Educational Strategies to Address the Educational Needs of Students with Asperger Syndrome in the Mainstream Classroom

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Abstract

The following article describes the Asperger syndrome (AS), an autism spectrum disorder, including an explanation of the main difficulties involved, especially with regard to social interaction, communication and imagination. In addition, specific examples help provide a more concrete understanding of the topic. Based on the principal explanatory theories of this syndrome -- "theory of the mind", "central coherence" and "executive functions" – several implications for education and intervention strategies are described in detail. As confirmed by our own experiences, these strategies are useful in mainstream classroom situations for meeting the needs of such students. Dealing with a conception of AS from the affective, relational and cognitive dimension improves our understanding and educational interventions with these individuals, enhancing the development of their social, communicational, and language skills, their self-regulation and self-determination. In summary, this results in better quality of life within the educational context of inclusive classrooms and schools.

Keywords: Asperger Syndrome, Special Needs, Inclusion, Psychological Theories, Educational Interventions.

Estrategias educativas para orientar las necesidades educativas de los estudiantes con Síndrome de Asperger en aulas ordinarias

Resumen

En el presente artículo se realiza una descripción del Síndrome Asperger (SA), trastorno que se enmarca dentro del espectro autista. Con el fin de que el lector o lectora comprenda mejor las características de dicho trastorno, se describen las dificultades básicas que manifiestan dichas personas referidas, principalmente, a la interacción social, comunicación e imaginación, aportándose algunos casos puntuales que dan una visión más concreta del tema. Considerando las principales teorías explicativas del síndrome: "*teoría de la mente*", "*la coherencia central*" y "*las funciones ejecutivas*", se detallan varias implicaciones educativas y estrategias de intervención que, en contraste con nuestra propia experiencia, resultan útiles en las aulas para responder a las necesidades de estos estudiantes en entornos ordinarios. Abordar las concepciones del SA desde la dimensión afectiva, de relación y cognición, posibilita una mejor comprensión e intervención educativa hacia estas personas, mejorando el desarrollo de sus habilidades sociales, de comunicación, de lenguaje, de autorregulación y de autodeterminación, y que en síntesis, equivale a potenciar su calidad de vida en el contexto educativo de los centros y aulas inclusivas.

Introduction

Why did we choose the Asperger syndrome[1]? What chance occurrence led us to draw up these guidelines on educational inclusion of pupils who have this syndrome? Those of us who in recent years have witnessed the schooling of students with Asperger or *High Functioning Autism* (Klin & Volkmar, 1996; Munro, 1999 and Moreno & O'Neal, 2003)[2], in the mainstream classroom, believe that it is indispensable to address this educational reality for purposes of inclusion. How many people with these characteristics have passed through the mainstream schools undiagnosed? The teacher, unversed in the matter, has tended to consider them as "normal" students in their physical appearance, but having unusual interests in things outside the knowledge of others, including the teacher. In other words, in certain situations these students were "dazzling"; however, in other situations they were more noted for their naivety, tone of voice, tantrums and unique mood changes that produced a certain chaos in the classroom. Consequently, the objective of this article is to propose educational guidelines for the inclusion of students with Asperger Syndrome in the mainstream classroom. As privileged witnesses of educational interventions, we have gotten a glimpse of the horizon and been able to delve further into the topic. Thus, the eventualities presented in this article allow us to give a precise response to teachers' concerns, provide orientation and outline action steps to serve as guidelines in their effort toward including pupils with these characteristics.

The two instruments most used for diagnosing this syndrome are the "Diagnostic and Statistical Manual of Mental Disorders" (DSM-IV), published by the American Psychiatric Association in 1994, and the "International Classification of Diseases" (ICD), published by the World Health Organization in 1992. The most current diagnosis at the international level is given in the "DSM-IV-TR (2002)", and is intended for the new "DSM-V" edition, making the only possible diagnosis that of autism spectrum disorder, thus eliminating AS as an independent category (Ghaziuddin, 2010). Nonetheless, until the new edition is published we

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[1] Asperger Syndrome is a developmental disorder and is referred to in this article as a syndrome or disorder interchangeably.

[2] Argumentation for the use of these two labels (Asperger Syndrome or High Functioning Autism) can be found in the DSM-IV-TR (2002), and is also explained and summarized by Klin and Volkmar (1996); Munro (1999) Moreno and O'Neal (2003), and others. Characteristic and congruent elements are offered for both labels (In Sepúlveda 2009, p. 139).

are to continue with what is familiar at this time, from the "DSM-IV-TR (2002)". This Manual describes AS as a Pervasive Developmental Disorder (PDD) that affects a wide range of skills, characterized by disability in the following areas: a) social interaction, b) communication [verbal and non-verbal] and c) imagination, these aspects being included in most of the literature reviewed, and referred to as the triad of observable symptoms (Alberta Learning, 2003; Winter, 2005; Bogdashina, 2005; Pittman, 2007). Both diagnosis systems are based on this triad of disabilities.

Principal features of Asperger Syndrome

Persons with AS usually present certain characteristics that we should be familiar with in order to better respond to their needs. Some of these characteristics, often reflected at school and in the classroom, according to Myles *et al*. (2005, p.7), are as follows:

Interests limited to specific topics	Low tolerance to frustration
Difficulty with changes in routine	Poor imitation strategies
Inability to make friends	Limited range of interests
Difficulty in reciprocal conversations	Problems with fine motor skills
Pedantic speech	Poor concentration
Socially naïve persons with literal thinking	Academic difficulties
Tendency to be vulnerable	Emotional vulnerability
Difficulty learning in large groups	Poor organizational skills
Difficulty with abstract concepts	"Normal" appearance to others
Poor problem-solving skills	Motor awkwardness
Generally broad vocabulary. Poor comprehension.	Sensory aspects (problems processing information)

Figure 1. Some characteristic features of the syndrome

Even though all persons with AS share certain common features, individual characteristics account for the variety of different cases. Based on studies carried out by

Cumine, Leach and Stevenson (2000), we offer three significant cases[3] by way of example, to illustrate the individuality of the syndrome:

- George (six years): He is defined as a passive child that has no interest in other boys and girls. His preference is to complete the same board puzzle over and over again. Many of his peers have stopped trying to interact with him, and others treat him cruelly, for example, throwing a ball for him to fetch as if he were a dog. He uses strange language, especially when answering questions, and often has facial expressions that do not correspond to the context. He is skillful at reading and spelling, but shows difficulty in comprehension. Sometimes he walks on his tiptoes and shakes his hands. He likes to have a little piece of string that he can twist.

- Michael (eight years): He tries to involve others in play, but instead of asking them he grabs them physically. His peers think he uses strange language because it is "old-fashioned". He does not understand the consequences of his actions on other people's feelings. He is very skilled in building toys, but never shares them with anyone. He shows interest in electrical wiring, without being aware of the dangers involved. The sound of wind makes him yell.

- Jeff (14 years): At lunchtime he becomes very anxious due to the noise and commotion that takes place in the lunchroom. He does not like to be observed while eating. At home, if there are guests, he eats in his bedroom. In the group, he observes the activities that are being performed, but always seems out of place. He talks ceaselessly about farming, if he can find someone to listen. In Physical Education no one wants him on their team. He has poor coordination.

Educational strategies based on the principal theories

This section will briefly explain some of the main psychological theories for understanding persons with autism and the difficulties they present. In particular, we refer to

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[3] Other examples can be found in Wall (2007).

"*the theory of mind*", "*central coherence*" and "*executive functions*". It is important to understand these theories since they will help us see the educational implications that may be useful and helpful with these individuals. Stichter *et al.* (2010) reveal the effectiveness of interventions for social competence designed for persons with AS. Consequently, based on these theories, our intent is to contribute ideas toward the best possible educational response.

The theory of mind

Premack and Woodruff (1978) introduced the term "theory of mind" in order to describe the capacity of persons to attribute mental states to themselves and to others and thereby predict others' behavior. Later research, from authors such as Leslie (1987), Frith (1989), and Baron-Cohen (2000), demonstrated that persons with autism (including people with AS) show difficulties in the theory of mind.

One study carried out by Baron-Cohen, Leslie and Frith (1985) is very significant in this regard; using the story of Sally and Anne from the prior experiment by Wimmer and Perner (1983, in Shaffer, 2000, p. 227), they proved how people with autism have difficulty in the theory of mind. Later, Cumine, Leach and Stevenson (2000) concluded that persons with AS have a number of difficulties in different areas, in response to which there are certain appropriate educational interventions.

DIFFICULTIES AND PRINCIPLES FOR SCHOOL-BASED INTERVENTION	
DIFFICULTIES IN	INTERVENTION PRINCIPLES
Predicting other people's behavior, preferring activities that do not depend on or require help from others.	Learning social skills for the classroom or the playground can be very stressful for students with AS. It is important to know that ongoing academic tasks are a relief that compensates for the stress of social interaction.
Perceiving others' intentions and understanding the motives behind their behavior.	Basic social skills should be taught: listening, not interrupting, pausing to allow others to talk, waiting in line, working in small groups, etc.

Explaining their own behavior.	They need help to recognize the effect of their actions on others and to modify their behavior accordingly.
Understanding emotions (both their own and those of others), resulting in a lack of empathy.	We must be cautious about supposing that the level of communication is what their use of language represents.
Understanding that behavior affects what others think or feel, leading to a lack of conscience and of motivation to seek help.	Be explicit in giving instructions, not assuming that the context clarifies the meaning.
Taking into account what others know or ought to know, tending to use pedantic, incomprehensible language.	Use strategies to develop self-concept, self-esteem, etc.
Reacting to the interests of the person who is listening when they speak.	Teach them to identify emotions "in situ", drawing their attention to expressions of emotion in others.
Anticipating what others might think of their actions.	Ensure that the person is paying attention to the activity they are carrying out.
Fooling others or understanding deceit.	Alert them to their role in tasks, situations and events.
Sharing attention with others, leading to an idiosyncratic point of reference.	Draw their attention to the use of gestures, facial expressions, looking in a certain direction, proximity in social interaction, etc.
Understanding social interaction, which leads to difficulty taking turns, inadequate use of visual contact, etc.	Be careful about assuming that the AS student has understood the intentions of our behavior.
Differentiating reality from fiction.	Help them to differentiate fiction from reality.

Figure 2. Difficulties and principles for school-based intervention

Central coherence

Uta Frith (1989) asserted that not all aspects of functioning in autism were explained by the "theory of mind", for example, the insistence on keeping a routine, obsessive preoccupations, attention to details, etc. In 1989, this author put forward "central coherence" as persons' tendency to gather different data in order to obtain the most possible information

about a context, in other words, the tendency to give meaning to situations and events based on reality, a difficult aspect for persons with AS.

The following table indicates the main implications of a deficit of *central coherence,* as well as principles for intervention, according to Cumine, Leach and Stevenson (2000):

DIFFICULTIES AND PRINCIPLES FOR SCHOOL-BASED INTERVENTION	
DIFFICULTIES	INTERVENTION PRINCIPLES
Idiosyncratic focus of attention	Clearly mark the beginning and end of each task, for example, use a list of steps to follow until the task is completed. Pictograms, diagrams, etc., may be used.
Imposition of own perspective	Consider showing an image of the finished task so that students with AS know what is expected.
Preference for the known.	Avoid ambiguity by using visual cues that emphasize the meaning.
Inattention to new tasks.	Teach how to make choices.
Difficulty choosing or prioritizing.	Teach how to make choices.
Difficulty organizing self, materials, experiences.	Construct opportunities for them to generalize knowledge and competencies.
Difficulty seeing connections and generalizing skills from one situation to another.	Teach stories using sequences with pictograms. Social stories by Carol Gray may be useful here (http://www.thegraycenter.org/).

Figure 3. Main implications of a deficit of *central coherence* and intervention principles.

Executive functions

These functions refer to the ability to apply adequate problem solving in order to meet a future goal. As a generalization, the cognitive model includes an executive function that includes "*limitations of working memory and representational processes that are limited by a central resource responsible for selective attention, inhibition, and planning*" (Norman &

Shallice, 1986, in Martínez & Henao, 2006, p.515). In 1995, Sally Ozonoff proposed the theory of deficit in executive functions of persons with autism (Ozonoff, 1997). The concept itself describes the activity of a set of cognitive processes linked historically to the functioning of the frontal lobes of the brain (Félix, 2005). This encompasses a broad range of cognitive operations where persons with AS also show difficulty in relation to planning, flexible behavior and the organized search for elements.

In general, research on executive functions of the brain has attracted growing interest, with many studies addressing this dilemma. It is also noted that executive functions are related to a set of strategies that would include: "*(a) the intention to inhibit a response or postpone it until a more suitable moment; (b) a strategic action sequence plan; and (c) a mental representation of tasks, including information about relevant stimuli codified in memory and the desired goal for the future, operations that serve to control and regulate information processing throughout the brain*" (Félix, 2005, p. 218). The following are implications from *executive functions* and the appropriate intervention principles, according to Cumine, Leach and Stevenson (2000):

DIFFICULTIES AND PRINCIPLES FOR SCHOOL-BASED INTERVENTION	
DIFFICULTIES WITH	INTERVENTION PRINCIPLES
Perception of emotion	Tasks should be clearly explained, preferably with previously defined steps to carry out.
Imitation	Specifying sub-objectives is recommended.
Simulation play	Help them identify the main idea in new information.
Planning	Facilitate their association of new knowledge with prior knowledge.
Beginning and ending tasks	Help them see the whole picture instead of just focusing on the details.

Figure 4. Implications from *executive functions* and appropriate intervention principles, according to Cumine, Leach and Stevenson (2000)

We wish to emphasize the great importance of keeping these deficits in mind, as explained by the three theories, when planning educational intervention for students with autism disorder. Principles and interventions should be applied at the school level and in the mainstream classroom and should address these specific educational needs.

Classroom strategies

One must remember that each person with AS is unique, so appropriate strategies must be planned for each individual. However, there are a number of key points common to interventions with these types of pupils, as we specify below:

GENERAL INTERVENTION	WORK MODALITY
According to the *Equipo Deletrea* (2004), general strategies for interventions incorporate the following:	Recommended forms and methods for proceeding in the classroom (Cumine, Leach & Stevenson, 2000):
Constant use of visual aids in any teaching process.	*Creating a peaceful work environment.*
Ensuring a stable, predictable environment, avoiding unexpected changes.	*Maintaining a clear classroom structure.*
Encouraging generalization of what is being learned.	*Making sure the person has understood what is expected.*
Establish guidelines for error-free learning.	*Classify tasks, gradually increasing demands.*
Break tasks down into small steps.	*Pay individualized attention to the student with AS, instead of relying only on instructions given to the whole class.*
Provide opportunities to make choices.	*Record progress and follow up.*
Help them organize their free time, avoiding inactivity or excessive time spent on special interests.	*Evaluate intervention strategies.*
Explicitly teach skills and competencies that generally would not require formal, structured teaching.	*Work in collaboration with other channels of support (professional, etc.) and establish school-family ties*
Prioritize objectives that relate to the core traits of AS.	
Include topics of general and special interest.	
Pay attention to emotional indications.	
Avoid criticism and punishment as much as possible.	

Figure 5. General strategies for interventions

It must be recognized that support teachers (curative education teachers, etc.) have an essential role in building the confidence of other teachers that are involved in educating students with AS. It is evident that neither teachers nor educational support staff will always have all the answers, so collaborative work among professionals is the best way to discover what responses are needed, without forgetting key intervention aspects such as routine, clarity and consistency. Small changes in the classroom environment can help the student with AS who has difficulties in the aspects of *physical surroundings; language and communication; social environment; and curriculum,* areas that we describe below.

Unpredictable, improvised *physical surroundings* confuse persons with AS; therefore, organization and structured settings are fundamental. The TEACCH program from the state of North Carolina was developed in the mid 1960s with the objective of helping persons with autistic spectrum disorders and their families (Mesibov & Howley, 2010). The intent is for these persons to have a life in the community through structured intervention. Some people liken the use of this method to setting up scaffolding, while others consider it a prosthesis.

Authors like Tsang, Shek, Lam, Tang and Cheung (2007) defend the effectiveness of this program methodology. Among the major, noteworthy features of the TEACCH program, we highlight the following (Cumine, Leach & Stevenson, 2000; Wall, 2007; Pittman, 2007; Taylor & Preece, 2010; Mesibov & Howley, 2010):

- *Physical structure* refers to how the environment is organized. A clear, visual separation of areas encourages understanding of what is expected in each place. For example, in the work area there must be minimal distractions.

- *Schedules* help students understand the activity they are going to carry out. Through the use of objects, photos, images, numbers, words (depending on the developmental level of each student), the person with AS will be able to understand the sequence of events.

- *Work systems* are used to show what jobs are to be carried out; when one must finish; what will happen when one finishes, etc.

- *Visual clarity*: tasks are presented visually in order to highlight the most important information and to help in understanding what is to be done.

Use of visual aids for organization is highly recommended by experts (Jordan & Powell, 1995; Winter, 2005; Betts et. al, 2007; Mesibov & Howley, 2010). In addition to these aids, it is recommended that the student with AS be seated near the classroom door. It is remarkable that some of these individuals have put their experiences into writing, explaining the importance of visual support in their lives, such as in the case of Temple Grandin (1984, in Attwood, 2009:409):

"My mind is completely visual and spatial work like drafting is easy for me. I remember that I taught myself to draft in six months. I have designed large steel and cement buildings such as stables for keeping livestock, but I still find it difficult to remember a telephone number or to add".

Language and communication. Persons with AS usually have good language skill, a large vocabulary, correct grammatical structures, etc. However, they have communication difficulties especially in pragmatics (language use) and semantics. Objectives include helping these people develop a communicative intent; developing their ability to initiate or maintain a conversation; improving their comprehension. The following strategies may be useful:

Structuring the language environment	Developing comprehension
When instructions are about to be given to the whole class, mention their name.	Have an interpreter that can help the student with AS understand the meaning of words.
Encourage and reinforce all attempts at communication.	If the student with AS has specific interests, "use" them in the assignment.
Use concrete, direct and explicit instructions, supported by images	Help the student with AS vary his/her tone of voice depending on the situation.
Allow time for them to answer and then check whether they have understood.	Encourage visual contact.
If necessary, repeat the instruction.	Teach them some metaphors and explain their meaning.
Teach them some standard remark that they can use when they do not understand the meaning of something.	Help them understand the meaning and emotions behind facial expressions. Point out facial expressions in books, mirrors, etc.
Avoid irony and sarcasm.	

Figure 6. Strategies for language communication

The social environment. We should not force students with AS to play, but we should teach them strategies of how to do so. Also, keep in mind the anxiety that these students usually feel when they do group assignments. These children might occasionally be given the chance to have their own space. Generally speaking, they prefer to be with older people rather than persons of their own age, since adults usually adapt better to their needs. One must also recall that a high percentage of schoolchildren with AS are victims of bullying (Dubin, 2007; Attwood, 2009). Examples given by these authors provide clues as to how we can plan strategies that help address the needs of these students.

We know that bullying involves an imbalance of power, leading to the use of aggression, and that persons with AS are susceptible to becoming victims of this aggressive, abusive action. If the AS diagnosis is exposed to the class, one must underscore its positive aspects and offer examples of exemplary behavior shown by these students. It is also important to remember that open communication with the family must be maintained in order to ensure joint collaboration.

In light of these considerations, our interventions ought to incorporate the following aspects (Cumine, Leach & Stevenson, 2000; Winter, 2005; Attwood, 2009):

- Ensure that all school personnel understand the social difficulties that these persons are facing, and work as a team to prepare an appropriate intervention.
- With the family's consent, it may be useful to talk about AS at the school and in the classroom.
- Work for the prevention of bullying schoolwide.
- Teach how to respond to undesired behaviors.
- Ensure that the pupil knows which adult to turn to when he or she feels bad.
- Have a quiet area of the classroom where the student can withdraw to when feeling anxious. Certain rules should be agreed upon in order to spend time in this area, which might be a certain corner of the classroom.
- Analyze the members of the class and choose certain classmates that might form a "peer tutoring" group or a "circle of friends". The "circle of friends" modality is a social help mechanism during group tasks, recess periods and other activities, whether recreational or formal. Generally the group includes six or eight volunteers that meet

regularly with the key person and with one adult. The circle, according to Plimley and Bowen (2007), has three main functions: *to offer encouragement and recognize success; to identify difficulties and devise strategies for achieving targets; help put these ideas into practice*. Thus, peers are a natural resource for helping intervene with students with AS; explain to them why their task is so important and necessary.

- Use social stories such as those by Carol Gray (mentioned previously), in order to help persons with AS understand social situations.

The curriculum. Most of these schoolchildren study in mainstream classrooms; therefore, all teaching staff should keep informed, be tolerant, show empathy and be aware that the whole school is to feel involved in meeting the needs of pupils with these characteristics.

In general, the learning style of students with AS includes the following characteristics (Cumine, Leach & Stevenson, 2000):

o *Motivation*: They are not usually competitive nor do they feel any desire to excel.
o *Imitation*: They usually find it difficult to imitate others' movements, and adjust them to their own frame of reference.
o *Perception*: There is a possibility of incoherent or unexpected responses to sensory input.
o *Attention*: Their focus of interest is often obsessive.
o *Memory*: Memory is usually episodic, for example, events are not usually recounted within their context. They are able to recall an endless list of data points without relating them to each other.
o *Sequencing*: They show difficulty with sequences, being able to copy a model, but finding it difficult to discover the underlying principle.
o *Problem-solving*: They can understand a variety of strategies, but not be aware that they have these strategies at their disposal, and therefore do not select the appropriate strategy for a new situation.

By way of example, we include the following difficulties and strategies to be taken:

DIFFICULTY	STRATEGY
In the area of mathematics	
Difficulty understanding the complete instructions.	Simplify your language. Follow instructions step by step in chronological order. Use objects and images as aids to help them understand.
The student is fascinated with numbers and asks questions repeatedly, interrupting the lesson.	Establish a clear rule. Say for example that one can only ask the same question three times, and try to devote time to clearing up his or her doubts.
They show difficulty understanding mathematical language.	Use practical examples to help them understand the exercises.
Uncertainty about how to answer the question *why?*	Whenever possible, convert the questions into statements, leaving a blank that the student can fill in.
In the area of sciences	
The student prefers to work alone and resists sharing tasks with others. Usually shows great difficulty when group work is required.	Carefully select members of the group. At first the student with AS can have a more passive role such as recording results. It is advisable to gradually give them a more active role within the group.
Is unable to ask for help in class.	Teach him or her to recognize when they are stuck and indicate how to ask for help when needed.

Figure 7. *Specific curriculum strategies.*

For many students with AS the curriculum is not a problem. However, their difficulties appear mostly in extra-curricular areas, due to the lack of structuring – for example, in assemblies, recess periods, etc. The following represent good practices for such situations (Cumine, Leach & Stevenson, 2000; Betts et. al, 2007):

- *Assemblies:* They can be integrated into these activities a little at a time. In preparation, the rules of the assembly should be clearly explained to them, using visual aids to reinforce their understanding. Allow them to sit at the edge of the group

instead of in the middle, and encourage some classmate to adopt the role of helper and to give them guidance.

- *Recess periods*: Recess, as a noisy space without specific structuring, seems confusing to them and tends to cause anxious feelings. Nonetheless, these areas present opportunities for developing social competencies. For example, create a space where collaboration is encouraged; accept their choice do things on their own; organize simple, structured, social games where each person's role is clear; encourage them to observe activities that are taking place during recess; find some activity that attracts them and, with the help of peers, encourage them to participate; teach them useful topics of conversation that will enable them to start and maintain conversations.

- *Moving around school*: Moving around the school, between classes, etc., may be stressful for students with AS. Possible strategies are: planning entrances and exits so they are not chaotic; before attending a new school, e.g. secondary school, hold advance visits so they can learn their way around; use peers to help them.

- *In the lunchroom*: This is another noisy, boisterous space where persons with AS often appear anxious. Some strategies might be: to establish clear rules, reinforced by visual aids; consider having them sit in a quieter area like a certain corner, and not in the middle where there is usually more commotion; alert the lunch room monitors to these difficulties and to the strategies that are being followed; teach the person with AS to ask for help from others when needed; encourage peers to become helpers.

- *Special days (holiday celebrations, field trips, etc.):* On some occasions the usual school routine is altered, such as for the celebration of some special event. Teachers should warn students with AS ahead of time about what is going to happen on those days, especially so they can start anticipating a change in routine. The schedule of activities must be available a few days ahead in order to anticipate what type of activity this student can participate in.

- *Help seeking and problem solving:* The key is to be aware of what tasks bring about their greatest difficulties. If they are having difficulty with a certain exercise, try to

work in conjunction with them, explaining the task step by step; when they finish the activity, have them reflect on their own learning; teach them how to recognize when they are stuck and how to ask for help.

- *Working with other people:* good practice for helping students with AS to work with others lies in knowing what social level they can tolerate without feeling anxious; allow them to sit on the edge of a group instead of in the middle, taking into account seat assignments; students with AS may feel more comfortable if the other person sits diagonally across from them and not at their side; their interests might be used in order to share with the group, clearly defining each person's task within the group.

Based on the observations and generalizations put forward by Alberta Learning (2003), we have tried to connect these guidelines with others from diverse authors in order to make a coherent whole, useful for consultation (Frith, 1989; Wing & Everard, 1989; Asperger, 1991; William, 1995; Happé, 1991; Munro, 1999; Attwood, 2000, 2009; Rivière, 2001; Tortosa & González, 2001; Moreno & O'Neal, 2003; Sepúlveda, 2008). Here we present the most complex areas that need to be considered and taken on within the school context. These criteria fall into the following categories: language, social interaction, insistence on an unchanging environment, limited interests, limited organizational skills, motor coordination and concentration, academic difficulties, emotional vulnerability and excessive sensory sensitivity. In summary, the peculiarities of the student with AS should be understood, and the school environment adapted in order to facilitate their learning, always including the support and collaboration of family and other professionals.

By way of synthesis and conclusion[4]

In reality, the "players" needed for inclusion include the entire educational community: students at the school, teachers and additional staff, as well as families. The latter must receive a number of benefits centered around: adequate information, professional help and reliable, ongoing support over time. The mainstream teachers also require such basic support, including: appropriate training to enhance their professional competency, support services, channels for autonomous training, analysis, guidance and reflection with other

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[4] The original synthesis which provides the fundamental basis for some of these conclusions can be found in the journal *REPSI*. Nº 113/114. January/April, pp. 28-40. Santiago de Chile.

professionals, allowing them to exchange experiences and to look for common solutions in inclusion situations, specifically with the occasional problem area that arises with students that have AS.

It is worth noting that, while in some aspects, "*the isolated task of the teacher allows for a certain degree of safety and protection*", making discretionary decisions concerning students with special needs forces him or her to "*move away from that isolation and to share and discuss the uncertainties being created*" (Fullan, 1994, p.149). In this way there is access to a type of shared, valuable information for the purpose of greater effectiveness in the task being undertaken.

An inclusive intervention project must be thought through with perspectives from Educational Psychology, with an orientation toward providing the student with AS access to learning under the best conditions. Advising from school psychologists is a valid means for optimizing how education is realized. Along with this, there needs to be previous consideration of certain qualities required of the school in order for its reception of the AS student to be motivating (Paula, 2003; Sepúlveda, 2008, 2011):

- Schools should preferably be small, with a small number of students per classroom.
- There should not be excessively complex interactions, avoiding schools that are excessively boisterous and "depersonalized".
- Structured schools are preferable, with directive teaching methodologies and types of organization that make the school day predictable.
- It is essential that there be a real commitment from the teaching staff and from specific teachers who have students with AS in their classrooms.
- Likewise, it is very significant that peers are provided with the keys for understanding and supporting their learning and their relationships.
- The educational project, in general, should not be based on restrictiveness, since that will be an obstacle to interaction among the main players, and thus make it difficult to meet the goals defined.

We insist on the inexistence of a single recipe that can be applied in the classroom for all students with this type of disorder. Just as no educational method meets the needs of each

and every student who is not affected by these symptoms, the same occurs with students who present these characteristics.

Through the foregoing discussion, based on the difficulties arising from the syndrome itself, we have attempted to address concepts from the affective, relational and cognitive dimension, suggesting that a better understanding of the topic makes it possible to better understand and intervene in the education of persons with AS. In general, this will help contribute to better development of social skills, communication, language, self-regulation and self-determination, which, in summary, means encouraging a better quality of life for these persons from the educational point of view in the framework of schools and inclusive classrooms.

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