers examples of self-regulation in its diverse phases and forms to be observed and imitated by their children), stimulation or emotional support (when parents favour their children's persistence in adverse situations), facilitation or help (when parents facilitate learning providing resources and means) and reward (when parents reinforce those conducts or sequences that involve some degree of self-regulation). In general, in these research studies we find empirical evidence that this type of behaviour in parents significantly influences different areas of children's self-regulation process in learning, and that this influences their academic performance.

In this line of work, González-Pienda et al. (2003) inform about some family conditions which characterize mothers and fathers who are involved in promoting self-regulatory behaviour in their children. Just as these authors propose in the study, the results would indicate that the greater cohesion and family adaptability is, the greater the children's "consciousness" about their parents' behaviours similar to those previously described (although about what we cannot assert anything at all is the relationship between family dynamics and the existence of self-regulatory behaviour on the part of the parents).

In short, what bears no doubt is that family involvement (socially, structurally and functionally) in children's education is a crucial element for their progress and an essential pillar for the school in order to achieve optimal results.

Nowadays, one of the aspects that requires increasing attention, has to do with "homework". Despite the ongoing controversy about whether homework is needed, research has found that when parents dedicate some time to help with school work, students improve their performance and their academic competencies (e.g., Fehrmann, Keith, & Reimers, 1987; Rosário, et al, 2005; Symeou, 2006; Useem, 1992).

AN APPROXIMATION TO THE CONCEPT OF HOMEWORK

Homework, defined by Cooper (1989, 2001) as the tasks that teachers assign students to do outside the school schedule, has a long and deep-rooted tradition, being a usual practice in most schools throughout the world. The literature suggests that, in periods of educational system reform, homework plays a more outstanding role in day-to-day school life, as this means an increase in the load of assigned tasks for students to do outside of the school context. In this sense, homework is recognised as an indicator of both successful schools and students (Epstein & Van Voorhis, 2001). In the same manner, international studies, such as the PISA study in 2000 and 2006, confirm that those countries and schools that prescribe more homework are also those with the best level of academic achievement.

Homework is, in fact, considered by many teachers as one of the most useful and even indispensable tools for the advancement in the quality of student learning and the resulting improvement in the quality of the educational process. According to Epstein and Von Voorhis (2001), already in the eighties, researchers such as Coleman, Hoffer and Kilgore came to the conclusion in their studies that a greater load of homework as well as of discipline are two of the most important factors for the improvement of the environment for learning and the consequent academic success that private schools present as opposed to public schools.

The idea of assigning more homework is based on the presumption that the more time students dedicate to studying the transmitted contents, the more they will learn. This idea, held by some authors, is highly questioned by others. Among the former, they defend that if something is universally accepted it is that the amount of time invested in the task predicts the amount of material learned. In this sense, homework would be a way of extending the school day, as Walberg et al. defend (Walberg et al., 1985). In addition, according to the results of some studies (e.g., Paschal et al., 1984), homework prescribed regularly, on a daily basis, and evaluated with adequate feedback regarding its realization in order to find ways for improvement, is one of the practices most linked to the beneficial effects of homework as a tool for the reinforcement of student learning.

However, even though there is increasing acceptance of

the influential role of homework on students' school results, today the existing relationship between these two variables is still questioned, especially due to the great diversity in the effects of homework at different levels of education.

Talking about homework can be something complex since the variables involved are very diverse and the observation focuses very heterogeneous.

Self-regulation theorists defend homework as a useful tool for improving students' involvement and concentration on the task, thus, providing a work ethic, but they obviously do not sanction just any homework. With respect to this construct, as to many others in daily school life, more than emotionally leaning towards one of the extremes of the barrier, perhaps the solution is in the discussion about its anatomy (e.g., load, typology of tasks prescribed, regularity, functionality perceived by students and parents, feedback given) so that the proposed tasks favour and optimize the willingness and activity of students without being intrusive for the family.

What do we know about the impact of homework compliance on school performance? What should teachers do about homework? What role should be assumed by parents in the construction of an adequate environment for studying? These are some of the questions that we will try to answer on the next pages going deeper into some of the whats and the whys of homework.

PROBLEMATIC ISSUES SURROUNDING HOMEWORK

Something that is frequently mentioned in the educational media, is that students in general, study and work less everyday. Commentaries such as the following are also common: "nowadays students do not study" and "they do not even do homework" Based on street indicators as well as on the support for these ideas included in the OCDE and PISA reports we can affirm that students dedicate little time to studying and personal work, which has direct implications on their low marks (Mourão, 2004).

Time spent on personal study and specifically on homework is, with no doubt, a determinant factor in student academic performance. Research underlines and confirms the importance of the role of "time on task", both during class and afterwards at home when completing homework and studying. In any case, it is convenient to highlight that, when we talk about time dedicated to homework, research recommends distinguishing between the quality and quantity of such time. Investing too much

time in homework could simply mean insufficient background knowledge or obvious difficulties for working contents. Thus, dedicating little time to homework may be related to high student efficiency or the opposite, to a great incapacity. Therefore, more important than the time spent, is the quality and the level of realization of prescribed homework, since these factors are related positively to students' school results (Cooper, et al., 1998). The findings of a broad research program by Cooper et al. (1998) demonstrate that homework exerts a greater influence at more advanced levels of schooling than at the initial levels. A more detailed examination of the benefits of homework in the first grades of primary school demonstrates that younger students have a tendency to be less efficient than their older classmates with respect to their study habits and the control of distracters which will have an effect when doing the prescribed homework (Hoover-Dempsey et al., 2001). Add to this Muhlenbruck et al.'s findings published in 2000, which suggest that primary teachers put more value in the opportunity that homework offers the student for training time administration skills and study habits, than actually working on the content. The development of these competencies occurs not only in the broad school environment but also in the home-family environment. As partners in the children's learning process, parents and teachers play a major role in the development of beliefs and approaches that go hand in hand with homework (Bempechat, 2004).

Throughout schooling, homework plays an increasingly important role in the consolidation of learning. If in the first grades of primary education teachers use homework in order to develop in their students good study habits and to improve self-control, in the last years of primary education and in secondary education students should start assuming homework as a personal responsibility, adequately writing down the tasks prescribed, doing them on time and verifying their realization. Therefore, the consolidation of good work habits should be an explicit objective in primary school. Teachers and parents should work cooperatively in the sense that they should provide a sufficiently rich and favourable homework environment that provides opportunities for modelling and guidance (Corno & Xu, 2004).

The assumption of responsibility in the administration of tasks and personal study, which are skills that lengthen and deepen students' knowledge about a subject,

corresponds to the characteristics of the step from “the apprentice” to “the expert” (Rosário et al., 2004; Zimmerman, Bonner & Kovach, 1996). In other words, homework should be one of the driving forces in the road towards expertise, since it constitutes a privileged tool of self-regulation (Mourão, 2004).

ANATOMY OF HOMEWORK

Homework constitutes a powerful tool for school learning. Teachers have always prescribed it and will continue to do so, although we cannot take this tradition for granted (Corno, 2000). Understanding homework in a new manner involves not limiting our debate solely to its effects on school achievement.

Homework is clearly influenced by many aspects of society, both in its realization and in its products. In many families, parents help their children with their homework, providing books and magazines, there are older brothers or sisters, they have internet, etc. But, obviously, it is not this way for all students, and teachers should take this into account when prescribing homework.

Homework should incorporate an adequate combination of challenge and realization skills with the aim of making it something gratifying in the eyes of students. More than enough times, teachers prescribe homework with the central objective of consolidating or expanding knowledge about subjects studied in class. Other times, homework is prescribed as a way of complying with a very extensive curricular plan.

However, in the same way that work performed in school evolves in cognitive complexity, homework should also do the same. Throughout the school years, it is not only important that homework shows a level of complexity adapted to student capacity but also a degree of challenge and incentive that will encourage students to get involved in the task. Students need to understand that learning is not only memorizing, training and practice (Corno, 2000).

When tasks are too demanding and are above students' perceived capacity, students may fall into a state or into a sort of self-consciousness that inhibits their action (Kuhl, 1985). In these cases, individuals under this state forget about the task at hand and fall into a state that Bandura (1982, p.137) designates as “repetitive perturbing ideation”, focusing on their personal weaknesses and underestimating their capacity (Corno, 2000). This situation occurs more frequently to children with low

academic achievement. In a study by Butler (1998), where personal accounts of students with learning difficulties were gathered, one of these students described his feelings regarding homework as follows: “I got nervous”, “I lost my concentration(...) I felt stupid, I did not want to finish, I worked more slowly and I was distracted”. Forty-nine percent of the students in this study reported unpleasant emotional reactions during the realization of homework.

Many teachers make the effort to show their students how to prioritize tasks by not leaving the most difficult or unpleasant ones for last when willingness, strength and energy decrease. In primary education teachers can alert parents about the importance of providing an adequate space for doing homework, minimizing distracters and being, whenever is possible, available to answer questions and help with possible problems that may arise.

In the United States, and other countries, especially English speaking, useful indications and instructions are given to parents regarding homework: the so called TIPS (Teachers Involve Parents in Schoolwork). Corno (2000) provides interesting suggestions for parents with respect to the realization of homework assignments, for example: “establish an hour for starting; accompany your child, but do not do his assignments for him; use a watch in order to increase your child's control and mastering of time used, but also to develop his competencies of monitorization and volitive control toward tasks; offer a simple glass of water as a reward”, etc.

The main objective is to establish routines that the child will associate with doing homework assignments (Klavan, 1992). These routines serve as a support with certain difficulties and many times they last throughout life. Quoting Zimmerman (1998), Corno (2000) reminds us that subjects who stand out for their high degree of excellence usually attribute their success to having effective and deliberately established working routines.

If there are homework assignments that are too difficult, there are also assignments that are too easy and are boring for the students. Boredom may lead to distraction and feelings of distance towards the assignment, for example, “daydreaming and loosing oneself in fantasy instead of working on the task” are behaviours that can occur. In the worse scenario, children may even openly refuse to do the homework, generate more destructive thoughts, posing questions such as: “Why should I be

sitting here doing this?", " Why haven't you given us something more interesting to do?", "I hate homework", "I hate the teacher", "I hate school".

THE HOMEWORK SETTING

Beyond the nature of homework itself, there is a complex context of expectations to consider. In these we include the expectations of teachers, parents, family, children and classmates.

Parents and teachers can insist to their children that assignments have to be done with 100% correction. Increasing expectancies to this level can have dreadful consequences, obliging the student to go beyond his limits and significantly reducing time of sleep only to fulfil inadequate expectancies. It is not desirable for a child to adopt this behaviour of working to obtain a "9" or "10", his parents' approval or satisfaction, or other rewards. Moreover, it is preferable that children enjoy the experience of learning and feel satisfaction from a job well done (Corno, 2000). In any case, the ideal would be that the expectations of others were adjusted to the real capacities of the students in order to avoid frustrations; only then will both parts in question win.

In the first grades of primary school students can benefit when an adult corrects and verifies their homework. Once the students become more skilled, the adult must step back staying in the background of the process, making it clear to them that the responsibility regarding the realization and the completion of homework assignments as well as the quality is theirs and theirs only. If homework is always handed in to teachers previously corrected by an adult, the teacher does not have the possibility to distinguish between what the student really knows and what he still does not master.

It would be of great help for the teachers if they had a better understanding of the difficulties and tensions that surround the completion of homework by students, especially the youngest ones (Corno, 1996). But they also have to be conscious that, according to research in this area, the development of self-regulating strategies and management competencies through homework is a possibility more than a reality. Personal responsibility needs to be developed and we need to provide conditions that will allow its development. Understandably, some students usually require more support and take more time to develop routines for doing homework than others (Xu & Corno, 1998).

Time control and resource management are aspects regarding self-regulation that teachers deal with at school, but there are other more subtle aspects, for example those relative to the energizing dimensions of behaviour, motivations and volitive control (e.g., emotional control), which are not always present in the educational agenda of schools.

In order to improve these competencies we have to unite the effort of parents, teachers and other educational agents, working together to provide opportunities that will facilitate the student in developing his capacities, for example, regulating the work environment, especially when doing homework and monitoring his volitive control and his affective states during its realization (Xu & Corno, 1998). Teachers should be realistic with respect to the time and emotional demands that homework assignments involve.

Finally, the numerous extracurricular activities that children and adolescents are engaged in daily also compete with the daily completion of homework. Despite being conscious of these threats, we insist on believing in the potential of homework as an educational strategy, and we endorse it reiterating the importance and weight of the results of its proper use in the teaching-learning process.

WHAT DOES RESEARCH TELL US?

The relationship between time spent on homework and academic achievement has been the focus of numerous international research studies. A brief summary of some of their conclusions is presented below:

Time spent on homework

- ✓ The relationship between time spent on homework and academic achievement is clear and positive in the last grades of Obligatory Secondary Education (ESO) and in Bachillerato (post-compulsory secondary education). Empirical evidence for this relationship is not as clear in primary education with inconsistent and inconclusive results obtained in the studies done.
- ✓ Time spent doing homework explains only part of the variability in students' academic results.
- ✓ Research studies conducted in the United States indicate that younger students (primary education), especially students with low school achievement, spend more time on homework. The tendency is the opposite in older students (high school): it is the students with higher school achievement who spend more time on homework.

- ✓ Studies in the US also show that girls have a tendency to spend more time than boys doing homework and that Asian students dedicate more time to homework than students from other ethnic groups. These Asian students usually take greater advantage of the time dedicated to homework.
- ✓ Diverse international studies suggest that the relationship between academic performance and time spent on homework could be curvilinear.
- ✓ The positive and significant correlations found between time spent on homework and performance should not be taken as proof that, by itself, more time invested in doing homework necessarily leads to greater performance.

Homework and student attitudes

- ✓ In a general manner, students present positive attitudes towards homework and verbalize its importance for helping them “get on well” in school. A positive attitude towards homework is associated with a positive attitude towards school, and the inverse is also true.
- ✓ The scarce existing research about students’ preferences indicates that students do not very much like the daily, routine assignments they are prescribed (e.g., such as finishing or completing unfinished assignments in class). In general, they prefer interesting, challenging and divergent tasks.
- ✓ Student attitudes towards homework are usually related to gender. Recent studies suggest that girls tend to dedicate more time to homework than boys.
- ✓ Prescribing adequate homework assignments in the first grades of primary education which is supported by the modelling and responsible monitorization of parents or other significant adults (e.g., older siblings), helps interiorize study habits, develop organization and management of time, instilling routines that will be useful in subsequent grades.

Parental involvement in homework

In general parents like schools to prescribe homework, even though sometimes homework may cause conflicts between parents, students and teachers. An exposition of some of the results of the research done on this topic follows:

- ✓ Parents get more involved in homework when their children are younger. The type and degree of parental involvement in homework is related to socio-economic and cultural level.

- ✓ There are no research findings that establish a clear relationship between parental involvement and students’ academic performance. However, evidence suggests that more important than the quantity of time spent by the parents on homework is the quality and type of approach during the time spent with children.
- ✓ Parental involvement in homework adopts different forms and, consequently, has different repercussions on students’ marks. It is possible to identify parents who appropriately intervene, for example by providing adequate places and proper material for studying. Other parents behave in a less adequate manner, for example by doing tasks for their children, planning and controlling their study schedules without letting them exercise their freedom to act and the responsibility to assume the consequences of their behaviour.
- ✓ Research reveals as very important that parents and adults support the autonomy of their children.
- ✓ The typology of parental involvement (e.g., what they do, when and how they do it), more than the time spent, may be the key factor in the success of the interaction between parents and children in the mastering of homework.

IMPLICATIONS FOR EDUCATIONAL PRACTICE

Homework demands the performance of three actors: the teacher who prescribes the assignments and gives feedback, the parent who monitors them, and the student who does them. If one of the three is missing, the play will be a failure. Thus, “the role of the teacher when offering feedback – when positively reinforcing what has been well done and reviewing what still has not been learnt – is the key to the maximization of the positive impact of homework” (Walberg & Paik, 2000, p.9).

Within the teaching profession, there are some teachers who use homework as a last resort in order to fill in gaps in knowledge and overcome time problems for covering all the contents, to promote the individual training that classes do not always guarantee, or more positively because they consider it a useful and indispensable tool for the development of skills for independent and autonomous work. However, there are also other teachers, who almost gratuitously reject homework, despising its usefulness, based on the discouragement shown by many students for its realization and compliance with a minimum of quality. With respect to students, we find, on the one hand, those who are more

distant and contrary to school tasks, who very easily adopt an attitude of aversion or repulsion for homework, considering it an intrusion in their free time or an activity of no value, and on the other hand, we find those students that methodically are committed to the daily completion of homework assigned by teachers, accepting it without much questioning as logical participants in their role as student who are responsible for their own learning.

If, on one hand, many educators believe that homework contributes to the improvement of learning and the maximum use of school, on the other hand, the same homework is widely criticized for the negative effects that it sometimes has on children's development. One of the harshest criticisms about the use of homework arises precisely regarding its degree of efficacy. For homework to be effective it must make sense and be significant to the student, be relevant, and whenever possible creative and cognitively challenging.

Homework is by definition, tasks that are carried out without the direct control of the teacher. For this reason, when students are faced with its realization they can choose what to do. First, they can decide if they are going to do it. Later, it is up to them the time and effort that they are going to dedicate to the prescribed assignments. Even after this decision-making process, the student still has countless options to choose from regarding "what", "where", "how" and "with whom" they want to (or can) do the assigned homework, options that inevitably affect the final quality of the performance (Hong & Milgram, 2000).

However, we cannot deny that on many occasions homework is a source of family conflict and a reason for friction and complaints in school-home relationships (Cooper, 2001). Essentially, the discussion with respect to homework is focused on whether it is good or bad for children (talking about school achievement or, at least of the development of good study habits) and for their families (homework as a means of having knowledge about their children's progress and/or for improving communication with the school).

If there are parents who deliberately make an effort to help their children create a proper environment for the realization of homework as proposed by the teachers, there are others who resign from that responsibility or who simply do not know the appropriate way to do so. The exact measure, the adjusted "dose" of help and type of ideal parental involvement are some of the present concerns regarding homework (Rosário et al., 2005b).

In any case, literature suggests that students benefit greatly from the experience of doing homework assignments in a family environment when they are helped by an appropriate parental structure (Xu & Corno, 1998). This idea should be present in the spirit of teachers who, in conjunction with parents, will be able to negotiate feasible and useful methods for the desirable daily accompaniment in the tasks that students do at home.

FINAL CONSIDERATIONS

Serious and systematic initiatives should be implemented, eventually clarifying information sessions at schools guided by involved and well-informed homeroom teachers (tutors) experienced in contact with parents. These sessions could be oriented towards making parents conscious of their essential role as educators and role models of behaviour and positive attitudes regarding school in general, and homework in particular. For example, issues could be discussed such as the importance of controlling the study environment at home with respect to its physical and emotional aspects, overcoming and eliminating external and internal distracters that are often present when doing the prescribed homework (e.g., arguments, insults, change of plans in timing that disrupt study, excessive noise, environments which are too hot or too cold, the physical working space, television or loud music, mobile phones, computer games, chats, amongst others). It would be desirable that schools, every school, every management team, every disciplinary group, every teacher, each and every one of them at their level, assumed their responsibility in the promotion and adoption of homework policies which are serious, feasible, theoretically based and as systematic as possible.

It would be preferable that this would not occur due to an imposition from above but based on the conviction that there is a need for education of better quality where homework has a noble function; that is, contributing to the increase of self-regulating skills and the success of our students.

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THE PSYCHOLOGIST AND SCHOOL DISCIPLINE: NEW CHALLENGES AND OLD ENCOUNTERS

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Today, generalized violence in educational centres (between peers, student-teacher, physical or psychological violence, etc.) is one of the problems which causes more concern in secondary schools. In this article, a detailed review of the concept "school of discipline" is given including its remedial and preventive perspective, and the extent to which the management of this "new phenomenon" requires teachers to be trained and assessed specifically in psychoeducation. Finally, the difference between school and classroom discipline is discussed.

Key Words: Antisocial behaviour, values, intervention strategies.

En la actualidad, uno de los problemas más preocupantes en la educación secundaria es la violencia generalizada en los centros educativos (entre iguales, alumnos-profesorado, de tipo físico, psicológico, etc.). En este artículo se realiza una revisión detallada sobre el concepto de "disciplina escolar", así como su perspectiva preventiva y remedial, y cómo la gestión de este "nuevo fenómeno" requiere del docente formación y asesoramiento psicoeducativo específico. Finalmente, se discuten la diferencia entre disciplina escolar y disciplina en el aula.

Palabras Clave: Comportamiento antisocial, valores, estrategias de intervención.

The coming into force of a new Spanish Act of Education opens horizons to new expectations among the members of the educational community who, finally, see some of their worries until now disregarded given visible form; but being more or less accustomed to the schemes of former legality, it also revives concerns which, with frequency, mean the reappearance of old fears.

Something like this seems to happen in reference to the question of school discipline and the recently approved *Ley Orgánica de Educación* (Spanish Act of Education 2/2006, 3rd May, BOE 4th May). The modifications introduced regarding student rights and obligations not only compel the adaptation of the decrees that regulated them until now, but bring to the front some of the most pressing concerns observed at present on this matter.

Questions such as the role of mediation (and the figure of the mediator) as an educational process in order to achieve peaceful resolution of conflicts, the collective decisions that students make about attending class so as to facilitate their right of assembly, or the clear reference to the problems of bullying in additional provision twenty-one, establish a far from negligible indication of such concerns and of some expectations which may be conceived in this respect.

In complete tune with the educational priorities manifested in the text of the Law as much for the stage of primary education:

"Know and appreciate the values and norms of student life, learn how to act in accordance with them, prepare for the exercise of citizenship and respect human rights, as well as the pluralism proper of a democratic society." (Art. 17, a).

as for E.S.O. (Obligatory Secondary Education):

"Assume your obligations responsibly, know and exercise your rights with respect to others, practise tolerance, cooperation and solidarity with people and groups, using dialogue, guaranteeing human rights as common values in a plural society prepared for the exercise of democratic citizenship." (Art. 23, a)

and for bachillerato (post-compulsory secondary education):

"Exercise democratic citizenship from a global perspective and acquire a responsible civic conscience inspired in the values of the Spanish Constitution as well as human rights which promote co-responsibility in the construction of a just and equitable society." (Art. 33, a)

The current Act of Education recommends and encourages the use of peaceful means in the resolution of conflicts in the school environment, which in turn not only stimulates the defence of social values of a high standard

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but it also awakens a number of fears and doubts about its implementation in day-to-day school life, since it is difficult to believe that if behaviour problems in schools have reached such high rates they could be remedied in such a civic and calm manner.

In our opinion, it is convenient at this point to clarify some matters, or we could find ourselves in a “blind alley” where the issue regarding school discipline seems to have come to a standstill, which would not allow us to advance in its comprehension or intervention.

SCHOOL DISCIPLINE: REMEDY OR PREVENTION?

Historically, school discipline has been treated from the perspective of “being a remedy”, in the sense that people turned to it when behaviour problems in the classroom arose, which in principle was not supposed to happen. Since the sixties in the past century, many voices have emerged in favour of the so-called “positive” discipline (Dreikurs & Grey, 1970); however, we should not be confused as this was also an option directed at correcting an existing problem but which refused to use the punitive strategies that, up to that time, had been the most widely used practice (Sugai & Horner, 2002).

It was not until just a few decades ago when people started talking about “preventive” discipline as a way of guaranteeing the necessary conditions for the good functioning of the class. It was not just another innovation in this field but instead it was an authentic revolution of the concept of school discipline itself and, for this, a contribution that was proposed and justified basically from psychoeducational research.

We will discuss the affirmations made in the previous paragraph. The “preventive” perspective regarding school discipline (Gotzens, 1997) implies, on one hand, that the teacher, aside from planning the contents and activities for learning, has the possibility, or being more precise, the necessity of doing what is proper with respect to those aspects that will rule the behaviour of the group in class. It is about assuming that the preparation of the teaching-learning processes that will take place during the school year carries implicitly the consideration of the conditions that will make possible the development of such processes, and consequently, their planning and concretion in norms and strategies directed at guaranteeing their compliance.

On the other hand, the preventive character of discipline means that a considerable portion of behaviour problems that unfailingly involve the alteration of class order with

all its added consequences (attention loss, disturbance, increase in perturbing conduct, etc.) is remediable and there is no reason for it to happen. This benefit has not gone unnoticed by any teacher: while the solution to a problem and the recovery of student attention is a costly endeavour, the maintenance of order when the conditions are favourable is attained with great ease, although always maintaining a certain level of “vigilance” by the teacher.

Finally, preventive discipline has the added advantage of being a reference for the teacher with respect to the conditions that have been established as indispensable for class functioning and with respect to the communication and intervention strategies that have been selected in order to achieve and maintain the set conditions; therefore, it becomes a facilitating element for the analysis of situations with alteration of order when these appear. Questions – not necessarily explicit – such as the following simplify the manner in which the teacher analyses and confronts the supposed misbehaviour: What is the disruption due to? Which norm has not been respected? What intervention – on the teacher’s part – has been missing?, etc.

SCHOOL DISCIPLINE AND LEARNING OF VALUES

This brief exploration about the preventive character of discipline helps us conceptualize this as a subsidiary and diverse matter in the complex scheme of school learning for which it is used. However, distinguishing between both concepts, school discipline and school learning, and more specifically the learning of values, still seems to be confusing.

We have mentioned above that in past periods (and also in more recent ones) school discipline was considered a remedial activity, and preferably with a punitive character. In light of educational proposals in which the civic education of students acquires greater protagonism than its instruction using the “classical” curricular contents, it is comprehensible that a “penal” approach would be perceived as not very desirable or even as unacceptable; it was about fomenting in students habits compatible with the educational objectives (respect, tolerance, etc.) and it did not seem that using “negative” disciplinary procedures was the best option on the part of the educators.

This reasoning is impeccable and it would probably be difficult to find an educator who would manifest his disconformity with what has been said. Nevertheless, a

well-known but usually forgotten clarification which facilitates a clearer and unambiguous, therefore more gentle perspective on school discipline must be made.

School learning of any sort (declarative, procedural and attitudinal) requires great effort and a considerable investment of energy and resources from both those who must attain them and those whose mission it is to facilitate this process. Due to its very nature, it is a long process whose domain is not always attainable for everyone and less so in the periods planned for its acquisition. In the case of the learning of attitudes and values (tolerance, respect, democratic sense, etc.) the proposed exigency is even greater, not so much because of its high cognitive complexity but because it is mainly based on the modification and restructuring of emotions, beliefs, values and other affective material whose means of access are not easy to control in the core of the class (Castelló, 2001).

With respect to this, school discipline is nothing but a requisite with which we pretend to guarantee the necessary and most favourable conditions for the development of learning processes in all their complexity. School discipline is not in itself an educational objective, but it is an instrument for the achievement of the real objectives (Gotzens, 1997).

If one is not capable of taking this distinction into consideration, a world of confusion enters the teacher's decision-making process and with it, a chaotic class is guaranteed. With the risk of excessive simplification of what has been said, we conclude that learning needs time (previously planned), while discipline demands "immediacy" which is not free of previous planning.

SCHOOL DISCIPLINE AND STUDENTS' RIGHTS AND OBLIGATIONS

The intention of establishing a list of "rights and obligations" that should be followed by students seems more reasonable. The obligatory nature of education reaches increasingly high age levels and with this in mind, the pretension of establishing which are the norms of the game (obligations) and which are the benefits that students can aspire to (rights) as well as the procedures established to guarantee both of these, seems not only sensible but also desirable.

The problem arises when we pretend to respond to two different demands with one single instrument: on one hand the regulation of school discipline and on the other hand the learning of values and the acquisition of habits for living together.

It is clear that these are not demands that are radically different in "content", but they do greatly differ in procedure. This way, while it is indispensable for the student to stop systematically interrupting the class session, which provokes attention loss in his classmates and multiplies the efforts of teachers to recover the course of the session, it seems equally obvious that it takes time, resources and collaboration for the student to acquire the skills that will permit him to turn this interruption into participation. Discipline is at the service of this last part of the example, but is "in essence" the expected intervention in the first part of it (Gotzens, 1997).

From this perspective, school discipline cannot be confused with the intervention of a "disciplinary" process (as contradictory as this play on words seems). This pretends to sanction an undesirable action (in instructional terms as well as in more social ones) carried out by some students. Here, the miniature "reproduction" of the current judicial framework that protects us and the purpose of guaranteeing the rights of all the affected parts, predicts a number of procedures that inevitably take a long time.

But school discipline refers to the "here and now"; in some sense, it is the most fervent defence of student rights: to create and maintain everyday conditions for the full enjoyment of their right to be educated.

This by no means implies distancing oneself from current educational principles, but it does imply granting greater flexibility to the teacher's decision making process as well as to intervention, always with the most scrupulous respect for the personal and social dignity of the students.

For example, that is why current regulations typify chatting or repeatedly disrupting in class as a minor offence. In terms of school discipline this carries with it an important problem that if it is not controlled may generate into a very detrimental situation for student learning (Seidman, 2005).

This way, we are at a crossroads where the coexistence commission in each centre (see, for example: Art. 6 of decree 279/2006, July 4th, DOGC number 4670 – 06/07/2006), as well as the school board in its function of supervising the disciplinary measures imposed in a certain case, are both authorities established by the education system that act as representatives and guarantors for the school rights and duties of citizens in those cases in which a duty or norm has been broken leading to a severe alteration of school order (from absenteeism to aggression towards others, to cite some examples).



Facing all this, the teacher is, in essence, a professional whose knowledge and competencies allow him to plan and develop the teaching-learning processes that he has been assigned, on which the consecution of the proposed educational objectives depend (Squires, 1999). Of their proper execution it is expected that students will learn the fair and appropriate treatment of others and interpersonal relationships, but the job of disciplining belongs to the day-to-day plane and it should not be decontextualized, nor should we ignore the numerous types of spontaneous learning that occur in the group, nor wait for time to go by.

In other words, the teacher cannot ignore – or in any case the psychologist should advise him – that what a student does in class is observed by the rest of his classmates who learn from it and from many other situations (Bandura & Walters, 1963). For example, if the behaviour of the student in question has negative repercussions on the course of the class, the teacher has to make “quick” decisions about how to respond in this respect; he cannot ask for a “time out” and “freeze” the session while he meditates thoroughly about the pros and cons of his possible reaction. This is one of the many cases where the teacher has to process “in parallel” the diverse types of information and the stimuli that he is receiving and, under these conditions, he has to make a good decision that will permit him to detain the problem in question, and at the same time, try to favour learning by observation which inevitably the rest of the students are experimenting (Genovard & Gotzens, 1997).

At the beginning of these pages we said that psychoeducational research has provided interesting sources of reference for reconsidering what we call school discipline; well then, one of the most significant contributions has been that of harmonizing the concept of school discipline with the aim which it serves, and this is none other than the attainment of student learning in the classroom, from which we gather another invaluable contribution: what students learn –even in the classroom– is not sequential nor does it keep to what was previously planned, but it functions “in parallel” and covers a great variety, much of which does not explicitly appear in the school curriculum.

Managing this situation calmly and on a daily basis requires that teachers undergo formation and counselling on these psychoeducational aspects we have mentioned and many others for which there is abundant bibliography (Chaplain, 2003; Corrie, 2001; Fontana, 2000). With these “mental” tools, problems endure but

their comprehension, their mental representation and the complex decision making that characterizes the job of teaching can become highly reinforced.

SCHOOL DISCIPLINE AND DISCIPLINE IN THE CLASSROOM

On numerous occasions the references regarding school discipline and discipline in the classroom are used indiscriminately. However, it is convenient to delimit the boundaries and most significant characteristics of each one in order to avoid confusion, which does not benefit order and school life at all.

On one hand, the norms for the organization and functioning of education centres referred to in the Art. 124 of the *Ley Orgánica de Educación* (Spanish Act of Education), establish a framework for the general functioning of the whole centre. School discipline refers to the sensible decision about which should be the legally established norms and procedures that guarantee their compliance.

On the other hand, discipline in the classroom refers preferably to the order that a certain group must observe so as to successfully perform the planned task. In this case, contextual variables play a decisive role; thus, the time of day that a certain activity is performed (first hour in the morning vs. last hour in the afternoon), the sequencing between activities (activities that require high motor exigency followed by activities that require high concentration) and the physical characteristics of the classroom (highly populated spaces or well-distributed spaces with enough room for the diverse activities), to mention a few examples, are essential elements for the proper development of the teaching-learning process of each class group (Genovard & Gotzens, 1996).

But, still more important than the contextual variables is the interaction pattern established between teacher and students and between the students themselves in that particular classroom. There is no doubt that the responsibility (and at the same time, the right) of every teacher to establish –within the centre’s general normative framework– his particular way of interacting and consequently, the concretion of discipline in the classroom, is unavoidable and irreplaceable.

It is understandable that most of the publications on school discipline deal with discipline in the classroom, without underestimating the added value that an action from teachers in consonance with that of other colleagues in the school brings.



In other words: the maximum coexistence between teachers and students happens in the classroom when the teaching-learning process is taking place, therefore, the risk for problem behaviour and coexistence problems is greater. But this lively interaction is specific of each instructional group which is why there are no general guidelines for all of them, because this would mean that we would be denying the singularity of each teacher-student interaction. This way, it is justified that the preventive discipline, as well as the provision and action to guarantee its maintenance, constitutes a responsibility of every teacher who in no way can elude it.

This distinction between the types of discipline that concur in educational centres is usually very useful for teachers who, on occasion, see in the regulations of the centre the only tool for confronting discipline in the classroom, and here psychologists have another reason for guiding teachers regarding the diverse levels of interaction that occur in the classroom and the diversity of responses needed.

For this reason, the existence of works dealing with the characteristics and actions proper of schools with "good discipline", (PDK Commission on Discipline, 1982; Watkins & Wagner, 1991; White et al., 2001) does not at all get in the way or contradict knowledge in depth in this field, on which every teacher should reflect and decide upon. On the contrary, the more knowledge teachers have about the multiple levels of task performance (in this case: school level and classroom level of discipline), the greater the probabilities are of succeeding in their realization.

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NEW CHALLENGES FOR SCHOOL PSYCHOLOGY: GUIDANCE COUNSELLING

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Educational Psychology has come a long way in order to take its rightful place in schools. On this journey, conflicts with other disciplines have been frequent because as educational psychologists have unclear functions in their psychoeducational diagnosis and participation, other educational professionals have assumed some of their tasks, i.e., diagnosis of cognitive and emotional abilities or personality. These are tasks proper of Psychology; therefore, there is a need to incorporate School Psychologists in all Departments, Educational Teams and Schools.

Key Words: School psychologist, guidance counselling, tutorial.

La Psicología Educativa ha recorrido un largo camino para hacerse un hueco en el ámbito escolar. En este viaje, las colisiones con otras disciplinas han sido constantes porque el Psicólogo Escolar, al no clarificar sus funciones respecto al diagnóstico y a la intervención psicoeducativa, otros profesionales de la educación han asumido algunas de estas funciones, tales como el diagnóstico de la capacidad cognitiva, afectiva o de la personalidad. Estas funciones son propias de la Psicología, de ahí la necesidad de incorporar un Psicólogo Escolar en todos y cada uno de los Departamentos, Equipos, y Centros Educativos.

Palabras Clave: Psicólogo escolar, orientación, tutoría.

In the western world, a strong research movement and educational approach called Effective School Improvement (ESI) is coming forth whose objective is the increase in the quality of education by improving the efficacy of the Centres (Muñoz-Repiso & Murillo, 2003; Thrupp, 1999). This increase in quality, following Negro (2006), has as its closest references "the movement of school efficacy", which pays special attention to the atmosphere, school culture, leaderships and degree of participation, and "the movement for the improvement of school", which highlights as key elements collective change, coordination and planning.

In this sense, an effective school (Mortimore, 1991), would be one that "promotes progress in every student regarding all aspects related to their performance and development over and above what is expected given their initial conditions and previous performance, assuring that every student achieves the greatest success possible and continues to do so every year" (p. 19).

This implies, according to Murphy (1992), setting out principles of equity (a school for all), of added value (absolute achievement is not valued but instead personal progress is valued), of comprehensive development (not only the conative level is valued but also the affective-

motivational) and of continuity (the exact effect is not valued but instead the achievement maintained throughout time). All these principles configure the ESI paradigm that, in practice, and according to Stoll and Fink (1996) and Stoll, Wikeley and Reezigt (2000) will promote a sustained change oriented towards united educational planning with the involvement of the whole school community, the participation of all agents in decision making, academic and professional development, the adaptation of the organizational structures to the learning style of each student and the promotion of creativity.

Such a substantial change needs a Guidance Model that would try to guarantee the integral education of students through the personalization of the educational process essentially in what refers to the adaptation of teaching-learning processes and the transition between stages and levels, with counselling and support of specialists.

To give expression to this model requires, on one hand, the implementation of a group of actions oriented towards the development of adequate means for the promotion of an education of quality, and on the other hand, a continuous process (integrating the actions carried out at tutorials and specialist counselling) which maximizes the adjustment of the educational project to the characteristics and needs of each and every student. Thus, every Education Centre must elaborate Tutorial Action and

Educational and Vocational Guidance Plans (Planes de Actuación Tutorial y de Orientación Educativa y Profesional), at the same time as it sets out the processes that will be used for offering a quality response to student diversity (Álvarez, Soler, González-Pienda, Núñez, González-Castro, 2002). Now then, this way of putting into practice educational psychology by means of the School Psychologist has experimented a considerable evolution since the late XIX century. At the beginning, between 1880 and 1920 it was closely linked to Special Education and later it became more centred on therapeutic models (1920-1955) (emotional, affective and social), scholastic models (1955-1970) (the psychologist behaves as a bridge between what is psychological and what is educational) or contextual models (since 1970).

According to Fernández (1988), there was a point of inflection in the sixties due to the great social demand for educational interventions that took place, especially in private centres, and also to the fact that the General Law of Education (LGE, 1970) formulated for the first time the right to School Guidance. In 1977, the first School and Vocational Guidance Services (SOEV) were created, initially with few members, only 2 or 3 per province, made up of EGB teachers and Psychology or Pedagogy graduates. In 1979, the Municipal Psychopedagogical Services (SPM) came into existence, greatly influenced by the community and preventive models of the corresponding health areas implemented in big cities.

After the coming into force of the Law on the Social Integration of the Disabled (LISMI, 1982) the Multiprofessional Teams (EEMM) were created with an initial approach closely linked to a medical-psychological understanding of Special Education which in turn impeded the more open psychoeducational approaches.

Now then, when an important change in the counselling models was really proposed it was with the RD334/85 for the Organization of Special Education, from which Integration Centres were promoted. In addition, in 1986 the SOEV and the EEMM were united, and from this moment on, they developed their functions on a national level, in Ordinary Centres as well as in Specific and Integration Centres. Such functions continued to be highly associated to preventive and socio-community aspects.

The LOGSE (1990), began to shape the model and the levels of action of educational and vocational guidance which are specified in the Tutorial (guidance class), with the specialised support of the Sector Team and the Guidance Department.

THE TUTORIAL

The tutorial is the responsibility of teachers of all stages and educational levels, and its aim is to contribute to the personalization and individualization of teaching-learning processes and the mediation between students, teachers and families. Its functions are:

- The development of educational programs regarding conflict resolution for the improvement of coexistence, programs regarding strategies and study skills in order to improve teaching-learning processes and programs regarding academic and vocational choices for the facilitation of the decision making process.
- The facilitation of exchange with the immediate socio-family surroundings with the objective of generating a real learning community.
- The coordination of all teachers that intervene with the same group of students in order to guarantee the coherence of classroom programming.
- The collaboration with the remaining levels of guidance in order to promote a gradual and coordinated development through specialised counselling.

SECTOR TEAMS

The weight of counselling and guidance in the sector is carried by the Educational and Psychopedagogical Guidance Teams (OM de 9-XII-92). These teams are classified according to the R.D. 696/1995 (art. 8.4), in: Early Assistance Teams (Equipos de Atención Temprana), General Teams and Specific Teams. The Early Assistance Teams according to Álvarez and Soler (1997), have as their fundamental competencies the early detection of educational needs in children in pre-school education and the counselling and support of parents. The General Teams, psychopedagogical assessment (OM of 14-II-96), counselling and technical-pedagogical support in Primary Education Centres. Finally, Specific Teams are in charge of specialised support for General Teams, Early Assistance Teams and Guidance Departments, in the case of students with special education needs associated to sensory and motoric disability, intellectual giftedness and personality or conduct disorders. Among its functions would be the collaboration in the elaboration of the census of students with special education needs, and in the assignment, control and utilization of the technical aids that are provided to the centres for a better educational intervention with these students. Also,

counselling of teachers and families in the utilization of the techniques, methods and resources appropriate for each disability and the elaboration of prevention and intervention plans in collaboration with other organs and institutions favouring socio-labour integration.

The objectives of the Educational and Psychopedagogical Guidance Teams make reference to the *Sector* as their broad context of action, and the *Centres*, as their more concrete sphere of activity. Among the Sector Objectives, according to Álvarez, Núñez, González-Castro and López (2003), we will cite the following:

- To facilitate the collaboration of Centres in the elaboration of a plan of action for the Sector and in the design of working programs.
- To be coordinated with the Teacher Centres and with the Inspection Services for the corresponding demarcation in the elaboration of the respective working plans and the resource map and Sector needs.
- To propose the activities of the different Teams (General, Early Assistance and Specific) in an integrated manner.
- To systematize the relationships between the Teams (General, Early Assistance and Specific) and the Head of the Guidance Departments at the Schools of reference.
- To prepare updated student files.
- To elaborate intervention programs.

On their part, in each Centre the Teams will try to:

- Carry out psychopedagogical assessments and report special education needs.
- Perform counselling tasks, especially within the Tutorial Action Plan, and in the work with students in programs of social skills, of improvement of self-esteem, of collaboration with families, etc.
- Collaborate with tutors and families trying to counsel them towards a better educational development of their children.
- Participate in the Plan to Attend Student Diversity (Plan de Atención a la Diversidad) in each centre. Facilitate an adapted response with reference to students with special education needs.
- Counsel the teaching staff, the Pedagogical Coordination Commission (Comisión de Coordinación Pedagógica) and all the organs of didactic coordination.
- To be coordinated with the Guidance Departments of Secondary Education Centres where students from the assigned Centres of primary education will go.

GUIDANCE DEPARTMENTS

Guidance Departments are neither Clinical Psychology Consultants nor Secretaries for the Administration of Tests. Their tasks consist more in the dinamization and strengthening of the activities performed by tutors (form teacher) in order to ensure that Education Projects of Centres become a personalized reality for every student. In order for this to happen, the Guidance Department must perform its tasks in close coordination with tutors, cycle coordinators and teaching department managers. They all act under direct dependency of the Director of Studies and in close collaboration with the Management Team.

The need for Guidance Departments comes essentially from the existing numerous electives in Secondary Education and in Bachillerato (post-compulsory secondary education) as well as the diverse offer of Vocational Training Modules; in these cases, students need help when making decisions, when changing Cycles, Stages, Centres and when making the transition to working life. The Guidance Department will be composed of (Circular from the *Dirección General de Renovación Pedagógica*, July 27th 1993, providing instructions regarding the Guidance Department Activity Plan for Secondary Education Centres):

- Teachers specialized in psychology or pedagogy (responsible for the management of the Department).
- Area teachers, in the case of having Curricular Diversification Programs in the Centre (Socio-Linguistic and Scientific-Mathematical areas).
- Support teachers (Therapeutic Pedagogy, Audition and Language) for students with special education needs.
- Occupational training and guidance teachers (FOL).

The Royal Decree 83/1996, of January 26th, points out among the functions of the Guidance Department "the elaboration of the plan of activities and the end of course memorandum". Such elaboration is the responsibility of the Department Head whose functions are also promoting the assessment of the different projects and activities of the Guidance Department and to ensure adherence to the plan.

The Resolution of 29-4-1996 of the D.G.C.E. specifies more clearly these activities which have to do with the Academic and Vocational Guidance Plan, the Tutorial Action Plan, the support to the teaching-learning process and the attention to diversity.

In addition, the Guidance Department Activity Plan

should take into account the objective necessities detected in the Centre, as well as the "subjective" necessities perceived by the Staff, Management Team and the Pedagogical Coordination Commission (*Comisión de Coordinación Pedagógica*), and the available personal resources and material. Furthermore, it should plan ahead the actions and procedures regarding Programs of Curricular Diversification (programming, development, organization and coordination), and the Program for the Vocational Initiation. In this sense, the Resolution of 29-4-1996 about the Organization of the Guidance Department proposes as one of the competencies of the guidance counsellor "to counsel educational teams regarding the Programs of Vocational Initiation and in the elaboration of the corresponding programming as well as of the final Guidance Counsel.

These specific priorities, in conjunction with the more general ones, help us sum up the Sphere of Activity of the Guidance Department into three main points:

1. Counselling in the development of the Educational Project, Curricular Project and classroom programming.
2. Organization of the appropriate supports.
3. Design of the Programs of Group or Individual Adaptation and Tutorial Action.

Finally, the Guidance Department must establish links to other education, health-related or municipal area services. Therefore, it is essential to introduce into the Plan of Activities a section regarding coordination, specifically with Municipal Social Services in order to tackle absenteeism and coexistence problems.

Thus, there are a series of different functions depending on which is the target group of the Educational Community (González-Pienda, Álvarez, Fernández & González-Castro, 2003; Núñez & González-Pienda, 2006); these are: Centre, students, teachers, families and other institutions. Among the functions with relation to the Centre, we have:

- To collaborate in the elaboration of Educational and Curricular Projects, as well as in the design of the specific integration programs for teacher formation and projects for the innovation of education.
- To counsel the respective organs in relation to students with special education needs and with learning difficulties regarding matters such as curricular adaptations, curricular diversification and evaluation and promotion criteria.
- To participate in the study of student needs and the

possible response in order to meet them.

- To collaborate in the planning and organization of educational activities including extracurricular activities.
- To promote cooperation with parents in the educational programs of their children.
- To provide in coordination with the Sector Team, specialized psycho-pedagogical counselling whenever needed.
- To participate mainly in Compulsory Secondary Education, Bachillerato and in Vocational Training Cycles (middle and higher levels) with respect to Vocational Training, in all aspects relative to professional guidance and the preparation for working life, in permanent cooperation with the business world.

With students, it would be necessary to:

- Counsel them individually, both in the educational and vocational spheres.
- Counsel them in their decision-making process regarding changes in Cycle and Stages, choice of elective subjects, electivity and starting in active life.
- To facilitate them information about academic and professional opportunities.
- To intervene in the ACIs (Individual Curricular Adaptation) and in the Curricular Diversification Programs.
- To promote the implementation of strategies of methodological innovation.

With teachers, it is necessary to:

- Provide them information about student psychopedagogical variables.
- Counsel them about how to attend diversity.
- Help them in their performance of the tutorial function, especially with students with special education needs and with other behaviour or coexistence problems.
- Provide them with programs and activities regarding techniques for teaching how to think, learning strategies and study habits.
- Integrate them in the activities organized by the Guidance Department.
- Counsel them on the use of methods of group dynamics, interview, etc.
- Guide them in the implementation of innovations, both in the fields of methodology and evaluation.
- Offer them support in the detection of problems and deficiencies in development and learning, as well as in the adequate intervention for their solution.

We will point out the following functions in relation to families:

- Facilitate cooperation between teachers, tutors and parents in the detection and solution of educational problems.
- Instruct parents about their active role in their children's education.
- Ask for their collaboration in the activities organized by the Centre where their assistance can be of great help.
- Organize meetings to improve their formation in educational aspects of their direct responsibility.

Finally, there are also functions in relation to other institutions like for example:

- Coordinate the collaboration of the Centre with other surrounding institutions, essentially with respect to social insertion of students.
- Be in permanent contact with the interdisciplinary Sector Teams to obtain their guidance.
- Obtain help and information as well as to collaborate with the diverse sectors of the Administration of Education.

OMISSIONS OF THE LOE ON GUIDANCE COUNSELLING MATTERS

- a) The LOE (Art. 1.f) eliminates psycho-pedagogical attention as one of the necessary principles for the achievement of a personalized formation that favours in every student an education that is complete in knowledge, skills and values. This principle was present in the LOGSE (Art. 2.3.g) in conjunction with the principle of educational and vocational counselling.
- b) The LOE (Art. 28) does not mention the Guidance Counsel that accompanied the Title of Compulsory Secondary Education (LOCE, Art. 31.3) and that was of a confidential nature but it was in no case prescriptive.
- c) The LOE also does not make any reference to Guidance Counselling in Bachillerato. In the LOGSE it did (Art. 27.2) when it talked about counselling with reference to the elective subjects and the subjects proper of modality, to guidance with respect to later studies or profession.
- d) The LOE (Chap. II, Title V), when talking about the autonomy of the Centres, does not mention the integration of the "Tutorial Action Plans" and the "Academic and Vocational Guidance Plan" in the

Educational Project of Centres, which was included in the LOCE (Art. 68.1).

- e) Finally, one of the most significant shortcomings of the LOE is the silencing of the existence of the Guidance Departments among the organs of teaching coordination. It only mentions the Didactic Coordination Departments and the Educational Teams.

QUESTIONS FOR DEBATE

It is necessary to reflect on some questions since they will probably affect the further development of the Law. Among these we will highlight the following:

- What mechanisms of coordination should be established in the change of stage in order to facilitate the process of student formation? (LOE, Art. 2.5).
- What programs for the reinforcement of students with negative reports should be implemented in order to develop their basic competencies? (LOE, Art. 24.8).
- What attention plan should be designed for students with learning disabilities or with special education needs associated to a high or low intellectual capacity? (LOE, Art. 26.5).
- What specialists should provide the pertinent supports and with what means? (LOE, Art. 72.1).
- Should the repetition of a school year have a Report from the Guidance Counsellor? (LOE, Art. 28.2)
- Should there be a Guidance Counsel at the end of Compulsory Secondary Education? (LOE, Art. 28).
- Would it be good to facilitate programs of pre-diversification and not limit the start of diversification programs to the third year of Compulsory Secondary Education? (LOE, Art. 27.1).
- What professionals should perform the psychological, educational and professional guidance of students? (LOE, Art. 91).
- Which functions correspond to School Psychologists?
- Can other professionals of Pedagogy or Philosophy perform the functions of the School Psychologist?
- If there is no express mention to the Guidance Departments, could the guidance counselling task become diluted in other organs for teaching coordination or teaching teams without specialized formation? (LOE, Art. 130).

FUTURE PERSPECTIVES

The LOE proposes "educational and vocational counselling as a necessary means for the achievement of

a personalized formation that promotes an integral formation in knowledge, skills and values" (LOE, Art. 1). This integral formation should reach every student, therefore, "throughout Compulsory Secondary Education the attention to student diversity will be an essential principle that will be guaranteed" (LOE, Art. 4). In practice, for educational and vocational guidance and to attend student diversity there will be "specialized services of educational, psychopedagogical and vocational guidance" (LOE, Third Additional Provision). The role of these services, even though it was partly defined by the normative development of the Guidance Departments after LOGSE (OM of 29-04-92, RD120/1998 of April 23rd, OM of 27-07-98, among others), is still not very clear. Often, guidance counsellors do not have sufficient resources (time, complete interdisciplinary team, spaces, formation, etc.) to be able to tackle all the problems they are up against, even though it is said that "the Educational Administration will provide public and concerted Centres (publicly funded private centres) with all the resources so that students that need an educational approach that is different from the ordinary due to the presence of special education needs (high intellectual capacity, late incorporation in the education system or other personal or family circumstances) can reach the maximum development possible of their personal capabilities and, in all cases, the general objectives established for all students" (LOE, Arts. 68 y 69).

In this sense, every Guidance Department should have on their team, aside from the professionals for the provision of the pertinent supports, a School Psychologist for the diagnosis, intervention or appropriate derivation of those cases that present emotional, affective-motivational, behaviour or personality problems. This is important because many of the problems at present are more emotional than cognitive or conative. Thus, emotional education is going to be one of the great challenges of Guidance Counselling in the forthcoming years (Bisquerra, 2006).

In addition, the Guidance Department should be represented in the Educational Team of the Centre and intervene in evaluation meetings, in meetings of teaching staff, in the decisions that affect students with special education needs, in repetitions, changes of stage, in the electives and options, therefore, the necessity of its participation in the elaboration of the Projects of Centres, especially in the aspects relating to the inclusion of

ordinary and extraordinary measures for attending student diversity, in Classroom programming, in early detection of special education needs, in the implementation of the plans for educational reinforcement and support, in psychoeducational assessment, in socio-family attention and in the elaboration of support materials (Trillo, 2006).

For this, close collaboration between tutors and Guidance Departments is necessary, which should go beyond the mere professional advice. The School Psychologist, on many occasions, must centre his tasks more on individual counselling on special educational needs associated to cognitive, emotional, sensory, behavioural or social deficits, while the tutor will be the person with a more complete idea of the educational approach that is being exercised with each student. In addition, the tutor acts as a bridge between the rest of the teachers and the student and between the family and the Centre. For this reason, the figure of the tutor in Secondary Education is so crucial; however, many teachers feel reluctant to be tutors since they have not been adequately formed. Therefore, the School Psychologist's task will also be the formation of young tutors in the psychoeducational field, to be able to coordinate their functions and work in the same direction. On its part, the Administration should incentivate the tutorial and consider it in the school period in order to strengthen it not only with words but also with actions.

Now then, the importance of guidance counselling is not only limited to Secondary Education Centres but it is also important for Preschool and primary Education Centres. The Guidance Units for preschool and Primary Education Centres should be inseparable, at a functional and organizational level, from the Guidance Departments at the Secondary Education Centres that they have been assigned (Ojea, 2006). In this way, a globalizing guidance model is proposed, with intervention phases which are organized according to these three levels:

1. **Tutorial:** Tutorial Action Plan with the assessment of the corresponding Guidance Units and Departments.
2. **Guidance Units and Departments:** Educational Guidance Plan following the guidelines of the Pedagogical Coordination Commission (*Comisión de Coordinación Pedagógica*) of each Centre.
3. **Sector Teams:** Sectorial Coordination Plan for assessment, formation and exchange of information of Guidance Units and Departments of the assigned Centres.

The organization and functioning of this triple guidance action could follow these steps:

1. The assigned Centres will unite the action measures at the beginning of the school year. The Sector Teams will coordinate these actions.
2. Follow-up will be performed once every trimester. The Guidance Units of the assigned Centres, the Guidance Departments of reference and the Sector Teams will be present.
3. There will be monthly coordination meetings between tutors and the corresponding Guidance Units or Departments.

This way, guidance counselling could become a dinamizing element of the teaching-learning process, with the aim of improving the efficacy of Centres.

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