<u>Partner Organisations</u>

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                        Barry Fenn, Learning Support Assistant

Maureen Hayton, Learning Support Co-ordinator
Frances Hobson, Education Partnership Manager
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UAEI – Unit of Support to School Inclusion, School of Education, Porto Polytechnic, Portugal

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Project Hand in Hand - Partner Organisations

Ankara Provincial Directorate for National Education is the second biggest local public authority for education, of 81, in Turkey. It is responsible for the planning, coordination and management of all kinds of educational and training activities for pre-school, primary, secondary and adult education in the 25 districts of Ankara. The institution has a range of duties mainly in 7 fields; entitled management, personnel, education and training, budget and investment, research, planning and statistics, inspection, guidance and investigation and civil defence. These duties are carried out by 24 affiliated units.

There are 1472 state and private school. According to the 2007-2008 educational statistics of the institutions there are a total of 834271 students in public and private schools. 34891 of them attend preschool, 587212 attend primary education and 212168 attend secondary education. There are a total of 45301 teachers in public and private schools. 1698 in preschool, 27108 in primary education and 16495 in secondary education.

As the coordinating institution project "Hand-in-Hand" has been carried out by Special Education, Guidance and Consultancy Services Department. It is responsible for managing, monitoring, evaluating and supporting special education, psychological counselling services at schools and guidance and research centres in the districts.

UAEI - Unit of Support to School Inclusion is a Research Centre of the Special Education Department of Superior School of Education of Porto, PORTUGAL. This department is responsible for post-graduate and master degrees in Special Education.

The UAEI involves a multi-disciplinary team of psychologists, occupational therapists, and speech therapists whose main goals are:

- To work with educational centres (schools and kindergartens) towards the promotion of academic achievement in the classroom context;
- To work in partnership with parents in early intervention;
- To promote and cooperate in programs and research projects and disseminate scientific knowledge;
- To exchange knowledge and practices among institutions, in educational and special education issues, at a national and international level;
- To promote and organise seminars and conferences with the participation of national and international specialists in the area of education;
- To develop training modules for all educational agents: parents, teachers and education professionals.

Northumberland College is a further education college covering the large county of Northumberland, in the United Kingdom.

Northumberland is a rural county, there is above average unemployment and consequent socio-economic disadvantage throughout the county, through rural depopulation on the one hand and industrial decline on the other. Northumberland as a county has extensive basic skills needs, identified by the local Learning and Skills Council and generally low rates of participation in both further and higher education. Ashington, the town in which the College is located, has been designated by the Department of Education and Science as an Education Action Zone. There is a considerable range of social problems experienced by students at the College, many of which are centred upon behaviour in the family setting. The College provides:

- Primarily vocational education and training to students aged from 14, but the majority of students are in the 16 - 21 age range.
- The College has more than 500 staff and over 12,000 students who attend full time or part time courses.
- Northumberland College provides students with alternative skills like joinery, outdoor pursuits, motor mechanics, hairdressing and construction.

Because of the specific needs of the county, Northumberland College has tried to find innovative ways of engaging local communities with learning and in 1999 won a national Beacon Award for the quality and range of its 'outreach' provision. Northumberland College operates on two main campuses and in four rural 'outreach centres'. The college also operates 2 mobile classrooms which can be driven to any location to offers ICT and other courses to the community who otherwise would be unable to attend the main college campus.

Atkinson House Special School, associated partner linked with Ashington College, Northumberland U.K.
Atkinson House School is part of Northumberland County Council's provision for children and young people with special educational needs. Atkinson House School is the only school of its type in Northumberland. The school is a day school for 40 boys, aged between 11 and 16, who exhibit extreme behavioural, emotional and social difficulties, (BESD). The behaviour exhibited by the pupils is such that at least two mainstream schools have been unable to meet their needs. 45% of pupils have a diagnosis of ADHD, ADD or PDD, 15% are diagnosed as autistic or being on the "Asperger's continuum". 70% of pupils receive input from Child & Adolescent Mental Health Services with 45% of pupils being on medication. Only 15% of pupils still live with both their natural parents with 20% living with foster carers or in Children's Homes. Pupils follow the full National Curriculum and can leave school having gained national qualifications in up to nine subjects. The school is judged by Ofsted, the government inspectors, as being "good". The inspectors also said "The school is a calm and orderly place to learn, with good relationships between adults and students. Students very clearly understand and respect the sophisticated systems the school has established for managing and rewarding good behaviour. Very importantly, students feel the systems are 'fair'". The school is seen, at a national

level, as being a model of good practice in the use of data in tracking and profiling pupil's behavioural development. Further information and details can be found at the schools web site: www.atkinsonhouse.org

The Polo Europeo della Conoscenza - European Pole of Knowledge is a public organisation. A network of schools, teachers, researchers, associations and institutions at national level, hosted by IC Lorenzi and initially supported by the Regional Council, which is working for the European social and educational integration. Its main fields of activity are to promote the European dimension and integration through European and extra European workshops, seminars, conferences, partnerships and projects. The European Pole of Knowledge is a planning "umbrella" for activities involving the greatest possible number of schools and institutions in every project consortium. The European Pole of Knowledge works in every field of education, from ITC to in-service training courses for teachers, from Kindergartens to adult education, in prison and in rural areas. It works mainly on social exclusion, fighting against xenophobia and racism, the training of students and drop outs, intercultural learning, youth workers' and the vocational training field.

Accademia Psicologia Applicata
 (Applied Psychology Academy) is a Non Governmental Organisation recognized by the Italian Ministry of Foreign Affairs
 (Ministerial Decree 2007/337/002657) to be fit for working in the Development Cooperation for the "Realization of programs for the Developing Countries", working for the "Selection, formation and deployment of Volunteers", working for the "In-site Formation of citizens from the Developing Countries", working for the "Information and Education to the Development" according to Article N° 28 of the Italian Civil Code law N° 49/87.

The NGO A.P.A. was born from the idea of a non-profit project of a group of men and women composed of professionals coming from the fields of Psychology, Psycho-therapy, Medicine, Architecture, Formation, International Cooperation and Communication areas, whose *Mission* is:
- Promoting psychology and psycho-logical culture in all its aspects (without any theoretical, technical, methodological and geographical boundaries) and Culture in general.
- Increasing Cultural Integration and Promoting Health in coherence with the *biopsychosocial paradigm* of the World Health Organisation (WHO).
- Strongly carrying out the opportunity of sharing our personal as well as professional skills with people who for a range of reasons, either economic, cultural, social or geographical, are denied this right and with the aim of promoting an equal wellbeing.
- Creating an organisation which can be a reference point for personal and professional formation as well as representing a constant development.

Our *Vision* is "A world in which every human being could live in an atmosphere of well-being thanks to active and mutual cooperation".

The Academy is subdivided in Topic Activities, each of them working on projects and intervention teams with a great emphasis and responsible to have a never ending attention to **quality**.

Formation, Schools, European Initiatives, Social Utility, International Cooperation, Clinic

These are the bases on which the ONG A.P.A. focuses its efforts, among others: humanitarian projects and international cooperation concerning intervention on water and electric supplies, agriculture, micro-enterprise, education, formation and health care on behalf of developing countries. Psychology, psychotherapy, personal and professional formation, formation as well as intervention activities in schools, volunteers' formation in Italy and abroad, immigrants, cultural integration, moving and youth exchange activities. **These are achieved by the never ending application of psychology with the added value which this discipline represents**.
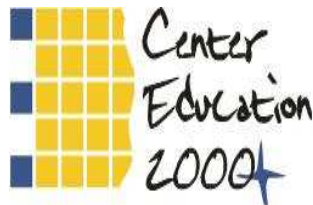
 Center Education 2000+ is a non-governmental, not for profit, educational organisation located in Bucuresti, Romania. **The Center**, founded in December 1999, is part of the Soros Open Network, the most important network of non-governmental and civic organisations in Romania. It operates nationally and is also part of the East-East NGO network covering Central and Eastern Europe and former Soviet states.

The mission of the **Center** is to promote the values of a knowledge-based global open society by:

- Supporting the development of an open and democratic public education system in Romania whose characteristics are: transparent and fair competition, cooperation, support for individual initiative and innovation in this field;
- Promoting the initiatives that aim at developing equal chances in education, student-centred learning activities, a broader community involvement in school life and the development of educational reform implementation patterns that can be replicated nationwide.

The programs and the expertise of **Center Education 2000+** have benefited, along the years, large groups of students, teachers and other educational consultancy specialists. Its contribution to the development of the current educational reform practices is reflected in educational change models implemented at present in Romania and various other countries from Central and Eastern Europe.

As for the professional standards and institutional procedures, **Center Education 2000+** is a think tank, task-oriented and learning organisation. **The Center** sets priorities and selects the areas of activity for its projects and services based on the concrete needs of its clients and on the requirements of the national and international educational market.

CHAPTER 1

ABOUT THE PROJECT

By Banu DUMAN, Project Co-ordinator,
Ankara Provincial Directorate for National Education, Ankara, TURKEY

The project "Parents and Teachers Working Hand in Hand : Training Programme for Parents and Teachers of Pupils with Attention Deficit Hyperactivity Disorder (ADHD)" was prepared and co-ordinated by Ankara Provincial Directorate for National Education under the European Union Education and Youth Programme, Lifelong Learning Programme within the framework of Grundtvig Learning Partnership.

At the planning stage of the project, as the co-ordinating institution, we wanted to prepare a project for pupils with ADHD because we know that, across the world, almost 5% of students suffer from this disorder and they encounter difficulties in their academic life, in their community and in their social relationships. Both parents and teachers encounter difficulties while they are supporting pupils with ADHD in their school lives. As the second biggest local education authority in Turkey, we decided to prepare this project for parents and teachers of pupils with ADHD to make everyone's life easier. We shared our thoughts with different people and institutions from different countries and we realised that it is not only a problem in Turkey but also for other countries. As a result, we developed project partnerships with various educational institutions, universities and non-governmental organisations (NGOs) from different countries. The project development stage was completed after contributions from all partners. Initially we had started with 8 partners but after approval for the project and the agreement of National Agencies of each partner countries, we implemented the project with 6 partners starting from 1st October 2007 to 31st July 2009.

The 6 project partners are;
1) Ankara Provincial Directorate for National Education, Ankara, TURKEY (Co-ordinator)
2) The European Pole of Knowledge, Verona, ITALY
3) Academy of Applied Psychology Association, Palermo, ITALY
4) High Superior School of Education of the Polytechnic Institute of Porto, Porto, PORTUGAL
5) Center Education 2000+, Buchuresti, ROMANIA
6) Northumberland College, Northumberland, UNITED KINGDOM
   Associated Partner: Atkinson House Special School,
   Seghill, Northumberland, UNITED KINGDOM

All partners undertook to provide contributions from parents and teachers of pupils with ADHD for this project. Within this context, it is intended that the training of teachers and parents of pupils with ADHD (aged 6-18) will be in accordance with European Union standards. Furthermore, we took into account "Key Competences for Lifelong Learning - a European Reference Framework" prepared by European

Commission Directorate General for Education and Culture. We especially targeted the acquisition of "learning to learn" and "interpersonal skills" for the target group of teachers and parents of pupils (aged 6-18) with ADHD throughout the implementation of the project.

We welcomed the diversity of project partners with their different expertise and proficiencies as enriching the project, and its outcomes. Experience has taught us that there are many things we can learn from each other although we have different cultural, social and historical backgrounds. The materials that we have created identify both the areas of similarity as well as the areas of difference between the different project partner institutions and countries.

Our adventure started with a grant supported by the European Commission which will finish on 31st July 2009. We believe that teachers, educational staff, support staff, parents and institutions working in the field of ADHD will benefit from the materials and resources produced by the project now and in the future.

The project consists of 6 main elements:
1) Preparation of educational materials for teachers and parents of pupils with ADHD,
2) Preparation of training resources for teachers and parents of pupils with ADHD,
3) Undertaking training of those who will deliver the training materials,
4) Delivery of training to teachers and parents of pupils with ADHD by facilitators trained under item 3,
5) Raising awareness and dissemination about the project across the EU,
6) Attending project meetings and delivering training sessions, with appropriate colleagues, within the project partner's organisations.

Across partner countries legal regulations and their education systems are different in some regards however they all ensure the provision of a properly resourced educational entitlement for pupils with ADHD. We started the project by undertaking a needs analysis by the completion of questionnaires and also interviewing parents and teachers of pupils with ADHD. From the needs analysis it became clear that there was a need for training in a range of areas for both parents and teachers. Within the identified training needs there was commonality of need across all partners, for example, teachers needed to be informed about ADHD, there was a need to increase teachers' professional understanding of teaching strategies, methods and techniques related to ADHD, to learn how to develop good communication with the parents, to educate teachers in how they can access and apply resources designed to help students diagnosed with ADHD. All partners felt that there was a professional obligation for teachers to share their knowledge, experiences and good practice with other professionals, working in the field, as well as the parents of children who are diagnosed with ADHD.

Parents of pupils with ADHD need training and support in a range of areas, some identified above. In addition they need to learn strategies related to developing negotiation, social and interpersonal skills as well as approaches to behaviour management for children with ADHD. Moreover, they need to be informed about the medical diagnosis process and the possible side effects of drugs. They need to be

encouraged to share their knowledge and experiences with other parents as well as learning how to develop positive relationships with and to communicate effectively with related institutions and professionals such as doctors, psychologists and teachers.

Taking into consideration these common needs, we prepared these materials in response to the needs of parents and teachers of pupils with ADHD. We believe that this publication is valuable because it is a book about ADHD written from an international perspective. We are happy for anyone to use the book and resources which are the outcome of all our efforts and cooperation.

D. De Silvestri
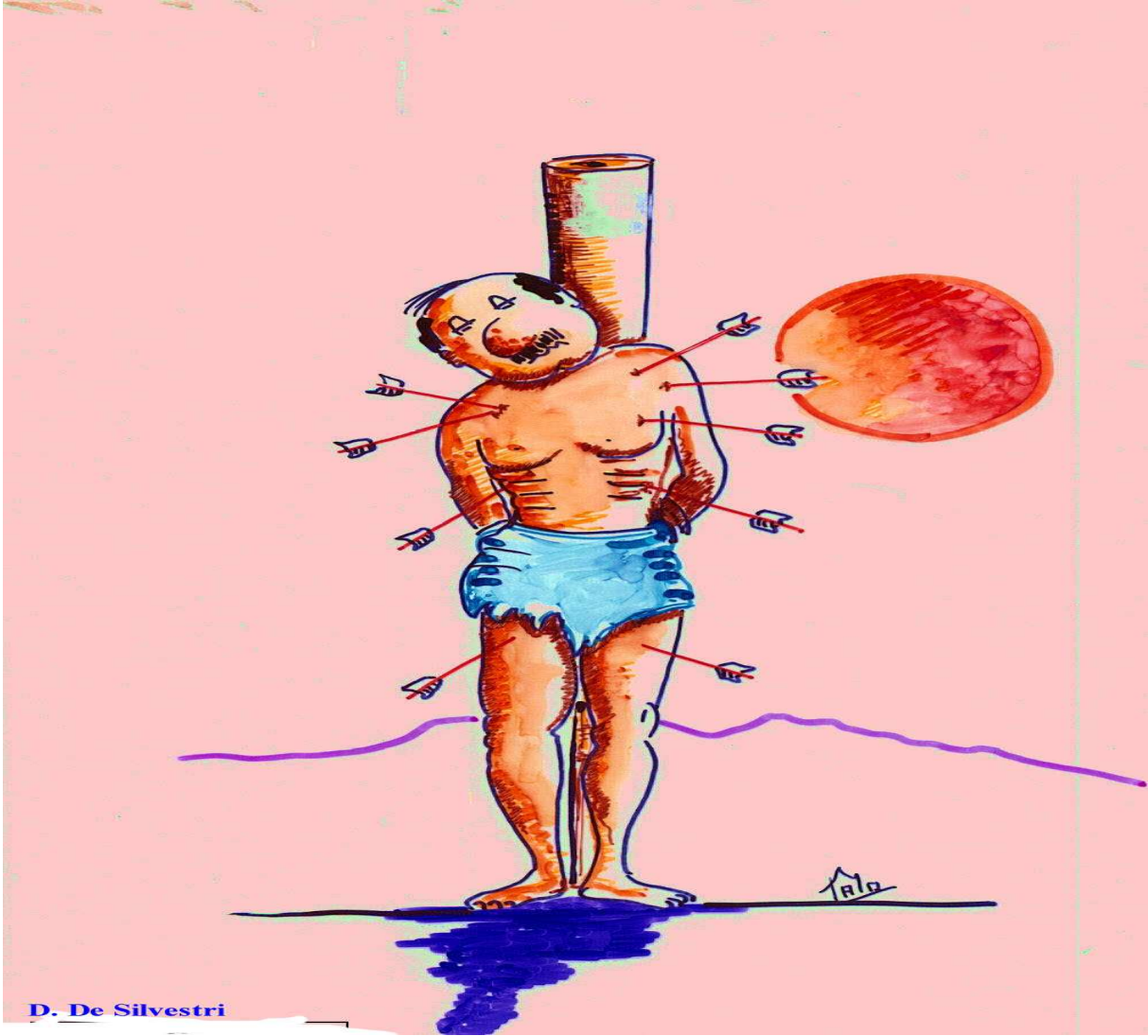
RESULTS OF NEED ANALYSIS UNDERTAKEN BY PROJECT PARTNERS

A review by Banu DUMAN, English Teacher,
Ankara Provincial Directorate for National Education, Ankara, TURKEY

Attention Deficit Hyperactivity Disorder is one of the most common, complex neurobiological disorders that are seen. It is estimated that between 3% and 7% of school age pupils in the world suffer from ADHD. Therefore, it is not only an issue for one country, many ADHD pupils encounter problems in a range of areas in many countries. These pupils struggle with a poor attention span, hyperactivity, impulsive behaviour and poorly developed social relationship skills both at school and at home. According to Zeigler (2000), succeeding in school is more therapeutic and helpful for pupils with ADHD than an hour of counselling a week. Therefore it is essential that administrators, teachers, school counsellors, psychologists, psychiatrists, parents and pupils with ADHD all work together to ensure success in school for students with ADHD.

Teachers play a pivotal role in the success or failure of students because teachers are role models, they have a powerful impact and they tell us that ADHD pupils have many positive attributes. Meanwhile, parents experience difficulties providing support and assistance at home. Both teachers and parents sometimes may feel frustrated, tired and disappointed. They may have difficulty finding solutions because of the pressures of living with a child diagnosed with ADHD.

Each partner country, within the "Hand-in-Hand" project, prepared questionnaires to determine the needs of teachers and parents of ADHD pupils. This was crucial because it was impossible to respond to their needs without knowing what they were. Partners undertook questionnaires with target groups although the numbers completing the questionnaire was not uniform across the partners. Some partners also undertook interviews with teachers and parents of ADHD pupils. This information also helped identify the needs of teachers and parents. Each partner presented an analysis of their results at the project meeting held in Sinaia, Romania between 26th and 30th March 2008. It became clear that there were many similarities in the problems, and needs, of partner countries. After discussion among partners the common needs were identified, as listed below. This list has been used to guide our work and was taken into account at all stages of the project; such as when writing the educational materials for teachers and parents of pupils with ADHD, delivering training to them and raising the awareness of teachers, parents and the public about ADHD.

General Needs of Teachers of Pupil with ADHD
1) To know more about ADHD,
2) To learn elements of diagnosis,
3) To have an action plan,
4) To learn methods and strategies,
5) To learn active learning methods,
6) To participate training courses with practical approach,

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7) To be part of the ADHD project,
8) To raise interest on ADHD,
9) To deal with resistance of teachers to change,
10) To learn classroom management strategies, behaviour management and self esteem,
11) To cope with aggression and frustration,
12) To learn resources about ADHD and how to use them,
13) To learn strategies to have good communication with parents.

General Needs of Parents That Have Children with ADHD:

1) To get more knowledge about ADHD (establishing realistic expectation),
2) To know medical information on ADHD (including available medical treatments and their effects),
3) To learn local resources to access to help,
4) To learn basic educational, social, interpersonal and behavioural strategies and negotiation skills to cope with ADHD,
5) To join meetings with other parents having children with ADHD for practical and emotional support,
6) To learn good practices for a better communication with school,
7) To learn how they can have a god communication among all related people and institutions.

References:
Zeigler Dendy, C. A. (2000). Teaching Teens with ADD and ADHD: A Quick Reference Guide for Teachers and Parents, Bethesda, USA: Woodbine House.

Disclaimer :

Attention-Deficit Hyperactivity Disorder, or ADHD, is a developmental self control neuropsychological disorder which interferes with normal development and impairs daily activities. This disorder affects every aspect of the sufferer's social life including their relationships at home, school and whilst playing games; indeed in every social aspect of their lives. It inhibits respect for common rules and impedes social integration. ADHD presents itself with a series of symptoms among which attention and concentration difficulty, inability to control impulsivity and difficulty in controlling their level of physical activity. The sufferer has difficulty in regulating their own behaviour with regards to time, in achieving objectives and in conforming with the behavioural expectations of society.

The internationally recognised diagnostic criteria for ADHD is the "Diagnostic and Statistical Manual of the American Psychological Society, Edition 4". This is more commonly referred to as; "DSM IV APA". Often further abbreviated to "DSM IV".

To diagnose ADHD, symptoms must appear from the following three categories: ATTENTION DEFICIT – HYPERACTIVITY- IMPULSIVITY. There must be six, or more symptoms, which last at least six months, and in at least two social contexts, from ATTENTION DEFICIT and six, or more, symptoms from HYPERACTIVITY and IMPULSIVITY together. These must take place before the age of seven.

INATTENTION (DSM IV APA Diagnostic Manual 1994)

(a)   Often fails to pay attention to details or makes inattention errors in tasks at school, at work or other activities;
(b)   Often has difficulty in sustaining attention in school work or game activities;
(c)   Often seems not to listen when spoken to directly;
(d)   Often does not follow the instructions completely and has difficulties in finishing school work (without oppositional behaviour)
(e)   Often has difficulty in organizing him/herself in various activities;
(f)   Often has aversion or is reluctant to engage in tasks that require sustained mental effort;
(g)   Often loses material necessary for tasks or activities;
(h)   Is often easily distracted by external stimuli;
(i)   is often inattentive in daily activities.

"HYPERACTIVE" (DSM IV APA Diagnostic Manual 1994)

(a)   Often fidgets with hands or feet, or squirms in seat;

(b)   Often gets up in the classroom or in other situations where one has to remain seated, (in adolescents and adults may be limited to a subjective feeling of restlessness);

(c)   Often has difficulty in playing or engaging themselves quietly in activities;

(d)   Is continuously "moving" or acts as if they were "driven by an engine";

(e)   Often talks excessively;

IMPULSIVITY (DSM IV APA diagnostic manual 1994)

(a)   Often answers before the end of the question;

(b)   Often has difficulty waiting for their turn;

(c)   Often interrupts or behaves intrusively.

Summarizing hyperactive-impulsive and attention-deficit symptoms:

Some hyperactive – impulsive or inattention symptoms must occur before the age of seven and persist for at least six months.

Some impairment from the symptoms must occur in at least two contexts (e.g. school, home, work).

There must be clear evidence of clinically significant impairment in social, academic or occupational functioning.

The symptoms do not occur exclusively during a General Development Disorder, Schizophrenia or other Psychotic disorders which are not better justified by other mental disorders (e.g. Mood disorders, Anxiety disorders, Dissociative disorders or Personality disorders).

SUB-TYPES

If at least six of the nine ''inattention'' symptoms appear, listed above, then the diagnosis is ADHD **inattention subtype.**

If only 6 of the nine symptoms are of the Hyperactive-Impulsive category, listed above, then the diagnosis is ADHD **hyperactive-impulsive subtype.**

Finally if both subtypes are present then the diagnosis will be ADHD **combined subtype**.

There is not a single diagnostic instrument that can establish the presence of ADHD. Rather diagnosis is based on data collection, on an accurate evaluation of all available <u>objective</u> information, on structured and non structured talks with parents and teachers. Furthermore a medical examination is needed and a neuro-psychiatric evaluation using specific standardised diagnostic instruments such as behaviour questionnaires and evaluation scales.

Examples of Behaviour Questionnaires and Evaluation Scales:

Conners' Rating Scale (from 3 to 17 years),

Parents Rating Scales (focusing on the symptoms related to impulsivity and inattention),

Teachers Rating Scales (focusing on the symptoms related to impulsivity and inattention),

Self Control Rating Scale (on the child's self control),

Sda and Sdag Scales (Cornoldi 1996) completed by parents and teachers.

Because inattention and hyperactivity are a feature in a range of diagnosis, disorders and syndromes they must be verified during early developmental milestones such as:

Age appropriate language development,
Acquiring bladder and bowel control age appropriately (Toilet training),
Age appropriate development of balance and gross motor skills leading to walking.

Possible Associated Disorders

As more than half of ADHD children display additional psychological or behavioural difficulties, it is important to distinguish between the disabilities associated with ADHD and those associated with other disorders or disabilities:

The former manifest themselves alongside the ADHD and are independent from it, whilst the latter are a consequence of the ADHD.

Only through comprehensive diagnostic evaluation undertaken by medical practitioners, such as neuro-psychologists and paediatricians, with input from parents and teachers, is it possible to differentiate between whether the observable behaviours are in "addition to" or "as a consequence of" ADHD.
PSYCHIATRIC and NEUROPSYCHIATRIC DISORDERS

NOTE: co-morbidity means the likelihood of the disability occurring with ADHD. For example if "Learning Difficulties" has a 60% co-morbidity then there is a 60% chance that an ADHD child will also experience learning difficulties.

School Learning Disorder, (Learning Disability), (50 - 80% co-morbidity)
Oppositional Defiant Disorder (59% co-morbidity)
Conduct Disorder (36 %   co-morbidity)
Communication Disorder (23% co-morbidity)
Bipolar Disorder
Anxiety Disorder
Obsessive - Compulsive Disorder
Adaption Disorder
Gilles de la Tourette Syndrome
Mental retardation
Pervasive Development Disorder

NEUROLOGICAL DISORDERS AND MEDICAL ILLNESSES

Sensory disorders (hearing and visual impairment),
Side-effects from drugs (eg phenobarbital benzodiazepine, methylphenidate, atomoxetine HCL, Equasym or Risperidone),
Epilepsy,
Thyroid illnesses,
Drug abuse,
Lead poisoning.

DEVELOPMENT DISORDERS

Physical exuberance,
Socio-economic factors such as poor housing, long term family unemployment resulting in low expectations and suppressed life chances,
Inadequate socialisation often resulting from poor family relationships. inadequate or poorly developed parenting / child rearing skills, a lack of social structure, boundaries and expectations. Additional factors may be chaotic home environment, divorce, abandonment or even abuse.

ADHD is a neuro-biological disorder and it is probably due to a combination of factors. At present there is no evidence that environmental factors cause ADHD nor do environmental factors influence the seriousness of the symptoms or its persistence.

Many studies suggest that ADHD is hereditary. Studies claim a high hereditary correlation with biological parents, on average 80%. This is not replicated with adoptive parents. When examining the neurological anatomy controls of children with ADHD, abnormal magnetic resonance differences have been found amongst areas of the central nervous system causing impairment to a number of mental processes. This leads to defects in some areas such as; attention control, difficulty in waiting and difficulty in using time to organise tasks. It is known that certain mental processes do not work as effectively as in children without ADHD.

Research indicates that in children diagnosed with ADHD the brain structures do not reach their normal size especially in the right frontal region. This area of the brain has an important function in planning tasks and controlling impulses. In children with ADHD an excess of blood has been noticed in the prefrontal regions of the cortex particularly those linking the Libyan system through the caudate nucleus. Although the disorder can disappear in time, the biological deficit will remain, thus not taking it into account could encourage the development of associated   deviant   disorders.
In the U.S.A. between 3% – 5% are tested for ADHD whilst in Europe the figure is 1% - 2%. This is due to the diagnostic manual which is much more restrictive in Europe. The psycho pathological definition of the cause of ADHD is noise disturbance of the prefrontal cortex and the nuclei of the base of the cortex. The evidence for this view is on the basis of general and neuro-radiological evidence. In the ADHD patient this manifests itself as a response to environmental stimuli that is different from what society considers the norm. Different networks in the brain are activated to the normal ones.

NEURO PSHYCOLOGICAL MODELS

Various models have been developed and are currently being defined in order to differentiate, with appropriate security, ADHD from various other disorders or deficits that include aspects of attention and alertness. Attention depends on the selectivity of the information conveyed by the sensory pathways in the brain. These determine what actions (behaviours) happen. Attention is linked to maintaining the signal through the so-called "working memory" and the selection of response actions and therefore of conscience. A System of Alertness which is linked to noradrenalin, binds the state of alertness with attention. It allows responding to certain environmental stimuli and inhibiting the response to other stimuli creating SELECTIVE ATTENTION. This attention can be active and anticipate an event with an intentional or passive expectancy awakened by a series of stimuli that exceed a certain threshold and are

judged significant. If attention is purely to highlight endogenous needs it is defined as motivation. The ability to inhibit or enhance responses (motor, language, cognitive, emotional) provides a self control that is essential in any behaviour and in achieving some objectives (executive functions).

MONITORING, EVALUATING & ASSESSMENT OF ADHD

By Santos, M.A. & Sanches-Ferreira, M *(School of Education, Porto)*
Lopes-dos-Santos, P. *(Faculty of Psychology and Educational Sciences of Porto)* and Vale, Maria do Carmo *(D. Estefânia Hospital, Lisbon)*

Despite the existence of relatively clear diagnostic guidelines (APA, 1994), establishing a diagnosis is a difficult matter (Anastopoulos & Schaffer, 2001; Neul, Applegate & Drabman, 2003). Children with Attention Deficit Hyperactivity Disorder (ADHD) are generally characterized by their inattention, impulsivity, and hyperactivity. Nevertheless, these characteristics may vary a lot, according to the child, the situation and the circumstances. They may occur in different degrees of severity, affecting students in different ways, and may be associated with other disorders.

The authors conclude that any assessment of ADHD must be comprehensive and multi-dimensional in nature, to capture variations and differences in all situations and settings. To identify any co-morbid features and the impact on home, school and social functioning (op. cit, 2001).

There is, to date, no single diagnostic test to identify ADHD. Professionals should rely on a battery of measures and data to diagnose ADHD and to organise an intervention plan. This battery varies according to different authors. Wright (2002) proposes that the battery should consist of documentation of general educational interventions, parent and teacher interviews, behaviour rating scales and classroom observations. Resnick (2005) suggests that evaluation of ADHD should be based on the following sources: (a) Psychological, developmental, and social history, including employment and educational history for adults; (b) School records, including report cards, achievement tests, teacher/school reports, and special services / special education testing along with Individual Education Plans (IEP's); (c) Teacher ratings; (d) Parent ratings; (e) Computerized Assessment Tests, measuring inattention, distractibility, and impulsivity (ex: Conner's Continuous Performance Test); (f) Mental Status Exam, observing the person for symptoms of ADHD while ruling out other diagnoses.

We are going to review some of the data sources mentioned above, paying special attention to measures that should be obtained in school or at home, and that are particularly important to the organisation of a behavioural intervention plan. Specifically, we are going to talk about: Interviews, Behaviour Rating Scales, Clinic-based Measures and Direct Observation. We are going to pay special attention to a method called Functional Behaviour Assessment, very useful for understanding behavioural sequences that are affecting the behaviour of the child.

Interviews
Interviews are generally conducted by a clinician and are very useful to access the cumulative knowledge base of adults closely associated with the child (Wright, 2002). Given their flexibility, unstructured and semi-structured, interviews with parents,

teachers and the child itself can yield a wealth of information about the child's functioning in a large number of situations and settings (Anastopoulos & Schaffer, 2001). Besides, they allow the clinician to clarify any point they consider pertinent arising from the interviews, and helps setting the groundwork for effective behavioural interventions.

The major drawback is that unstructured and semi-structured interviews don't allow accurate, normative, comparisons, complicating the process of documenting deviance from usual developmental milestones (Anastopoulos & Schaffer, 2001). Only structured interviews allow this process, but on the other hand, these are not very easy to employ in clinical settings.

Parent Interviews

Parents are considered the most comprehensive source of information about the child's previous development and adjustment, including ADHD characteristics, displayed within the home. Parents can also provide information on the child's developmental and medical history, family background, and peer relationships. It is also important to learn about family relationships and the home environment, about families coping strategies with the child's behaviour and the success of these strategies (Carter, 1994).

Teacher Interviews

Teacher interviews are an opportunity to collect information about the student and, most importantly, about the classroom environment and teaching strategies used by the teacher. The teacher can also offer their perspective on the student's cognitive and emotional functioning. Finally, intervention strategies and plans can be discussed between clinicians and teachers (op. cit.).

Student Interviews

An informal interview with the student can reveal important information about family, school, social interactions, the student's feelings and how these influence behaviour, the student's strengths and weaknesses and many other subjects. Nevertheless, it is important to remember that student's behaviour during interviews should not be considered an example of their behaviour in other settings (op. cit.).

There are standardised procedures regarding child / student interviews. Anastopoulos and Schaffer (2001) mention the Diagnostic Interview Schedule for Children (DISC; Costello, Edelbrock, Kalas, Kessler & Klaric, 1982) and the Diagnostic Interview for Children and Adolescents (DICA; Herjanic, Brown & Wheat, 1975), both of which can be now administered via computer in a format compatible with DSM-IV. Carter (1994) also suggests the Child Behaviour Cheklist – Youth Self-Report (CBCL-YSR; Achenbach & Edelbrock, 1987) as a useful screening measure for symptoms frequently associated with ADHD.

Behaviour Rating Scales

Standardised behaviour checklists and rating scales are very convenient. Their ability to be completed by a range of respondents such are parents and teachers, allied with their ability to gather information across any time interval and being norm referenced

have led to their widespread application in clinical practice (Anastopoulos & Schaffer, 2001).

McConaughy (1993, cit. in Wright, 2004) outlines the main characteristics of behaviour-rating scales: they typically contain a list of characteristics and behaviours, often stated in observable behavioural terms, to be endorsed by a teacher, parent, or other person who knows the child well. The responses are then summed up to generate an overview of the student's functioning. The results are usually stated in standard scores based upon a normative sample. This normative sample allows comparisons of the child's behaviour and the behaviour of children of the same age and gender, to determine if the behaviours identified in the behaviour rating scale are exhibited to a significantly greater or lesser degree (Carter, 1994).

Behavioural Rating Scales for Teachers

Teachers should only be asked to fill in these scales when they have a good Knowledge of the student's behaviour (at least 45 to 60 days). Additionally, behavioural rating scales are subject to rater bias and dependent on the teacher familiarity with the student and, therefore, may present an inaccurate picture of the student (Carter, 1994, Wright, 2004).

Some of the scales usually found in literature include:
- ADHD Comprehensive Teacher Rating Scale (Ullman, Sleator & Sprague, 1991)

- Child Behaviour Checklist (Achenbach, 2001)

- School Situations Questionnaire – Revised (DuPaul & Barkley, 1992)

- ADHD Rating Scale (DuPaul, Power, Anastopoulos & Reid, 1998)

- Conners Teacher Rating Scales (Conners, 1997)

- SNAP Rating Scale (Swanson, 1992)

- Child Attention Profile (DuPaul, 1990)

Behavioural Rating Scales for Parents

Parents can be excellent sources of information because they have observed their child for a long time in a wide range of situations but, conversely, parents are more prone to lose their objectivity, answering according to what they believe would be more desirable. In addition, parents are not usually familiar with other students of the same age as their child, therefore losing their "normative" knowledge.

Some of the scales include:
- Child Behaviour Checklist (Achenbach, 2001)

- Home Situations Questionnaire – Revised (DuPaul & Barkley, 1992)

- ADHD Rating Scale (DuPaul, Power, Anastopoulos & Reid, 1998)

- Yale Children's Inventory (Shaywitz, Schnell, Shaywitz, & Towle, l986)

- Conners Parent Rating Scales (Conners, 1997)

Clinic - Based Measures

Laboratory measures of sustained attention and impulsivity are commonly included in ADHD evaluations and assessments (Anastotpoulos & Schaffer, 2001). Of these, perhaps the most widely used is the Continuous Performance Test (CPT), of which there exist a number of versions: the Conners (Conners, 1994), the Test of Variables of Attention (Grenberg & Waldman, 1993) and the Gordon Diagnostic System (Gordon, 1983). Although they seem to differentiate groups of ADHD children from children without ADHD, they frequently produce unacceptably high false negative rates when applied to individuals (Anastopolous & Schaffer, 2001).

Direct Observation

Conducting behavioural observations in the classroom using standardised techniques to observe selected behaviours of the target student is a fundamental part of the ADHD assessment (Wright, 2004). Frequently it is considered a second phase of the assessment procedure, following the diagnosis, and is conducted to ascertain the extent that ADHD affects the student's academic performance (Carter, 1994). Teachers know that student's behaviour may keep them from learning in class therefore, a team effort is needed to develop Individualised Education Programs (IEP's). These should be based on a functional behaviour assessment that allows the team to develop a behaviour intervention plan to deal with behaviours that interfere with the learning of the student or with the learning of others (or that require disciplinary action).

The behaviours we are talking about don't usually have a single cause, and it is fundamental to understand why a particular student presents a given behaviour. Although many students display behaviours that present as very similar their causes or triggers can be quite different (Quinn, Gable, Rutherford, Nelson & Howell, 1998). If we focused only on the presenting behaviour(s), we would have little information about the underlying causes and therefore, planned interventions would have only a small likelihood of being effective. If we identify the causes or functions of the behaviour, for instance, what the student gets or avoids with their behaviour, we can design an intervention program that is aimed directly at their behaviours, not just at the consequences of the behaviours. Just focusing on the presenting behaviour(s) is often unfair to the student and may become a barrier to a positive student - teacher interaction and communication.

Functional Behavioural Assessment is a method of identifying the causes and functions of behaviours, which incorporates a range of techniques and strategies of data collection. It addresses environmental, biological, social and even cognitive and affective variables that are important in the initiation, sustaining or prevention of behaviours.

Another major issue with functional behaviour analysis is that, most of the time, although the behaviour presents as inappropriate the intended outcome of the behaviour in not inappropriate. The team generating the student's individual education plan, (IEP team), should take this fact into consideration (op. cit). If a student is misbehaving to seek attention from their teacher then the focus of the intervention plan shouldn't be to prevent misbehaviour from happening but to teach

the student acceptable ways to seek attention and provide positive reinforcements when students use these strategies.

CONDUCTING A FUNCTIONAL BEHAVIORAL ASSESSMENT
The process of assessment has four main steps: (1) identify the problem behaviour; (2) to conduct an indirect assessment; (3) direct observation; (4) formulate a hypothesis about the function of the behaviour (Wayne County Regional Educational Service Agency, 2003; Winsor, 2003).

Identify the problem behaviour
The basis for the functional analysis is to provide a clear definition of the problem behaviour(s). The goal of the IEP team should be to put the problems in an objective way and where possible, in a behavioural sequence (Antecedents – Behaviours – Consequences, or ABC). If we have more than one problem behaviour we should try to prioritize them.

Therefore, we should be certain that the behaviour we focus on is, in reality, the behaviour that is causing problems for the student, their peers or teachers. For instance, we can identify "gets out from their seat", as the problem behaviour, but that would not be as much of a problem if the student wouldn't hit and kick their peers each time they left their seat. This implies that the team should look at behaviours from many angles trying to clarify some questions: (1) is the problem behaviour linked to a skill deficit? (2) Does the student have the skill but doesn't desire to modify their behaviour? (Quinn et al, 1998).

The first question suggests that some behaviour problems result from a lack of knowledge about how to behave in a particular setting. Also, if a student doesn't know how to complete a particular task, they may exhibit misbehaviour as a strategy to avoid attempting, and usually failing at, the task. In these cases, the functional assessment should look for an answer to some specific questions: (1) Does the student understand how they are expected to behave in that situation? (2) Does the student understand that their behaviour in inappropriate, or are they just "used to behaving that way"? (3) Is the behaviour within the student's self-control, or do they need support to achieve control? (4) Does the student have the skills necessary to perform adequately in that situation? (op. cit).

The second line of questioning points to situations where the student is able to behave adequately but, for some reason, doesn't use that behaviour consistently. The reasons for this can be varied. Most frequently inappropriate behaviour occurs because it is rewarded and / or the appropriate behaviour is not sufficiently rewarded. To help clarify this situation, several questions should be answered: (1) Is the student clear why the appropriate behaviour should be displayed? (2) Does the student get any benefit by undertaking the appropriate behaviour? (3) Is the behaviour a way of avoiding a task (whether it is too demanding or simply boring)? (op. cit)

Identifying the questions that need to be answered is the best way of determining which instruments and techniques should be used. Some questions require gathering data from contexts that teachers don't have directly access, other questions require information directly observable, and others may even require interviewing the

student. More frequently, as mentioned earlier, we have to gather various types of information and data.

Indirect Conduct Assessment
The information and data needed to formulate an explicit hypothesis of the problem behaviour must be collected from various contexts. As teachers are not able to collect data directly in contexts other than school, they have to gain data from non-school settings by indirect assessment. The most common way to get this information is by interviewing parents and other significant adults from the student's background.

Questions that should be asked cover the following aspects: (1) In what settings is the behaviour observed? (2) Are there any settings where the behaviour doesn't happen? If so, which? (3) Who is present or absent when the behaviour occurs? (4) What happens just prior to the behaviour? (5) What happens immediately after the behaviour? (6) What has been tried previously to stop the behaviour and how successful were these strategies? (7) Are there any medical conditions, family dynamics or parenting issues that may account for the behaviour? (Quinn et al., 1998).

Sometimes it can be necessary to interview the student in order to understand their point of view about the situation. We can access, in this way, their interpretation of events and who they feel is to blame for them. The student's understanding of events prior to the behaviour their perception and understanding of the consequences. The benefit of this process is to understand possible affective or cognitive distortions of the situation that the student has. Understanding these variables can be important when designing an intervention plan. Questions such as : What was in your mind…? How did you feel…? What happens after…? are usually used.

Direct Assessment
Usually, when we speak about direct assessment, we are referring to observation techniques that allow us to identify and quantify situational factors that impact on the problem behaviour identified before. The organisation of an observation protocol depends on the type of behaviour, of the context where it occurs, of the available resources and other factors. We should keep a number of issues in mind: (1) the goal of this observation process is to gather information that can help us in designing and implementing a successful intervention program; (2) the observation protocol that we design should allow us to present data in a simple way (if possible in a graphical manner); (3) the protocol will be implemented for the whole period of assessment but also for the period of intervention and, therefore, it should be realistic and able to be implemented for long periods of time.

The process of observation must be consistent and reliable. This means that the process should be clear enough so that any person will identify the same behaviours or environmental aspects in the same way, and that it will be consistent over time. In the process of designing the instruments, several questions must be answered (Rutherford & Lopes, 1993):
  (1) who will perform the observations? Observations could be performed by various people, often the teacher or other classroom support staff are the best choices in a classroom setting.

(2) What will be observed? We should determine whether the behaviour has a beginning, a cycle and an end. This gives us the opportunity to clearly identify the behaviour and whether we are observing a new presentation of the behaviour or just a continuation of a previous behaviour.

(3) Where will the observation be done? Usually the observation is done in the setting where the behaviour usually occurs, where it has the most significant impact or where it is seen as a problem.

(4) When will the counting be done? Depending on the type of the behaviour being observed, we can decide on a long interval – a school day, for instance or a small one – for instance, counting the frequency of the behaviour per minute.

(5) How can it be recorded? The quality of the data collected depends largely on the quality of the instrument we use to record our observations. There are six types of recording techniques:

   a. Students' permanent outcomes

   b. Continuous recording

   c. Frequency recording

   d. Duration recording

   e. Time interval recording

   f. Periodic sample recording

Permanent Outcomes

This method is very useful to identify academic behaviours, for instance behaviours connected with student's learning that we observe and record after their behaviour occurs. For instance, we can record behaviours, such as: (1) number of words correctly spelt; (2) number of mathematical sums correctly answered; (3) number of tasks completed. To record these outcomes doesn't require any particular grid rather just to record of these outcomes, in terms of frequency.

Continuous Recording

This technique is used in very specific situations where the observer tries to record a continuous narrative of the student's behaviour, trying to identify antecedents, describe the behaviour and, again, identify possible consequences. This process is done in a behavioural way, using the ABC model. Frequently, this technique is used in the first stage of the process, when some elements about the target behaviour are still not clear. With the data collected using this technique we should then try to use another system, such as a frequency or a duration recording, to validate the data.

Continuous Recording Grid

Students name:					
Date:					
Observers name:					
Start of the observation: End of the observation:					
Total time of observation:					
	Antecedents	**Behaviours**	**Consequences**		**Results**
Hour	Classroom activity	Students Behaviour	Teachers response	Colleagues Response	Result of the consequence

Frequency Recording

This observation technique involves the counting of the number of times a given behaviour occurs in a previously defined period of time. This type of observation is used with behaviours that have a clear cycle, whose duration is relatively short and with an interval between incidents that allows for accurate recording (i.e. it's not too frequent). This technique is very easy to use and has the advantage of producing data easily transferable into a frequency graph. The recording can be made in specific grids or on any piece of paper, not requiring any special instruments.

Frequency Recording Grid

Student:
Date:
Observer:
Start of the recording: End of the recording:
Total Time:
Classroom activity:
Behaviour observed:
Number of events:
Comments:

Duration Recording

This type of observation technique aims at recording the length of a behaviour in terms of time. We can have two students out of their place twice in an hour – that would be a frequency registration. But if we record the time they spent out of place, it's conceivable that they have very different profiles. Therefore, we can decide that the time they spend out the place is a more accurate measure than the frequency.

One subtype of this recording technique is the one that allows us to measure the interval between two behaviours. For instance, we can measure the time a student is able to stay at their place without getting out of their seat.

Duration Recording Grid

Student:		
Date:		
Observer:		
Start of the recording: End of the recording:		
Total Time:		
Classroom activity:		
Behaviour observed:		
Start	End	Time
Comments:		

The other method is the Time Intervals Observation, intended to measure the occurrence of a behaviour in a given period of time. We don't want to measure the number of events nor their duration, just to see if, in a given period, the behaviour is present or absent. The time intervals are usually between 6 and 30 seconds – the observer might use a device to help him identify these intervals – and the results are translated into frequencies. For instance, if a behaviour is present in 8 out of 10 intervals, then it is present in 80% of the time. This type of observation is very demanding in terms of the attention of the observer. If it's not possible to undertake a Time Intervals Observation then a simple frequency observation should be done. On the other hand, it allows us to have a clear idea both of the frequency and of the duration of the behaviour.

Time Interval Recording Grid

Student:					
Date:					
Observer:					
Start of the recording: End of the recording:					
Time interval:					
Classroom activity:					
Behaviour observed:					
Comments:					
Number of times the behaviour occurs:					
Proportion of the number of intervals / total number of intervals:					

Periodic Sample Recording

Through this recording we want to identify if, after a given period of time, a specific behaviour is taking place. The main difference to the last method – the time intervals recording – is that the period of time is significantly longer. This method is able to be implemented with little resources and is not very demanding in terms of observer attention. On the other side, it doesn't allow for a very accurate view of the situation rather only an estimate of the intensity or frequency of the behaviour. Data can be recorded into a grid similar to the one presented before in the time intervals recording method, only changing the duration of the intervals.

Formulating a Functional Hypothesis

At this point, the personnel involved should be able to formulate a hypothesis about the reasons for the behaviours in question, predicting the general conditions under which the behaviour is most and least likely to occur (antecedents), as well as the probable reinforcing consequences that serve to maintain the inappropriate behaviour (Quinn et al., 1998). This is the basis for an individual behaviour intervention plan. The major issue, then, is to identify the motivation behind or trigger for the problem behaviour to be displayed. The Wayne County Regional Educational Service Agency (2003) established some usual categories of reinforcement for behaviours:

- Attention-seeking: to gain attention / interaction of others, including positive or negative attention, from adults or peers;

- Communication: consider the behaviour as an attempt to communicate a specific message, particularly in the case of children with language problems.

- Escape / avoidance: the behaviour may serve the function of preventing or stopping something that in unpleasant to the student, usually a non-attractive task. E.g. a work avoidance strategy.

- Gain access to things or activities: when the child gets what they want, the behaviour is being rewarded.

- Control: the behaviour is a way for the child to control (predict or structure) the environment.

- Automatic reinforcement: refers to behaviours that are intrinsically reinforcing, providing pleasure to the individual or alleviating some unpleasant condition.

- Obsessive / compulsiveness: repetitive or ritualistic behaviours that don't seem to have an apparent function.

- Fear or phobic responses to specific stimuli: some students may exhibit exaggerated responses to a specific stimuli or situation that sometimes seem irrational.

When these motivators are well identified, the team is able to design an intervention plan that draws upon the knowledge they have about the child / student, their family and all the other environmental settings in their lives.

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MULTIMODAL TREATMENT OF ADHD

Polo Europeo della Conoscenza

The treatment for ADHD is based on a multimodal approach that combines psychosocial interventions with possible medical treatment.

Parents, teachers and the child itself should always be involved in developing an individual treatment programme based on addressing the more severe symptoms and enhancing the areas of strengths which are identified in each individual child.

The interventions are:

On the child: Cognitive behavioural therapy (training to self-regulate)
Psycho-educational support
Pharmaceutical (drug) therapy

On the parents: Educational support
Parent training

On the school: Teacher Training
Meta-cognitive techniques
Psycho-educational interventions

Therapy with the child   The areas of intervention will be focused on reducing the main symptoms. For example; lack of attention, hyperactivity and impulsiveness. Consideration will be given to probable associated disorders such as anxiety disorder, provocative oppositional disorder and mood disorders as well as to relational difficulties such as developing problem solving skills, management of emotion and increasing tolerance of frustration. If associated disorders are identified then programmes to support the child develop skills in coping with the disorder(s) will be devised.
Support to the family The most common areas for work with parents are with the following problems; lack of parental control and parent's sense of ineffectiveness. Through a cognitive-behavioural approach parents are taught strategies for the management of interpersonal conflict and relationship problems.
Educational interventions The schools, or other educational settings, will consider devising interventions to address issues such as; learning difficulties and school failure, the reduction of behavioural problems, integration with other students and the teacher student relationship. In addition, there may be additional training needs for teacher.
With peers The problem area, and so the most important for intervention, is the negative interpersonal relationships that students have with their peers, the student's lack of respect for rules and the management of their emotions.

ON THE CHILD:

Cognitive Behavioural Therapy:

This approach proposes the teaching of various techniques including verbal self instructions (an internal dialogue that guides the student through problematic situations). Problem solving (subdividing the problem into smaller elements, generating possible alternative solutions and evaluating the work carried out). In addition "stress inoculation training" is undertaken. This develops awareness of stressful situations and how to control these. "Contingency management"; planning for a range of possible outcomes with positive reinforcement for appropriate outcomes and the ignoring, as far as possible for inappropriate behaviours.

In addition to this, there are evaluations, self-evaluation and discussions so the student acquires internal self-control which is focused on achieving positive outcomes for the strategies undertaken and as a result of the commitment made. These approaches are carried out though therapy which is modified according to the age and maturity of the student.

Parents and teachers are involved in all of the above.

Psycho-educational Support:

This approach offers a variety of interventions that can change the student's physical and social environment. This is in order to modify the student's behaviour, create greater attention and fewer distractions / off task behaviour.
The modifications in the student's behaviour are implemented by educating parents and teachers on positive reinforcement for appropriate / desirable behaviours or loss of privileges for failure in achieving the desired objectives or behaviour. Parents and teachers can anticipate events during the student's day, both at home and at school. By identifying potential problems with future tasks or situations the student can be taught simple actions to cope with the situation as well as being offered incentives for successfully dealing with the challenging situation(s).

It is important that parents and teachers become good observers, analyzing what happens. They need to know at what time an incident occurs, the rules that were being applied at the time and the consequences of the student's actions. **This checking in needed in order to allow the child / student to expand their own repertoire of self-control, understanding and following of rules and motivation.**

To help a child with ADHD parents and teachers should acquire the following skills:
- Increase the number and strengthen the positive interactions with the child / student.
- Dispense reinforcements / rewards in response to positive behaviour. These may be social and / or material rewards.
- To ignore low-level inappropriate behaviour.
- Increase the collaboration / compliance of the child / student with simple, direct and precise agreements and commands.
- Consistently apply sanctions and systems which are coherent and understood by the child / student on the occasions when inappropriate behaviour occur.

Pharmacological Therapy

Having made the diagnosis, the mental health doctor of children with ADHD should design and implement a treatment plan. Priority must be given to psycho-educational interventions but when the symptoms are significantly severe and pervasive it is appropriate to consider taking drugs. Drug taking must be constantly monitored by the Regional Medical Centre in the area working together with the Neuro-psychiatry Service, and making sure that the paediatrician and the family doctor are informed. (The above is the system in Italy. Different systems may apply in other EU countries).

The most commonly used drugs are:
Methylphenidate whose active ingredient has a psycho-stimulating effect in order to control pivotal symptoms such as carelessness, hyperactivity and impulsiveness. Unlike amphetamines, methylphenidate does not have dependence or addiction characteristics. Effects are noticeable after one hour and last for about four hours, therefore administration is usually twice a day.
Atomoxetine blocks annealing noradrenalin and seems more specific. It shows a similar effect to psycho-stimulants but with fewer side effects such as a decrease in appetite or the potential for abuse.

With associated symptoms atomoxetine also reduces levels of anxiety.
In Italy, such prescribing of medication must be registered in the ADHD NATIONAL REGISTER.

ON PARENTS:

Parent Training was conceived as an 8 - 12 weekly session plan to be implemented with a group of parents of children with ADHD and a therapist with special training. The programme of meetings is focused on improving parent's understanding of the characteristics of children affected by ADHD and teaching them skills that allow them to manage and improve the difficulties that these characteristics entail. Programmes / strategies to increase positive social skills and eliminate inappropriate ones are devised and taught. These training activities are also planned to maintain improvements and prevent relapses.

Parent training sessions can be summarised as follows:

1. Understanding the problem - (information on training, on ADHD, administration of questionnaires).
2. Preparing parents for change (debates on attitudes and beliefs as well as teaching appropriate behaviour).
3. The complexity of the problem (interaction between characteristics of children, educational choices and situations).
4. Educational choices that favour self-regulation.
5. Identifying the negative behaviour of the child.
6. Broaden the parent's strategies.
7. Acting in advance by anticipating the problem and having a plan in mind.
8. Developing the parent's skills at problem solving.

9. Evaluation of the work carried out and prospects / intentions for the future.

This training programme is applied both to groups, or to an individual parent.
It can be pointed out that individual sessions allow stricter application of the educational techniques and greater promptness in evaluating the relationship of the family to the proposals contained in the training. On the other hand group meetings are more effective in alleviating the sense of frustration and isolation often experienced by parents of children with behavioural difficulties.

ON THE SCHOOL (meta-cognitive and psycho-educational techniques and teacher training)

Teacher consultancy is focused on the behaviour of the child and strategies can be either integrated into the school's routines for all pupils or focused on the individual child.

The objectives of consultancy at school include:

The preparation of a facilitating environment :

The ability to predict the consequences of one's intervention which can improve student conduct:
- Offer feedback information to the child,
- Establish routines,
- Establish rules.

The more structured and regulated the days, the less volatile will be the behaviour of the student, we must therefore:
- organise the class and working time,
- organise activities and materials,
- optimise the approach to the task and the outline of the lesson,
- reduce off-task behaviour through tutoring and cooperative learning.

The above strategies and approaches are supported with:
- positive verbal feedback / gratification,
- behavioural contracts,
- token economy,
- cost of response.

ADHD THROUGH LIFESPAN

By Vale, Maria do Carmo *(D. Estefânia Hospital, Lisbon)*

Attention-Deficit Hyperactivity Disorder (ADHD) is a common neurobiological condition affecting 5% - 8% percent of school age children,[1,2,3,4,5,6,7] with symptoms persisting into adulthood in as many as 60% of cases (i.e. approximately 4% of adults). [8,9]

There are different estimates, but a middle-of-the-road one is that about 8% to 10% of school aged children and about 6% of adolescents have ADHD. Of those adolescents, it's thought that between 40% and 60% will have symptoms that persist into adulthood.[10]

Historically, ADHD was considered to be a childhood disorder which declined in adulthood, but that theory has altered over time and it is now understood to be a chronic disorder, affecting both sexes.

However, its developmental course is not clear-cut, and from his review of the literature, Willoughby concluded that questions still remain about the developmental course of ADHD symptoms during childhood, adolescence and adulthood. [11]

In fact ADHD is a lifespan condition that affects children, adolescents, and adults of all ages, gender, race and cultural background.

Some common symptoms and problems of living with ADHD include:
- Poor attention; excessive distractibility
- Physical restlessness or hyperactivity
- Excessive impulsivity; saying or doing things without thinking
- Excessive and chronic procrastination
- Difficulty getting started on tasks
- Difficulty completing tasks
- Frequently losing things
- Poor organisation, planning, and time management skills
- Excessive forgetfulness

Not every person with ADHD displays all of the symptoms, nor does every person with ADHD experience the symptoms of ADHD to the same level of severity or impairment. Some people have mild ADHD, while others have severe ADHD, resulting in significant impairments and in doing so, ADHD can cause problems in school, in employment and careers, at home, in family and other relationships, and with tasks of daily living. [1,5,6,7,8]

It would be great if it could be predicted which children will continue with symptoms and, in order to achieve that, it must be analysed and understood the kind of symptoms and changes observed in the disorder, with increased age.

What is normally seen is:
- more hyperactive-impulsive symptoms in younger children
- combined subtype of ADHD in school-aged childhood
- more inattentive subtype in adolescence and adulthood.

Moving from adolescence to adulthood, symptoms of excessive running and climbing translate into a kind of internal restlessness that is not readily observable and individuals must be interviewed to find out if they're experiencing that. The usual complaints are that they feel somewhat restless inside and that they can't stay sitting still. [10]

Sufferers of ADHD tend to have problems with social interaction beginning as a child, experiencing an increase in difficulties during adolescence, as long as they grow up and they handle greater responsibility, in order to be organised. Difficulty with organisation isn't just within the school realm but with their peers as well. These children and young people have lower self-esteem, they look for a peer group that will accept them and the typical peer group will reject them.[12] Usually they'll find a problematic peer group that often is engaged in risky behaviour. These children and young people tend to be impulsive, so they may be more inclined to engage in risky behaviours.

Co-morbidities
A number of co-morbidities may occur in other age groups as well, particularly anxiety disorders, depression, bipolar disorder, and disruptive behaviour disorders such as oppositional defiant disorder.[13]

Those diagnosed with Conduct Disorder will frequently break the law which leads to juvenile delinquency as well as, in some cases, substance abuse. Problems with driving may or may not go along with a particular co-morbidity, but this is something not to forget about when talking with ADHD adolescents. In fact, car rental agencies won't rent cars to young adults under 25 years old. It seems that research is just catching up with practical knowledge in terms of what we know about planning and prefrontal-lobe functions in normal adolescents and also in development continuing beyond the age of 21.[14] Certainly before that age, one has a concern about the effects of substance use on the healthy brain, let alone on the brain of someone with ADHD.

In terms of driving, we usually see that adolescents with ADHD have higher rates of motoring violations in their first 3 to 5 years of driving, compared with those who don't have ADHD. Motoing violations includes: following too closely, dangerous overtaking, speeding tickets, difficulty with recognising signs and signals, and dealing with road markings. These findings are not gender specific; in other words, we see this with adolescent males and females with ADHD. New research uses models for driving, and when people are treated with stimulants, their focus and ability to attend may improve, not just in everyday tasks in the classroom and at home, but on the road.[15] In general, people with ADHD need more emergency hospital visits because of accidents (not just related to driving), and increased costs for medical care.[16]

At the same time there is a growing area of research on nicotine use and those diagnosed with ADHD, and certainly a lot of individuals start smoking in their

adolescent years. There may actually be a neurobiological reason for this, which has to do with nicotinic receptors and biological displacement, and smoking may be a way to self-medicate just as using other drugs of abuse may be.[6] This is an area that deserves more careful research.

As already mentioned, other areas of concern are substance abuse and self medication. There's some work by McCabe looking at the fact that, in older adolescents and young adults, some individuals may be using illegal or non-prescribed drugs.[17]

In addition there are polarised views on medication, meaning that some families totally embrace it as a way of treating their child's difficulties, and others who want to delay the taking of medication and wait 4 or 5 years or longer. Although, there is some evidence that earlier medication treatment may actually provide some protective function in respect of self medication and going on to use illicit drugs.[18]

Accepting the diagnosis and getting some early treatment helps each child and young person achieve their potential. In the untreated adolescent, difficulty with academic pressures, financial pressures, and even handling everyday life situations and eventually a need for treatment for excessive drinking or depression are usually seen.

The large Multimodal Treatment for ADHD study[19] looked at treatment, over a 14 months period, of school-age children, but there are more studies specifically of adolescents. These aren't necessarily long-term studies but do demonstrate responses to a variety of different therapies and treatments. Increasing knowledge about different treatments for ADHD is essential. For example; evaluating the use of placebos as opposed to medication.

It is definite that the symptoms of ADHD needs management and some key factors are education and medical staff and physicians being empowered to form a partnership, not only with the adolescent, but also with the parents. At that age, the patients do not necessarily want to continue on medication, but the majority of them do not outgrow the symptoms when they get into adulthood.

Academic Achievement
Heiligenstein's paper looked at the presentation of ADHD in college students, because some students are evaluated for the very first time in college even though the symptoms of ADHD began before the age of 7 years. It also documents some of their educational underachievement and behavioural problems.[20]

Some research showed evidence that it is more likely to have the diagnosis of ADHD put off when you're a higher-calibre student or have a higher IQ. Possibly, higher IQ can help children and adolescents to compensate or control ADHD, but in young adulthood, with greater demands, it could be more troublesome to cope on your own and that includes in the classroom and with schoolwork. Those students who are away at college may have to handle, for the first time, all their day-to-day living tasks and prioritising them; in addition they may lack social skills and have problems with friendships.[10]

<u>Developmental Outcomes</u>

There is a distinction to be made between the developmental course of ADHD and the developmental outcomes. There is a further difficulty associated with the identification of ADHD in the sense that it is not a disease with clear symptoms. ADHD presents a large spectrum of symptoms. At a neuropsychological level sometimes it is difficult to differentiate what is normal from the abnormal.[21] Indeed, the severity of symptoms has been shown to correlate to academic performance. Even knowing that, the diagnosis of ADHD is given in a yes or no binary format. [22]

On the other hand, and as already pointed out, children diagnosed as having ADHD are at a higher risk of negative developmental outcomes. That means they are more likely to display delinquent, antisocial behaviour as adolescents, achieve lower grades at school than their peers and have less positive attitudes towards school (Nussbaum *et al.*, 1990; Solanto, 1990; Barkley *et al.*, 1990, 1991). [23,24,25] Merrell and Tymms (2001) found that negative outcomes in respect of lower grades extended to children aged 4 to 7 years who were severely inattentive, hyperactive or impulsive in the classroom. They tracked the mathematics and reading progress of a cohort of children over their first three years at school. At the end of that period, their class teachers assessed the pupils using a slightly modified form of the American Psychiatric Association's diagnostic criteria for ADHD.

Large differences in reading and mathematics achievement (effect sizes (ESs) of up to 1.14 were found between children who did not meet any criteria on the behaviour rating scale and children who met a high number. *The differences increased over time*. [26]

In a study conducted in Australia, McGee *et al.* (2002) found a strong linear relationship between early teacher-identified hyperactivity and later adverse outcomes for reading achievement. Further, many young children are severely inattentive, hyperactive and impulsive at school but are not diagnosed with ADHD for a variety of reasons and their teachers need to manage their behavioural problems and help them to succeed at school.

Studies of the effects of school-based interventions for children and adolescents with ADHD were found to be effective in improving behaviour and, to a much lesser extent, improving academic performance, although they were not as effective as stimulant medication. [27] Ideally, teachers need to be able to exploit the positive aspects of their particular learning styles and compensate for deficits (Cooper, 2005). Teachers should also focus on changing the environment within which the child experiences difficulties, thus reducing behavioural problems and improving achievement and attitude.

Several studies have found ways of helping such children, but a further challenge is to encourage teachers to incorporate these scientifically evaluated methods into their pedagogy (Cooper, 2005).[28] Past research into the effectiveness of behavioural and classroom interventions has tended to be conducted with small samples. Additionally, the extent to which the findings from behavioural and classroom interventions apply to children with similar behaviour but who have not been formally diagnosed as having ADHD has not been evaluated *Early intervention can be successful in reducing behavioural problems and subsequent negative outcome. The earlier they*

are implemented, the better (Farrington, 1994). It makes sense therefore to try to identify children with behavioural problems at the end of the first year at school and to pass that information on to the next teacher. [29]

On the other hand, could that lead teachers to have a harmfully low expectation of such children? O'Shaughnessy *et al.* (2003) have suggested that coordinated school-wide identification and interventions for children with behavioural problems increases the likelihood of improving their outcomes.[30] Norwich *et al.* (2002) also highlighted a need for systematic assessment procedures involving education, health and social services to help improve the outcomes of children with ADHD symptoms.[31]

Who is qualified to diagnose ADHD?
For adults, an ADHD diagnostic evaluation should be provided by a licensed mental health professional or a physician. These professionals include clinical psychologists, physicians (psychiatrist, neurologist, family doctor, or other type of physician), as long as they have expertise. (This range of people approved to diagnose ADHD is not consistent across all EU countries).

Whichever type of professional the individual may choose, it is important to ask about their training and experience in working with adults with ADHD. It is always the case that the professional's level of knowledge and expertise about adult ADHD is more important for obtaining an accurate diagnosis and effective treatment plan than the type of professional degree that they hold. Qualified professionals are usually willing to provide information about their training and experience with adults with ADHD. Reluctance to provide such information in response to reasonable requests should be regarded with suspicion and may be an indicator that the individual should seek out a different professional.

When, and who, is in need of an assessment for ADHD
Most adults who seek an assessment for ADHD experience significant problems in one or more areas of live. Some of the most common problems include:
- Inconsistent performance in jobs or careers, losing or quitting jobs frequently
- A history of academic and / or career underachievement
- Poor ability to manage day-to-day responsibilities (e.g., completing household chores or maintenance tasks, paying bills, organizing things)
- Relationship problems due to not completing tasks, forgetting important things, or getting upset easily over minor things
- Chronic stress and worry due to failure to accomplish goals and meet responsibilities
- Chronic and intense feelings of frustration, guilt, or blame

A qualified professional can determine if these problems are due to ADHD, some other cause, or a combination of causes. Although some ADHD symptoms are evident since early childhood, some individuals may not experience significant problems until later in life. Some very bright and talented individuals, for example, are able to compensate for their ADHD symptoms and do not experience significant problems until high school, college, or in pursuit of their career. In other cases, parents may have provided a highly protective, structured and supportive environment, minimizing the impact of ADHD symptoms until the individual has begun to live independently as a young adult.

What is a comprehensive assessment?
Although different clinicians will vary somewhat in their procedures and testing materials, certain protocols are considered essential for a comprehensive assessment. These include a thorough diagnostic interview, information from independent sources such as the spouse or other family members, DSM-IV symptom checklists, standardised behaviour rating scales for ADHD, and other types of psychometric testing as deemed necessary by the clinician. These are discussed in more detail below.

The Diagnostic Interview: ADHD Symptoms
The single most important element of a comprehensive ADHD assessment is a structured or semi-structured interview, which provides a detailed history of the individual. In a "structured" or "semi-structured" interview, the interviewer asks a pre-determined, standardised set of questions, in order to increase reliability and decrease the chances that a different interviewer would come up with different conclusions. This allows the clinician to cover a broad range of topics, discuss relevant issues in more detail and ask follow up questions while ensuring coverage of the areas of interest. The interviewer will review the diagnostic criteria for ADHD and determine how many of them apply to the individual, both at the present time and since childhood. The interviewer will further determine the extent to which these ADHD symptoms are interfering with the individual's life.

The Diagnostic Interview: Screening for Other Psychiatric Disorders
The clinician will also conduct a detailed review of other psychiatric disorders that may resemble ADHD or commonly co-exist with ADHD. ADHD rarely occurs alone. In fact, research has shown that many people with ADHD have one or more co-existing conditions. The most common include depression, anxiety disorders, learning disabilities, and substance use disorders. Many of these conditions mimic some ADHD symptoms, and may, in fact, be mistaken for ADHD. A comprehensive assessment includes some interviewing to screen for co-existing conditions. When one or more co-existing conditions are present along with ADHD, it is essential that all are diagnosed and treated. Failure to treat co-existing conditions often leads to failure in treating the ADHD. Crucially, when the ADHD symptoms are a secondary consequence of depression, anxiety, or some other psychiatric disorder, failure to detect this will result in incorrectly treating the individual for ADHD. At other times, treating the ADHD will eliminate the other disorder and the need to treat it independently of ADHD. The clinician is also likely to ask questions about the person's health history, developmental history going back to early childhood, academic history, work history, family and marital history, and social history.

Participation of a Significant Other
It is also essential for the clinician to interview one or more independent sources, usually a significant other (spouse, family member, parent, partner), teachers and close friends, who know the person well in order to gather additional information.

Many adults with ADHD have a patchy or poor memory of their past, particularly from childhood. They may recall specific details, but forget diagnoses they were given or problems they encountered. Thus, the clinician may request that the individual being evaluated has his or her parents fill out a retrospective ADHD profile describing childhood behaviour.

Many adults with ADHD may also have a limited awareness of how ADHD related behaviours cause problems for them and impacts on others. In the case of married or cohabitating couples, it is to the couple's advantage for the clinician to interview them together when reviewing the ADHD symptoms. This procedure helps the non-ADHD spouse or partner to develop an accurate understanding, and an empathetic attitude, to the impact of ADHD on the relationship, setting the stage for improving the relationship after the diagnostic process has been completed.

Finally, it should be noted that many adults with ADHD feel deeply frustrated and embarrassed by the ongoing problems caused by their ADHD. It is very important that the person being assessed discuss these problems openly and honestly, and not hold back information due to feelings of shame or fear of criticism. The quality of the assessment, and the accuracy of the diagnosis and treatment recommendations, will be largely determined by the accuracy of the information provided to the clinician. [8,9,32,33,34]

Standardised Behaviour Rating Scales
A comprehensive assessment includes the administration of one or more standardised behaviour rating scales. One of the rating scales may be a checklist of the DSM-IV-TR ADHD symptoms reviewed earlier in this information and resource sheet. These are questionnaires based on research comparing behaviours of people with ADHD to those of people without ADHD. Scores on the rating scales are not considered diagnostic by themselves, but serve as an important source of objective information in the assessment process. Most clinicians ask the individual undergoing the evaluation and the individual's significant other to complete these rating scales. [1,35]

Psychometric Testing
Depending on the individual, and the problems being addressed, additional psychological, neuropsychological, or learning disabilities testing may be used as needed. These do not diagnose ADHD directly but can provide important information about ways in which ADHD affects the individual. The testing can also help determine the presence and effects of co-existing conditions. For example, in order to determine whether the individual has a learning disability, the clinician will usually give a test of intellectual ability as well as a test of academic achievement.

Medical Examination
If the individual being assessed has not had a recent physical examination, within the last 6-12 months, a medical examination is recommended to rule out medical causes for symptoms. Some medical conditions (e.g., thyroid problems, seizure disorders) can cause symptoms that resemble ADHD symptoms. A medical examination does not "rule in" ADHD but is extremely important in helping to "rule out" other conditions or problems.

Conclusion
Towards the end of the assessment the clinician will integrate the information that has been collected through diverse sources, complete a written summary or report and provide the individual and family with diagnostic opinions concerning ADHD as well as any other psychiatric disorders or learning disabilities that may have been

identified during the course of the assessment. The clinician will then review treatment options and assist the individual in planning a course of appropriate medical and psychosocial intervention. Afterwards, the clinician will communicate with the individual's primary care providers, as deemed necessary. [36,37,38]

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THE POSITIVE ASPECTS OF ADHD

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ADHD: gift or bane?

First of all let's have a look at the history of ADHD diagnosis. Many people say ADHD is new but that is not correct. In every century you can find children and adults who are particularly distractible, who have trouble being organised, who have trouble doing tasks, who underachieve, who seem unable to complete projects and who could be disruptive.

Five hundred to a thousand years ago, people with these characteristics were condemned and called "bad". Society's moral framework was influenced by theology: Everyone's soul was "fought over" between God and the devil. Children were punished, battered and mistreated. Their lives were full of rejection and, by today's standards, torture.

It is important to talk about the "moral diagnosis" because it persists even today. Very often these children or adults still hear "You have to try harder". They are considered bad people, losers or lazy. This increases the problem and makes it more dangerous for the mental health of these people.

Only at the beginning of the nineteenth and further in the twentieth centuries did people begin to change their attitude and started to consider that maybe genetics was involved and that the brain was an organ of the body. The, long held, belief that "free will" controlled everything began to be challenged. In the moral framework, mentioned above, "free will" was considered the origin of all human behaviour. Therefore, if you were being disruptive you had decided to behave in this way. As you weren't supposed to behave inappropriately the fact you were was your deliberate decision. The only "solution" was for the person behaving inappropriately to "try harder" to conform.

Thank God, during the nineteenth and twentieth centuries people began to consider that the brain and not only the soul controlled behaviour. They started to realise that these differences in behaviour did not depend on the failure of "will power" but on genetics. Doctors began to provide diagnosis and treatment instead of condemnation

and punishment. They tried all imaginable treatments before a doctor called Bradley had the brilliant idea to give these patients amphetamines. We can all imagine the reaction to his actions by those who worked with him and we also know the results of his actions; in a very short time these children were able to sit down, cooperate and complete their tasks. In the short time of twenty minutes we had a demonstration of how medical treatment can improve the situation of these children where thousands years of punishment and "education" had failed.

About 40 years ago, what we now know as, ADHD was renamed Minimal Brain Disorder. Today we do not consider this name to be totally appropriate however it was progress because the name conveys the information that the disorder is related to brain function, or disorder. You have to treat the brain; not the soul between God and the devil, the patients "will power" or parents who have lost control over their children.

Nevertheless, one of the biggest problems that parents have to face when their child has ADHD is that many in society still have a "moral diagnosis" where the child is seen as "bad". In the 1970's and 1980's scientists discover that ADHD didn't necessarily go away in childhood but can persist into adulthood. More recently MRI scans have shown anatomical differences in the brains of people with ADHD and helped to prove that ADHD is a biological disorder and not a mythical beast or demon.

Genetic studies have emphasised the inheritability of ADHD. Everyone inherits a set of genes. These may predispose the person to develop the symptoms however you don't inherit ADHD but only the predisposition. Genes are not the only factor there is also the impact of nurture; both come together to determine ADHD. Twin studies and other genetic studies confirm this statement. It is not unusual for a child with ADHD to have a grandfather or uncle who behaved the same as they do and was looked upon as "a strange person".

In the 20th century psychiatrists tried to develop empathy for the diagnosis and not focus on the negatives. They tried to emphasis the positive aspects for their patients. Two doctors specialising in ADHD developed a programme called "unwrapping the gift of add" (www.UnwrappingTheGiftofADD.com). They explained that people who receive a diagnosis of ADHD and only hear about the fact that they have a *deficit* cannot be encouraged but disheartened by this new event in their life. Instead these doctors just tried to present the condition not as a deficit but as a gift that has to be unwrapped. When people have hope they do better. If you only tell them that they are disabled or disordered they won't be motivated to overcome the diagnosis. However if you tell them they have a gift and talents they are motivated to meet the challenges of the diagnosis. It can be presented that the patient has a brain like a Ferrari and this is an extraordinary, great and powerful car. It is good news for you and your life. You can go very fast, you can win the challenges of your life. There is only one little obstacle that you need to adjust when you have a Ferrari; you need to strengthen the

brakes. However the doctors and support workers are "brake specialists" and they know how to transform bicycle brakes into stronger brakes suitable for a Ferrari. Boys, girls and adults will be able to slow down when they come to curves and to stop at stop signs, and they "will win races instead of spinning out of control". They will have been taught self-control, to manage their ADHD.

Is this an illusion? No, it is the truth. We don't say everything will be easy. Parents, with their children, have to work on strengthening the child's brakes. They will need to work harder at school and to do extra work. If they do they'll succeed and win the races of their lives.
Moving the emphasis away from the deficit / problem model and focusing patients, and their parents, on seeing the positives of strength and hope will help them to have a career, integrate into society, possibly marry and make a success of their lives.

ADHD as a Natural Adaptive Trait
This different approach also reminds us of the theory from Tom Hartmann about the "hunter" that in the earliest times had ADHD. This hunter did very well in the environment he lived in. He was continually monitoring the whole environment and that helped him to notice any danger around him. Today the inability to filter out external impulses in several contests is a problem or can even be disturbing. For example at school when the only activity that is required of the pupil is for them to pay attention to what the teacher is saying.

The hunter was flexible and ready to change his strategy immediately. He was tireless until he caught his food. He knew what he wanted to achieve, he just had to bring food to his family. Conversely the negative / disorder perspective shows us a person who is disorganised and a poor planner that makes impulsive, snap decisions. He has no sense of time and is impatient.

We see the hunter as a very independent person that responds to new challenges and ideas. They are enthusiastic and willing to take risks and face danger. The fact that they had to decide immediately meant they did not have time for niceties such as talking diplomatically. This "negative" is more outweighed by the "positives" of the scenario.

Today people that have reading disabilities cannot convert words into concepts or vice versa equally daydreamers have many difficulties in their daily life. They also fail to follow instructions, act without considering the consequences and often lack social graces.

Teachers, parents and whoever comes in contact with these children should not focus on the weakness but consider the list of positive qualities. They should not overlook the fact that the strength of divergent thinking are qualities such as openness to multiple stimuli, sights, sounds and thoughts. A great imagination that

leads to a global perspective surpassing usual limits and great creativity. The intense focus they have on their pursuits and interests helps them to reach their goal in a brilliant way. They have high energy levels and tenacity. You can also notice a trusting and forgiving attitude (sometimes too much so) and a great loyalty. They love to laugh and have a good sense of humour.

People with ADHD should consider their condition when they choose their career or a job. You can find people with ADHD who are hard working like a nurse (especially in the emergency unit), a psychologist (they are very sensitive, intuitive and warm-hearted), like a stuntman or actor, a sales representative, a scientist or presenter, artist or musician. They are lucky if they can find a wife or husband that organises their life.

Finally, we see that, put in the right context, the ADHD condition can help people to succeed. Put in an unfavourable context they can fail and have much trouble which reinforces a lack of self-esteem and can lead to other mental disabilities or antisocial behaviour, dependences or criminality.

The Positive Aspects of AD/HD

Most descriptions of ADHD focus on the negative aspects and neglect to mention the advantages to having ADHD. Positive attributes include:

- Creativity
- High Energy
- Intuitiveness
- Resourcefulness
- Tenacity
- Warm-heartedness
- Trusting Attitude (sometimes too much so)
- Forgiving attitude (sometimes too much so)
- Sensitivity
- Ability to take risks (sometimes too risky)
- Flexibility
- Loyalty
- Good sense of humour

Not all people with ADHD have all these traits, however to the extent that there is such a thing as a "ADHD personality" this list of positive qualities describes the advantageous / positive side of the ADHD personality. It should be noted that the problems ADHD causes can be so severe that these positive qualities never gain full expression or recognition.

Disorder Perspective	ADHD as a Natural Adaptive Trait "The Hunter"
Distractible.	Constantly monitoring environment
Attention span is short, but can become intensely focused for long periods of time.	Able to throw themselves into the chase at a moment's notice.
Poor planner, disorganised and impulsive (makes snap decisions).	Flexible; ready to change strategy quickly.
Distorted sense of time: unaware of how long it will take to do something.	Tireless: capable of sustained drive, but only when "hot on the trail" of some goal.
Impatient.	Results oriented. Acutely aware of whether the goal is getting closer *now.*
Doesn't, adeptly, convert words into concepts and vice versa. May or may not have a reading disability.	Visual /concrete thinker, clearly seeing a tangible goal even if there are no words for it.

Disorder Perspective	ADHD as a Natural Adaptive Trait "The Hunter"
Has difficulty following instructions.	Independent.
Daydreamer.	Bored by mundane tasks; enjoy new ideas, excitement, "the hunt," being hot on the trail.
Acts without considering consequences.	Willing and able to take risks and face danger.
Lacking in the social graces.	"No time for niceties when there are decisions to be made!"

"These are attributes of his outstanding gift for divergent thinking...It is the teacher's job to train your child to use convergent thinking skills. So they tend to overlook his divergent thinking strengths, and see only his weakness in convergent thinking." - *Lucy Jo Palladino, Ph.D., "The Edison Trait - Saving the Spirit of Your Nonconforming Child*

Your Edison-trait child has an inventory of positive qualities:

- Openness to multiple sights, sounds, and thoughts
- A daring or wandering imagination
- A global perspective
- Creative urges or compelling attraction for new ideas
- Intense focus on their own pursuits and interests

CHAPTER 3

LEGISLATION, PROCEDURES AND RESPONSIBILITIES IN PARTNER COUNTRIES

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Objective. To develop a holistic framework and to share the legal procedures and school responsibilities that should be followed by teachers when they meet pupils with ADHD in each country involved in the project. The country overviews show that the global and European debate and conceptual frameworks on the inclusive education of disabled students (students with special educational needs) including those with ADHD have been transferred down from the EU, to a national level and then to school level. Procedures are in place in some countries specifically for students with ADHD, while in others ADHD is perceived in the context of inclusive education for people with mental health problems and / or students with special needs. A country by country explanation follows.

Italy

The situation in Italy regarding ADHD is, at present, rather contradictory. During research on the pathology and consequently treatments for ADHD two contradictory positions emerged. On the one hand, the scientific aspect which makes use of international research and extensive literature, that maintains that ADHD is a real deficit probably of a biological nature. On the other hand, various Associations contradict these views regarding the problem as an environmental and / or relational difficulty. Those who subscribe to this view refuse any use of drugs or medication to treat the symptoms. A treatment which is otherwise considered one of the most useful approaches in improving the outcomes for the person diagnosed with ADHD.

In April 2007 a specific pronouncement was made in Italy (Gazzetta Ufficiale n. 106 – determination n.876) on the possibility of using the drug (Ritalin). This acknowledged the existence of the illness and established a diagnostic and therapeutic Protocol. The pronouncement was signed after having examined the studies their findings and recommendations. In fact hyperactive syndrome / attention deficit ADHD is defined as one of the most common disorders of the psycho-neural development in children and adolescents. It is characterised by hyperactivity , impulsiveness and an inability to concentrate. It is evident before the age of seven and it covers all relationships; among peers, in the family and at school. It is estimated between 3% to 4% of children have ADHD although this varies between different regional areas.

The National Register of ADHD is aimed at monitoring the use of drugs (Metifenidato and Atomoxetin) and comparing the outcomes with other non-pharmacological therapies. The task is for The Psycho-neural Territorial Service to organise the appropriate strategies. The families have to give their informed consent.

The introduction of this Register is the result of scientific phases used as guide lines and put forward in various years. In June 2002 the guide lines of the Italian Society of Infant and Adolescent Neuro-psychiatry were published (SINPIA), March 2003 Consensus in Cagliari, February 2003 Register activation. Even the Council of Europe, in 1999 with the Pompidou Working Group, recommendation 1562 of 2003 reaffirms the right of the child with ADHD to be treated by every possible means even pharmaceutical.

As well as the background history, diagnostic work, analysis of presenting symptoms, evaluative aspects and reflection on other capabilities such as reading, writing, cognitive aspects and depression the text of the law (876) on the use of the drug underlines the importance of the family in addressing the child's needs through the strategy of "PARENT TRAINING" and "SCHOOL INTERVENTION" which has teacher involvement and teaches key strategies and techniques. Even though a diagnosis of ADHD may have been made this does not guarantee a support teacher for the child. Only with certification according to comma104 is it possible to have a support teacher.

Contrary to this view Associations such as "Perché non Accada" or "Giu' le mani dai bambini" argue that this illness does not exist but can be attributed to a difference in every child's individual characteristics. Furthermore, they argue that no type of drug / medication should ever be used referring to numerous cases of children who have died in the United States due to the administration of drugs which caused cardiovascular deficit.

There is a large movement in Italy against the diagnostic treatment of ADHD and in particular against drug treatment. This makes it difficult for those who work with children who present this disorder to operate and to have secure working practices or "reference points" as workers in this field. On the defensive to the very end, concerning any type of diagnostic work the administration of tests related to ADHD are forbidden in a school environment unless there is informed consent and a request by the parent of the child.

The Piemonte Region, on 30th October 2007, in its Regional Council issued a law (LR405/07) stating that it was forbidden to carry out ADHD tests in the school and safeguarding the children from the administration of drugs (the promoting side was the Citizen's Committee for Human Rights CCDU).

The Regional law states that the symptoms, (presenting behaviours), are being confused with the illness, in the absence of adequate supporting scientific evidence. (Polo Europeo della Conoscenza –Verona)

In Italy, disabled pupils have been integrated into ordinary schools for more than 30 years. There is not a separate education system for these pupils. Integration started, in the mid seventies. The right to education is granted to handicapped children in ordinary classes of every school type. (Specialised teachers, insegnanti di sostegno, are provided for many pupils.)

The local health authorities, upon request of the parents of a handicapped child, can provide specific individual assessments as established by Law 104/1992. The outcome of each assessment is documented through minutes specifying who the handicapped child is and the nature of their illness, according to the international classification of the World Health Organisation;

Furthermore, it specifies that if the illness can be defined as particularly serious then there may be a justification to assign a higher number of support teaching hours in comparison with the standard ratio foreseen by law.

The minutes are delivered to the parents who, in their turn, deliver them to the school. The assessment paper, that declares that the pupil is handicapped and has the right to specific additional support measures, is essential in starting up the administrative procedures for school attendance and integration.

A functional diagnosis is required after the individual assessment of a handicapped pupil. This is drawn up by the Local Health Authority and written by a doctor specialised in the diagnosed illness. For example a child neuro-psychiatrist, a rehabilitation therapist and social workers. The functional diagnosis should provide an analytical description of the psycho-physical conditions of the pupil and of their potential.

After the first period of school attendance / integration a dynamic- functional profile is drawn up by the Local Health Authority informed by class teachers and support teachers. It includes diagnostic elements related to the difficulties encountered by the pupil in the various areas of activity in school, but above all their potential and developmental goals for the short and medium term. This informs the preparation of the Piano Educativo Individualizzato – PEI. (Individual Education Plan. IEP).

PEI Includes the descriptions of the interventions foreseen for the pupil in a given period of time. It is drawn up jointly by the operators of the Local Health Authority, teachers and support teachers, educationists or education assistants of the local authority, if required, in collaboration with parents.

Portugal

3/2008 is a new law in special education, and represents a new step in the process of inclusive education in Portugal. The law signals a major change in emphasis because the eligibility of the students is based on a bio-physico-social assessment using the International Classification of Functioning, Disability and Health – Children and Youth (ICF-CY) to World Health Organization (WHO).

Students that are eligible to special education are those with severe limitations in activities and participation in several life domains, related to functional and/or structural permanent alterations, in result of continuous difficulties in communication, learning process, interpersonal relationships and social participation.

Referral for Assessment

The referral for assessment, to determine special educational needs, may be made by parents, teachers, staff or services dealing with the child to the school in the area where the child lives. The referral is A written request explaining the condition of the

child and providing relevant reports for the assessment process. Special education units at school or special education teachers and psychology staff will assess the case, determining what kind of special support and generate a report. The school may seek outside help from health services, special resources centres or others that may contribute to the assessment. The report shall document the results of the assessment using the ICF-CY. The school management is empowered to make the final decision. Picture 1, below, diagrammatically illustrates the process.
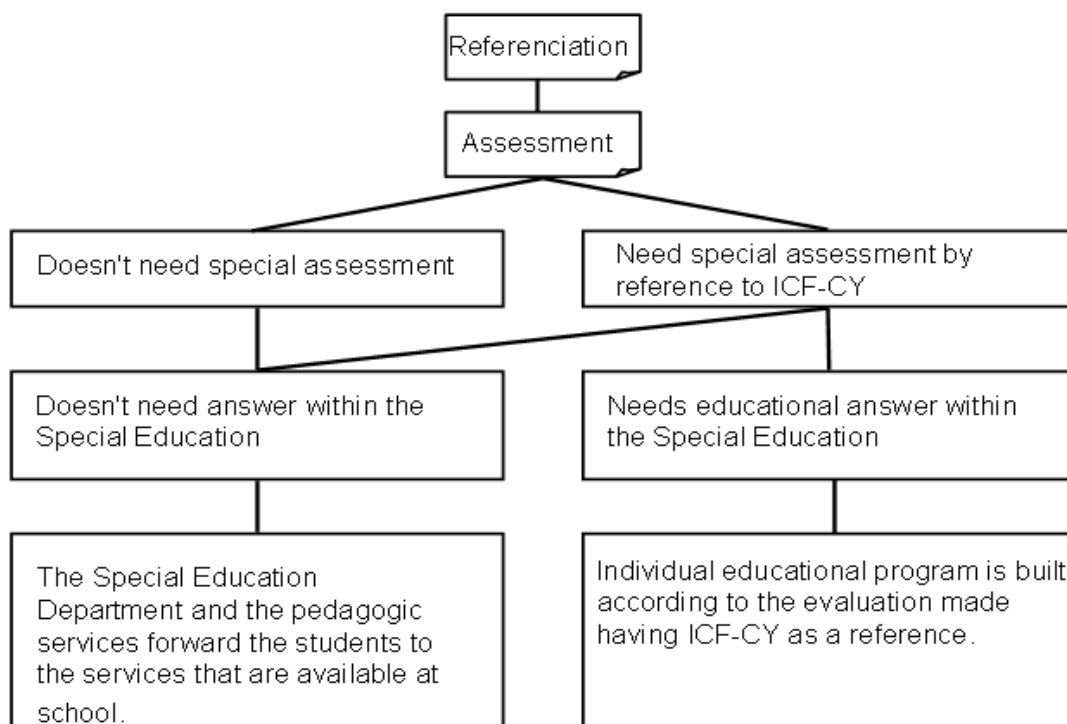
If the assessment indicates that the child has special educational needs then an IEP must be generated and include a profile of the student's functioning that integrates indicators of functionality, environmental factors working either as facilitators or obstacles and an evaluation of the pupil's participation in school life. The IEP must detail objectives and a plan for how the pupil will be supported in achieving them. The IEP will detail strategies and approaches, special staff support, special equipment, a timetable for the school activities and assessment parameters.

The Decree-Law nº 3/2008, of 7 January defines specialised supports through the following measures:
• personalized educational support;
• adaptations to the curriculum;
• adaptations in the enrolment process;
• adaptations in the evaluation process;
• individualised curriculum;
• assistive technologies.

With the International Classification of Functioning Disability and Health utilization, we use a universal and objective language based on observable behaviour and not on a diagnosis criteria. For that reason, the eligibility of a student with Attention Deficit Hyperactivity Disorder (ADHD) to special education support is not dependant

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on the diagnosis but on the functional limitation the ADHD causes on the student's ability to participate in all social and environmental settings, settings, as well as the support needed.

Romania
Romanian Legislation concerning the integration of children with special needs.

Order 5379/25.11.2004 concerns the organisation and methodology for educational services through teaching support staff for children with special needs. This established the principles and objectives for special education and the principle of integration in mainstream education.

Article 4 from the first chapter refers to the integration of children with special needs into normal school, assisted by support teachers. Teachers must be specialists in special education, pedagogy or psychology graduates. They have an advisory / leadership role supporting normalisation for special schools and, also, for mainstream schools. In some cases Language Therapy Interschool Center or Center for Special Education Assistance are used in this role. The role of a support teacher for special education must follow guidance contained in art. 5 of Law no. 128/1997.

It is also required that at least half of the lesson time, 16 hours per week, be spent with their peers / in the classroom during which the teaching and learning is undertaken with the mainstream teacher. The other hours from the norm can be done:
1. in the resources centre
2. in multifunctional rooms in the school where the child is
3. in the child's family
4. in institutions within the local community (children's locations, library, cinemas, theatres, circus, etc.). The teacher will accompany the children in different educational contexts.

Article 9 is very important as this refers to the criteria to be met through which the child may benefit from a support teacher. Article 9 also establishes the categories of special needs that would benefit from a support teacher:

1. children with a certificate of examination, school and professional recommendation made by Commission of Child Protection,
2. children with learning or developmental disabilities which have the recommendation of Internal Commission for permanent evaluation from resource school / centre,
3. children with special needs for whom the family have made a written request.

One of the following documents triggers educational services provided by a support teacher:
- certificate of school and professional recommendation made by Commission for Child Protection,
- recommendation, in writing, from the Internal Commission for a permanent evaluation. In the annex of this complex evaluation of the child will be psychological, medical, family and social reports and advice as well as the

academic attainment and preferred learning style of the student. The recommendation of Internal Commission of permanent evaluation can only occur after a complex evaluation of the child. The evaluation is undertaken by the Internal Commission for permanent evaluation in the child's local area with input from the child's school, the family, legal tutor of the child, other involved organisations, non-governmental organisations and other involved persons.

In addition Law no. 128/1997 talks about the roles and responsibilities of support teachers and the facilities for inclusive schools.

Art. 15: outlines educational services to be provided by support teaching staff for children with special needs who are integrated in mainstream education.

Order MEC 5418/08.11.2005. This regulation relates to the creation, organisation and functioning of integration school centres.

This outlines the institutional action plan which assures all children's access to education through formal education and to educational services for children with special needs who are educated both in special education and in mainstream education. The order also outlines staff requirements.

Law No. 448/06.12.2006 is concerned with the protection and promotion of handicapped peoples rights.

Law Project of Pre-university Education 2007
Section 4: Art. 46

(1) that the education of children with special needs is an adapted form of schooling addressing student's educational, social, cultural and medical needs. It outlines assistance for people with special needs such as disabilities, learning difficulties, developmental delay, behavioural difficulties and language disorders. Lastly addressing the needs of people disadvantaged for social, ethnic or linguistic.

(2) covers the education of children with special needs. It also addresses issues for gifted children.

(3) that the education of children with special needs is a part of the national educational system.

(4) that the education of children with special needs is free of charge.

Art. 47 (1) the education of children with special needs mentioned in Art. 46 (1), is organised in special education schools for children with sensory, motor, psycho-motor, psychiatric and mental disabilities and in normal education schools. The integration of children with special needs.

Steps for ADHD

1. General Direction of Social Assistance and Child Protection **Commission of Child Protection** **(only with the parents agreement)**	To evaluate the child for special needs such as ADHD. (A portfolio is required in each case). The children with special needs integrated in normal education, is provided educational services by support teaching staff during all period education.
2. Family Doctor (general practitioner)	To undertake a case history / review. To make a referral for psychiatric intervention. To supervise the repeat prescriptions, 6 monthly.
3. Psychiatrist's Involvement	To obtain a diagnosis of ADHD they undertake - interviews with the child and their parents - that the diagnosis conform to DSM (IV) standards - issue a medical prescription - after diagnosis of ADHD, 6 monthly review appointments with the psychiatrist. To put into practice the treatment of ADHD. - medication - repeat prescriptions after 6 months (The child meets the criteria of DSM-IV for ADHD) To educate the client and their parents for the start of treatment.

4. Involvement of Schools	- Meeting with the family doctor for a referral to a psychiatrist. - Meeting with the psychiatrist for diagnosis of ADHD. - Generate a portfolio with personal information about student and referral from family doctor for General Direction of Social Assistance and Child Protection. - General Direction of Social Assistance and Child Protection decide to deploy support teaching staff based on the certificate, a legal document. It is important for designing the programme and to protect the child and ensure that they receive the additional help and support they require. - Before the first meeting with the family doctor and before an ADHD diagnosis is made by a psychiatrist, the schools identify the problem and analyse the nature of the special educational need through Special Commission from Education Inspectorate.

	• During the process the following must be involved: parents, school, psychologists, educational counsellors, health professionals and social assistance.
	
	Schools…
	• To identify the student's difficulties.
	• To provide action plans for prevention and intervention based on input from educational managers, school counsellors, parents and teachers.
	• To collaborate with Educational Resources and Assistance Centre from each county.
	• When the diagnosis is ADHD, or special educational needs, the mainstream and special schools will be involved, in actions such as:
	    o Educational support services (e.g. psychologists, school counsellors and social assistance)
	    o Plan a programme to be delivered by support teachers
	    o Educational programme is regulated by professional association for ADHD and NGO's.

Turkey

1. WHAT ARE THE BASIC RIGHTS AND RESPONSIBILITIES RELATED TO SPECIAL EDUCATION IN THE TURKISH EDUCATION SYSTEM?

In Turkey, all education institutions are open to everybody without any discrimination according to language, race, colour, gender, political views, philosophical beliefs, religion, sect or similar reasons. According to _Constitution of the Turkish Republic Article 42_; Primary education is compulsory for all citizens, boys or girls between the age of 6-14, and is free of charge in public schools. All citizens after primary education can benefit from further education institutions in line with their interest, capability and ability _(National Education Basic Law No:1739, Article 7)_.

All the individuals who are in need of special education will benefit from the special education services irrespective of the type and level of their disability. 'Pre-primary, primary, secondary schools and non-formal education institutions in both private and state sectors have to ensure provision of special education services for individuals in need of special education in their surroundings. These institutions have to provide interventions and modifications according to special needs of individuals' _(Decree Law on Special Education No: 573 Article-24)_

Attendance of individuals with special needs at school or other educational institution can not be blocked for any reasons. Children, young people and adults who have special needs have the same educational opportunities with who have no special needs. These educational opportunities are provided in integrated environments appropriate for the special needs and characteristics of those individuals. _(Law on Amendment to Law on the Disabled and to the Certain Decree Laws No: 5378 Article -15)_

2. WHO ARE INDIVIDUALS IN NEED OF SPECIAL EDUCATION?

Individuals in need of special education are those who differ significantly from their peers in terms of their individual characteristics and educational abilities. In this context, severe mental deficiency, more than one deficiency, profound mental deficiency, attention deficit hyperactivity disorder, speech and language disorders, emotional and behavioural disorders, visual impairment, mild mental deficiency, hearing impairment, moderate mental deficiency, orthopaedic impairments and autism are included. _(Regulation for special education services article 4)._ Moreover, gifted individuals are also included within the framework of special education.

3. HOW ARE INDIVIDUALS IN NEED OF SPECIAL EDUCATION DIAGNOSED AND ORIENTED?

The main responsibility for an educational diagnosis of an individual in need of special education belongs to Guidance and Research Centres. Psychologists, psychological consultants, special education teachers and social education experts work in these centres affiliated to the Ministry of National Education. They decide on the appropriate special education services for each individual with special educational needs.

Medical diagnosis is done by hospitals whilst educational assessment and diagnosis is performed by the Guidance and Research Centres.

In the educational assessment and diagnostic process individual's medical assessment reports as well as mental, physical, psychological, social developmental history, characteristics in all the development fields, competency in the academic fields, educational performance and needs are all taken into account. Each area is assessed to see if it would benefit from the education services. An individual development report is prepared by the teacher of the school where the child is registered which is taken into consideration. *(Regulation for Special Education services article 7).*

4. WHAT ARE THE WAYS OF PROVIDING SPECIAL EDUCATION SERVICES?

Priority is given to supporting individuals who are in need of special education to continue their education with their peers taking into consideration their educational performance by modifying aims, content, instruction process and assessment. (Regulation for special education services article 6-ç). Within this context, there are 3 ways by which special education services can be provided:

1. Special Education Schools and Institutions: They are boarding or day, private or state schools of any type and stage affiliated to the Ministry of National Education. They provide a service to individuals who are in need of special education with expert staff by applying individually developed educational programs and methods. *(Regulation for special education services article 4).* The maximum number of students in the classroom is 10 with 2 teachers working together.

2. Special Education Classes: These are established in schools and institutions for pupils who need to take education in a separate class more suited to their educational performance and type of disability *(Regulation for special education services article 4).* There are 10 pupils in most of the classes with 2 teachers working together.

3. Mainstreaming: This is a special education practice on the basis that the individuals with a special educational need are enabled to receive education in the mainstream preschools, primary schools, secondary schools and non-formal education institutions with their peers who do not have special educational needs. This practice requires input from education support services. *(Regulation for special education services, article 23).* The students with a special educational need can continue their education in mainstream provision either full time within the same class with their peers or as a part time pupil within a special education classes. Part time mainstream practice is achieved through educating the students within the same classes with their peers without disabilities or by the participation of students with special educational needs at extracurricular activities with their peers without disabilities.

5. WHAT ARE THE REGULATIONS RELATING TO THE EDUCATION OF PUPILS WITH ADHD?

Some pupils with ADHD do not receive support from the special education services for a variety of reasons. For example; there is a medical diagnosis but the severity of the symptoms do not justify input, no diagnosis may have been made or there may be a decision not to inform the school. Pupils with ADHD who do receive support from special education services continue their education within mainstream provision.

An Individualized Education Program is prepared for pupils with ADHD in line with their needs and educational performances. This is so they can continue their

education effectively. The schools and institutions then provide education through mainstreaming practices. This programme is prepared by the Individualized Education Programme Development Team every 6 months or yearly. The team carries out all their work under the chairmanship of a head teacher or a deputy head teacher. The team consists of a teacher responsible for preparing educational programmes, a consultant psychologist, the class teacher of the pupil with ADHD, specialist teacher of pupils with ADHD, the parents and the pupil with ADHD.

6. WHAT ARE THE CONTINUING STUDIES FOR THE RIGHTS OF PUPILS WITH ADHD?

The participation of Non-Governmental Organisations (NGO's) to the process is supported by the statement *'Opinions of organisations of individuals who are in need of special education are given importance to develop special education policies (Decree Law No 573 article 4-g).*

Within this context; NGO's apply for the provision of modifications for pupils with ADHD through University and Secondary Education Entrance Exams according to their specific needs were considered and accepted in line with the statement *'Assessments of Pupils with ADHD should be frequently done by short exams (Regulation For Special Education Services Article 24/ı).* As a result of that initiative, pupils with ADHD do not have to take these exams in public; if they want, they can take the exam on their own in a quiet room with an observer; and also if they want, a reader can help them by reading questions aloud.

REFERENCES

1. 1982, Constitution of the Turkish Republic (Article – 42) http://www.tbmm.gov.tr/english/constitution.htm
2. National Education Fundamental Law No: 1739 (Article -7)
3. Law on Amendment to Law on the Disabled and to the Certain Decree Laws No: 5378 Article - 15
4. Decree Law on Special Education No: 573 Article -4/g, 24
5. Regulation For Special Education Services Article -4, 7, 24/
6. http://www.eurydice.org/ressources/eurydice/eurybase/pdf/section/TR_TR_CLEG.pdf

United Kingdom, excluding Scotland & Northern Ireland

Referral Route: the process for obtaining a diagnosis of ADHD sits totally within the medical arena.

General Practitioner
(Family Doctor) makes a referral to

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CAMHS
(Child and Adolescent Mental Health Service)
CAMHS have a gatekeeping role. They have their
own criteria which the referred child must meet before

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Diagnostic Point: **Psychiatrist Involvement**
Will interview parents and child. Will, usually,
seek views of associated professionals such
as schools, social workers and health visitors.

Diagnosis comes from above process
and meeting DSM (IV)

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(If) Diagnosis of ADHD Given
3 monthly review appointments with the psychiatrist.
If medication prescribed then the GP is asked to provide repeat prescriptions.

Who can refer the child to the G.P.? The child's parents must approach the G.P. Whilst teachers, social workers and other professionals can make suggestions to the parents and support them. The G.P. will only progress matters after an approach from parents and they are satisfied that there is an underlying and long term problem. It is very unusual for the G.P. to make a referral after the first meeting with parents and the child.

How Does an ADHD Diagnosis Impact on Schools?
Often it doesn't impact at all!! It is likely that the child had been causing difficulties within the mainstream school for quite some time before an ADHD diagnosis is made by a psychiatrist.

Schools and the Education Departments have their own structure for the identification of children with Special Educational Needs, regardless of the nature of the special educational need. This process would have been started at quite an early stage and often before the first meeting with the G.P.

Stage 1: School Action. At this point the pupil is identified as having difficulties significantly more challenging than for their peers. The school is expected to generate plans to address the pupil's needs and deliver those plans. These plans will be met from the school's budget. Education support services may become involved such as Behaviour Support Service and a general discussion with an educational psychologist.

Stage 2: School Action Plus. At this point there is the evidence that the child has special educational needs. Education support services and educational psychologists will be involved in meeting the pupil, supporting the school in devising the plans / programmes to address the child's needs and may deliver some of the plan / programme. Some additional funding may be provided for the school.

Stage 3: Statements of Special Educational Needs. At this stage the school will approach the education department requesting that a statutory assessment of special educational needs is written. THIS IS A LEGAL DOCUMENT designed to protect the child and ensure that they receive the additional help and support that they need. If the Education Department agrees that a statement is written then a formal assessment process is undertaken. The following MUST contribute, in, writing, to the process:
- Parents
- School
- Educational Psychologists
- Health Professionals
- Social Worker, if involved

Once a Statement of Special Educational Needs is written it will identify:
1. the needs of the child
2. long term objectives for the child
3. the type of approaches that are required to meet the child's needs
4. name the school that the child must attend.

Most children with Statements of Special Educational Needs are in mainstream education however a child can not attend a special school without a Statement of Special Educational Need.

Once a Statement of Special Educational Needs has been written additional funding and / or resources will become available to the mainstream school. Additional funding would not usually come to the special school as they are funded more generously.

Conclusion

The educational policies in all countries promote the integration of students with ADHD in normal school but the practices in each country is different.

- In Romania and Portugal support to schools is given related to the children's needs. This approach is for all students with special educational needs not specifically for students with ADHD.
- In Turkey all educational institutions are responsible for providing the specific educational environment according to the need of students.
- In Italy attitudes to ADHD are in one of two contradictory positions. Those who support the diagnosis of ADHD see it as a biological problem whilst those who argue that ADHD does not exist attribute the child's behaviours to environmental and / or relationship difficulties. Debate is currently in progress concerning the recognition ADHD as a disability. In Italy, disabled pupils have been integrated into mainstream schools for more than 30 years. There is not a separate education system for pupils with special educational needs. Integration started, in the middle seventies. The right to be educated in mainstream classes is granted to handicapped children in every school type. Support from specialised teachers, insegnanti di sostegno, are provided.
- In UK, most children with Statements of Special Educational Needs are educated in mainstream education however a student with the most severe or extreme special educational needs may be educated in a special school. A student can not attend a special school without a Statement of Special Educational Need.

One common aspect, across the partner countries, is the use of multi-disciplinary teams to access the needs of individual children and generate programmes to meet their needs. All countries use specialists; teachers, tutors, counsellors, psychologists, psychiatrists, educational managers, local authority and peers-mediators.

Across the partner countries support teachers are involved in developing the educational programmes for children at ADHD. Students with ADHD are being isolated from their peers and by their teachers thus generating one of the reasons for ADHD students dropping out of school. All countries require a clinical / medical diagnosis of ADHD. In all partner countries only psychiatrists have the authority to make a diagnosis of ADHD. Medical treatment using drugs is dependent on parental permission. A diagnosis of ADHD is necessary to access additional support such as teachers, support teachers, counsellors, and psychologists. With parents, these professionals identify strategies to meet the needs of students with ADHD. All countries emphasised the delivery of a focused educational approach, using active learning methods and strategies, being more important than purely a medical approach to meeting the needs of students with ADHD.

CHAPTER 4

MYTHS AND FACTS ABOUT ADHD

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What are the facts and myths about the student with ADHD?

1. What are the key points and facts everyone should know about ADHD?

2. How should I approach the student with ADHD? (Assumptions, Attitudes and Expectations)

3. What are the most effective ways of communicating and co-operating while teaching the student with ADHD?

4. How do students with ADHD perceive themselves? (Misconceptions and facts)

5. Children and young people with ADHD left messages for their teachers. Let's listen to what they say.

- FACTS ABOUT ADHD -

- ADHD is a disorder which is evident in every country regardless of race and gender.

- It should be kept in mind that not all inattention, hyper-activity or behavioural problems occurring in childhood can be attributed to ADHD.

- ADHD is not a recently diagnosed disorder. It has appeared in clinical literature with different names since 1902. Previously used names are; minimal brain damage, minimal brain dysfunction, hyperactive chills syndrome and attention deficit disorder with or without hyperactivity.

- Research into ADHD demonstrates that it is a hereditary, neurological inefficiency in the area of the brain which controls behaviours.

- Stimulants used in ADHD treatment can reduce the symptoms by influencing the neurotransmitters in the central nervous system.

- ADHD is not a disorder related to intelligence. Children with high intelligence or low intelligence can have ADHD.

- ADHD is a life long disorder. Almost 80% of children with ADHD continue to have substantial symptoms during adolescence. At least 67% of children with ADHD continue to have symptoms during adulthood.

- Recent research estimates that 3% - 12% of school age children have ADHD and in the total childhood population, between 0 - 18 years of age, between 3% - 5% are affected by ADHD

- The rate of boys diagnosed with ADHD is at least three times more than for girls. Recent research claims that many girls actually have AHHD and are not being diagnosed.

- Regardless of the needs of children and young with ADHD they can not access appropriate treatments and benefit from them if an assessment and diagnosis has not been made. This is especially common for un-diagnosed girls with ADHD.

- Almost $^2/_3$rds of individuals with ADHD also have coexisting disorders. *(See Chapter 2c)*

- There are many disorders and disabilities which look like ADHD and have similar symptoms such as learning disorders, social or emotional disturbances. *(See Chapter 2b)*

- It is accepted that ADHD is a medical condition and not a myth. ADHD is not determined by inappropriate parenting, laziness, naughtiness, intentional misbehaviour or a personality disorder. There is no single treatment that will work for all individuals with ADHD.

- There are degrees of ADHD which ranges from mild to severe as well as subtypes. Each individual with ADHD is unique. The degree of severity of the ADHD symptoms in a child can usually be seen within a day.

- There are many positive characteristics and traits present in many students with ADHD *(See Chapter 2h).*

- Students with ADHD show higher performance if they are provided with activities that are attractive, interesting and motivating. They usually learn effectively in general classrooms where appropriate classroom management and supporting strategies are evident.

- The prognosis for children diagnosed with ADHD is very poor if not treated. These children are at risk of experiencing serious social, emotional, behavioural or academic difficulties and challenges.

- Comparing with their peers, students with ADHD are more likely to drop out of school or, where the national system allows, be retained at school. They may have trouble socially and emotionally if they experience rejection, inappropriately applied punishments or ridicule at school.

- The prognosis of ADHD is positive and hopeful if treated and many can effectively manage their symptoms of ADHD.

- Some factors related with the school or the family environment, e.g. the support systems or stress levels, may either exacerbate problems or help the student to deal with their difficulties.

- There are numerous successful individuals with ADHD in almost every field.

Famous People Who May Have ADHD or Learning Disabilities

Albert Einstein	Thomas Edison	John F. Kennedy
Mozart	Beethoven	Winston Churchill
Galileo	Alexander Graham Bell	Prince Charles
Leonardo De Vinci	Louis Pasteur	Robin Williams
Jules Verne	Agatha Christie	Tom Cruise
Stephen Hawking	Whoopi Goldberg	Sylvester Stallone
John Lennon	Carl Lewis	"Magic" Johnson
Walt Disney	Henry Ford	

- There are numerous resources, including suggestions and strategies, to support and enrich the lives of children, young people and adults with ADHD.

- Thanks to the work of educators, physicians and psychiatrists, who have devoted themselves to improving the treatment and understanding of ADHD, every day we can learn more about ADHD.

- ASSUMPTIONS, ATTITUDES AND EXPECTATIONS -

- The inappropriate and difficult behaviours of students with ADHD are not motivated by malevolence or rebelliousness. The difficult behaviours are simply related to a weakness with the students' executive functioning. Because of this, even though children with ADHD know what should be done, they can not impose self-control on themselves to behave appropriately. Misbehaviour by students with ADHD is rarely caused from bad intention. They usually do not recognise that their behaviour is inappropriate or how these behaviours affect others.

- Don't forget that all students with ADHD are unique.

- Don't assume that the student with ADHD intentionally does not do their assignments. From observation, you can see that the student has only sufficient concentration to complete some of the assignment or they attempt to do the assignment but fail to complete any.

- Remember that inconsistency is one of the main characteristic of ADHD. The student with ADHD performs differently day by day. One day they may complete homework yet on another day they are unable to complete very similar homework.

- Remember that the reason for academic underachievement is not laziness or apathy but neurobiological.

- Do not give up on any student. Keep the faith.

- Believe in the student with ADHD and having high expectations for them makes the student successful. This also positively impacts on teacher performance in spite of the challenges and disappointments.

- Remember, you may need to revise the educational plan for the student with ADHD and reinforce their progress with rewards, praise and encouragement.

- Remember, students who are quite may be missed or overlooked. They need to be identified and supported.

- Be positive and communicate with colleagues who are supportive. Avoid having close communication with those who often criticize students and who are closed to learning new approaches or practicing them.

- Ignore the students' previous teachers' negative opinions about them.

- Wish the best for every student and ensure they begin the new term with hope and optimism.

- Realise every child's cultural background is different from each other and different from yours. By recognising you have limited knowledge about the students' cultural and social background you can challenge and check your point of views about them.

- CRITICAL POINTS FOR COMMUNICATION AND CO-OPERATION -

- Realize that the best way to manage ADHD is by, collaborative, multidisciplinary team working.

- Therefore, all family members, school staff and medical staff should work cooperatively.

- No single intervention can manage and treat ADHD. There should be modifications, interventions and sustaining treatment plans which are consistently applied and regularly revised.

- Don't try to manage ADHD alone.

- Don't avoid asking or accepting suggestions about teaching students with ADHD.

- Find colleagues to support each other to overcome the challenges of teaching students with ADHD.

- Don't underestimate or ignore the importance and effectiveness of cooperating with the student's parents. Parents know their children better than anyone else. Be prepared to learn from them. To do this

  - Invite parents into school and the classroom to get information about their child.
  - Have consistent communication with parents and make plans together. For example, daily behaviour response cards and home - school communication forms / diaries.
  - Ensure parents understand your primary aim is to increase the student's success at school.

- Share your, objective, observations relating to a student's performance and behaviour. If you are questioning whether the student may have ADHD, inform them following the appropriate procedures.

- (This structure does not exist in all EU countries). Work in co-operation with the Individualized Education Program (IEP) Team to support the student. The followings assistance should be provided by the IEP team.

- o Making observations of the student.
- o Defining and providing needed individual behavioural management and classroom management strategies.
- o Ensuring parents attend meetings and participate in discussions.
- o Maintaining information.
- o Supporting the application of appropriate school based interventions.
- o Guiding and orienting, when needed. (*See Chapter 8*)

- SELF CONCEPT OF THE STUDENT WITH ADHD -
- Rights & Wrongs -

Students and young people with ADHD may have misconceptions of themselves and misattributions. If the student with ADHD has a realistic self-concept it supplies them with positive self-esteem while dealing with the struggles which are caused by ADHD. If a student with ADHD has inappropriate beliefs, exaggerated opinions and misperceptions about themselves these should be changed and reshaped within a realistic approach. The following table can be used as a guide which could be helpful to alter misconceptions into realistic concepts.

Misbelieves and Misperceptions	Reasonable Believes and Perceptions
ADHD is a life sentence.	ADHD is not a life sentence. It is just a way of life. You have to deal with it but it is not so bad. Don't forget having ADHD may have some advantage. For example, people with ADHD have more energy and more creative than others. They can exploit these traits more than the average person.
I am stupid.	ADHD is not connected with intelligence. You are at least as smart as your peers. Some of world's greatest geniuses such as Einstein and Churchill probably had ADHD.
I will lose all my friends because they will think I am weird.	They will only know that you have ADHD if you tell them, otherwise they will not know. They like you for whom you are. You have always had ADHD, even when you did not know it and you have always had friends. Why will it change now? If anyone stops being your friend because of ADHD it means they are not really your friend.
I will spend my whole life going to doctors, psychiatrists and tutors.	People who manage with ADHD see their doctors just 3 or 4 times a year for 30 minutes. They may go to a therapist or tutor once or twice a week. You will spend more time watching TV in a month than the time spent going to the doctor or a tutor during a whole year. It can not be so bad.
Medication will change my personality.	Nobody or nothing can actually change your personality. Medicine has short term effects. It just makes it easier for you to pay attention, to think before acting and to feel less restless. Medication does not change your personality.

I will never be a normal person.	What is normal? Everybody has some strange habits. You are not different than others in this regard. ADHD is just a part of you not all of you. It is invisible so your friends can not see it.
This is all my fault!	ADHD is inherited and a neurobiological disorder so having ADHD can not be your fault.
ADHD is just a way for my parents to control me and a way for them to take away my freedom.	Actually, your family does not control you. The point is for you to control yourself not to be controlled by others. ADHD means having difficulty in controlling yourself although you may need support to learn self-control.

CHILDREN AND YOUNG PEOPLE WITH ADHD LEFT MESSAGES FOR THEIR TEACHERS. LET'S LISTEN TO WHAT THEY TELL US -

Messages from students with ADHD. Their expectations of their teachers can be summarized into the following sentences:

- My inattention problem is real. It is not an excuse and it affects my learning. I wish I never had it and that I could be more successful.
- I need your help to be successful, but it is not easy for me to ask for help. I can do better if you encourage me.
- I need to know you believe in me.
- I really do forget things. It is not deliberate, it is unintentional.
- If you are supportive and patient I can ask questions without fear.
- I know I ask something again and again but the reason is to understand the subject clearly not to attract attention.
- Please give me feedback about my misbehaviour in private, not in front of my friends.
- I do not like to be the subject of special treatment. If they are necessary I prefer them to be kept private, between you and me.
- Please, don't treat me as if I were so different from other kids.

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CHAPTER 5

STRUCTURING THE CLASSROOM CLIMATE

Appropriate Teacher's Attitudes & Appropriate Classroom Climate

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● What kind of classroom climate does my student with ADHD need to be placed in?

● How can I create that climate in my classroom?

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1. What are the things I should consider when structuring the classroom climate that makes pupils feel emotionally safe?
   - ✓ Decrease the level of Anxiety and Stress
   - ✓ Increase the respect for the student
   - ✓ Believe that the student can learn
   - ✓ Maximise the positive characteristics of the student

2. What should I do to provide an appropriate learning atmosphere for the student with ADHD?
   - ✓ Increase predictability through providing "Structures and Routines"
   - ✓ Modify instructions and training in accordance with the severity of the symptoms.
   - ✓ Provide creative, enjoyable, engaging and interactive lessons.

3. Which environmental modifications and adjustments should I make regarding the needs of the student with ADHD?

4. Which teacher's qualifications can be helpful in providing a better classroom atmosphere for students?

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│                                                           │
│       - PSYCHOLOGICAL ATMOSPHERE IN THE CLASSROOM -       │
│                                                           │
│        Components of  an Emotionally Safe Classroom       │
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Effective Classroom Management & Positive Discipline

It is essential for academic achievement to provide a classroom climate that makes all the students feel a part of a caring and supportive community. In order to create the supportive classroom community teachers of pupils with ADHD should;

- have effective classroom management and positive discipline strategies,
- structure the classroom environment, routines and rules with a focus on preventing problems,
- be aware of what can cause behavioural problems and avoid them through careful planning.
- teach and reinforce to the pupil with ADHD attitudes and behaviours which are expected and appropriate. *(See Section 7, Behaviour Management)*

No Perfectionism

Pupils can feel free to express themselves, feel emotionally safe and not be afraid of trying and learning from their mistakes only in the classrooms which accept and tolerate mistakes as a part of learning. However, in classrooms that are not open to mistakes being made causes the pupils to feel frustration, anxiety; fear and stress.

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│ Mistakes are learning opportunities!   │   When pupils with ADHD feel anxiety,
│   │   it is usually followed by withdrawal or
│ Do not be afraid of the mistakes, but be │ aggression. Anxiety, fear and anger
│ afraid of the fear!   │   decrease attention, concentration and
│   │   self-esteem   and   increase
│ This classroom is the place for mistakes! │ hyperactivity in pupils with ADHD.
│   │
│ If we do not learn from our mistakes in │
│ the classroom, where do we learn?   │
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Teachers can create an appropriate classroom atmosphere by being a role model for pupils. With their behaviour and displaying pictures and notices highlighting that it is OK to make mistakes in the classroom.

Increasing Respect for the Student

Every pupil deserves to be in a classroom where everyone respects them. Teacher's behaviours and attitudes are the role model for other students to respect each other. The teacher who is empathetic towards the student with ADHD becomes a role model for other students and ensures that they are empathetic and respect the student with ADHD. If the teacher does not tolerate the symptoms of ADHD the classmates of the student follow the teacher's example. If the teacher and classmates do not respect a student it is obvious to expect that the student with ADHD may show underachievement in all areas including academic, social and personal. In this regard teachers should do the followings;

- be a role model for students through your manners, speaking style and body language,
- do not embarrass the student by giving negative feedback in front of the classmates or by criticizing,
- give feedback in private,
- highlight the positive traits of the student with ADHD,
- identify characteristics related to students with ADHD positively. *(See Section 2d, Positive Characteristics of Pupil with ADHD),*
- respect the privacy of the student and do not inform anyone about the student's health conditions (ADHD) except for those who the parents of the student with ADHD have agreed to,
- prevent the child from being labelled and do not allow their health condition to be a subject of conversation in the school,
- if appropriate, inform the classmates of the student about ADHD with a focus on the dignity of the student. This can not be done without getting child's and their parents' permission. It may be helpful if some of their classmates are aware of some particular behaviours of the student with ADHD. *(See Section 4a-4b, Having Good Communication and Cooperation with Pupils with ADHD and their Parents),*
- design classroom activities that focus on respecting differences and learning social skills in order to improve social relations and cooperation among students. *(See Section 7d Developing Social Skills; Section 5b, Cooperative Learning)*

Believe That The Student Can Learn

Belief in the student is the key factor which brings forth success. Students with ADHD need "significant others", especially adults such as parents and teachers to believe in them and that they can learn and be successful. This belief is a critic factor which supports and motivates them when they have trouble and struggle. This belief also feeds the child's self esteem, too. These supportive adults need to know that their belief requires that;

- they don't reduce their expectations of the student,
- they don't give up on them. Underachievement is not their destiny.
- they focus on finding out the different ways and different teaching methods which supports the student to learn,

- they are ready to re-examine and revise their original plan when it is appropriate to do so,
- they never give up generating plans even when some plans fail to produce the expected outcomes,
- they need to be ready to spend extra time and extra effort. If you do not that, who will do it?
- they provide thanks to all the adults who do not give up and who keep the faith. The student with ADHD won't give up on themselves and will be successful in life if the "important other" adults continue to support them.

Exploring and Developing Student's Strengths

ADHD is not an intelligence disorder. Many students with ADHD have average or high intelligence. In addition many are highly gifted, artistically, musically or athletically. Given the chance to nurture and develop their strengths, gifts, interests and talents they will be successful in life. Unfortunately, students with ADHD are usually very well known among their peers, especially their weaknesses and vulnerable characteristics more so than their strengths. Worse than this, students with ADHD are sometimes "labelled" in the classroom or the school. In this respect;

- Teachers should provide numerous opportunities for the student with ADHD to show their strengths and demonstrate to their peers what they do well.
- Students with ADHD should be supported to find out and develop their own interests and talents.
- Teachers should encourage the student and their parents to maximise opportunities for the student to develop their interests, aptitudes and skills by participating in school and after school activities as well as joining appropriate organisations such as football teams or scouts. This will develop their social skills as well as increasing their self-confidence.

- THE LEARNING ATMOSPHERE IN THE CLASSROOM -

Components of an Appropriate Classroom for Learning

Providing Structures

Pupils with ADHD need to be placed in a classroom which provides "consistency" and "structures" because "inconsistency" and "organizational problems" are some of the main characteristics of ADHD. Regardless of the teaching style of the teacher, traditional or open, or the physical environment of the classroom, every teacher can and should provide "structures" so student can experience success.

In this respect, it is very important to understand what a "structured classroom" means and what are the functions of the structures which have been mentioned.

Pupils with ADHD need to have structured educational materials, a structured educational environment, structured relationships and group dynamics.

☑ Expectations, rules, routines and consequences;
  - Should be clear, well defined and understandable.
  - Should not be changed frequently and the number of these should be small enough to be remembered.
  - Should be applicable and predictable.
  - Should be expressed through positive sentences.
  - Should be displayed through attractive displays, pictures, banners, catch-phases.
  - Should be repeated and reinforced frequently.

☑ Academic tasks;
  - Should be structured by breaking assignments into manageable pieces.
  - Should be guided by providing clear verbal or written instructions, directions, expectations, feedback and teacher modelling.

☑ The school day should be structured with a variety of active and quiet periods.

☑ Students should be informed before changes in routine or arrangements occur in order to prepare them for the changes by making them a predictable event.

Flexibility to Modify Instructions and Training In Line With The Severity of The Symptoms.

The degree of ADHD symptoms are defined neurologically and it is this that dictates whether the student is receptive or unreceptive to learning. When the severity of symptoms such as impulsivity, inattention, and activity increase so student's

performance decreases. When teachers' realize the severity of the symptoms are increasing they should do the followings:

- Modify their expectation of the student according to the severity of the symptoms of ADHD.
- Modify tasks and activities according to the severity of the symptoms.
- Be aware that the student's neurological condition means that they are not receptive to processing new information. Instead of trying to teach new information provide reinforcement and practice activities to review and master the student's previous learning.
- Prepare the materials in advance of them being needed and keep them in the classroom in order to provide them to the student when their symptoms become more severe.
- Remember that whilst most students with ADHD struggle to concentrate on any kind of educational activity they are still able to focus on educational activities delivered via the computer. Because of this providing opportunities for students to undertake work on a computer can be helpful to engage them in learning.

Using Creative, Enjoyable, Engaging and Interactive Teaching Strategies

All students, especially those with ADHD, need and deserve to be educated through an educational process which is motivating, enjoyable, enriching, creative and attractive. Such lessons enable students to engage, be actively involved and interact with their peers thus enhancing learning. In order for teachers to enable all students to learn they should take into account student's differences with respect to their intelligence, preferred learning styles, interests, psychological characteristics and social conditions. In this context teachers;

- Need to have a large repertoire of strategies and approaches including active learning, cooperative learning strategies and differentiated lessons and tasks.
- Need to structure programmes of work and lessons to meet the differentiated needs of all students.
- Need to engage all students actively in the educational process.

All students;

- Need to be given daily opportunities to work in a variety of formats. Such as individually, with partners, small groups and large group.
- Need to be instructed through a combination of methods involving multi-sensory strategies, student choice and experimental learning.

In order for teachers to meet the all these needs, teachers need to be trained about instructional strategies and to be skilled in their use.

The classroom environment is very important to influence how students function. There are many environmental adjustments that can be undertaken that facilitate good classroom management and prevents problems in the classroom. The needs of the student's depend on their developmental stage and the variety of their learning styles. Which instructional approach you are going to use should be carefully considered while constructing and shaping the classroom environment throughout lighting, furniture, layout, visual displays, colour schemes, background music, areas for relaxation and opportunities for blocking out distractions during work whilst seated.

Classroom Size and Space

- The classroom should not be crowded. (Guidance on class sizes varies between EU countries).
- The number of students in a class should be reduced in accordance with the students' age. This is especially true for inclusive classrooms in mainstream schools where more attention should be paid to the issue. The importance of having the small number of students in the classroom can be understood better when you remember that that children with ADHD are, emotionally, almost 2 years behind their peers. (Barkley, 2006)
- The classroom should have enough space to provide opportunities for various instructional activities.
- There should not be unnecessary furniture or objects in the classroom so providing students with more free space.

Classroom Layout

- There is no perfect classroom layout which is appropriate for every kind of lesson or teaching style. Classroom layouts should be changed in accordance with the type of instruction.
    - Straight rows during exams, lectures or working with a partner.
    - U shaped / horseshoe desk formation, during discussions, presentations and role playing.
    - During group work cluster tables together and stagger the rows; groups of four tables in the centre with groups of two tables on the periphery.
- During group work having a table layout that means the student with ADHD is opposite another student, face to face, may not be helpful as the ADHD student is easily distracted. Because of this, there should be careful consideration about where pupil with ADHD should sit, with whom and with how many pupils during group work. The student with ADHD should be placed in the group with the fewest

members, not more than 4 students. This group should be close to the teacher, away from other classroom distractions and areas of high movement and not to be in the centre of the classroom. *(See Chapter 5b, Cooperative Learning & ADHD)*

- If they are willing, group members, or those sitting next to the student with ADHD should be good role models. These students should be made aware of the social skills that need to be developed and reinforced with the student with ADHD. Supporting the student with ADHD in this way should be perceived as a privilege rather than an obligation.
- Seating arrangements should be predictable and should not be changed frequently. Before any change students, especially the student with ADHD, should be informed of the changes, in advance, by clear and short directions.
- The classroom layout should be such that the students and teacher can move around the classroom easily. There should not be any congestion points in the class.
    - The teacher should hand out materials promptly.
    - The teacher should be able to reach the student with ADHD with few steps, without disturbing other students.
    - The student should be able to move around the classroom easily without disturbing anyone else, when needed.
- There should not be any blind spots. All students should be able to see the board clearly.

Finding The Right Position for the Student with ADHD

- In a traditional seating format, it is usually recommended that students with ADHD have a seat near the teacher;
    - to easily see non-verbal / visual signals which are decided between the teacher and the student,
    - to reach them quickly,
    - to be away from visual or auditory distractions,
    - to be away from high traffic / movement areas,
    - to be surrounded by students who are focused and good role models.

Regardless of age, ADHD students usually have an attention span significantly shorter than that of their classmates. Because their periods of concentration are so brief, they frequently look up from their work and check on what's going on around them. If there is something interesting nearby, it captures their attention so that they never return to their work.

Claude was an extremely bright, extremely active first grader. He loved school; he loved people. He was curious about everything. First-grade work should not have been terribly difficult for Claude. His learning disability was mild, he was getting excellent therapy, he was on stimulant medication, and he very much wanted to learn.

But in the classroom, the youngster never got his work done. He barely even got started on most of his schoolwork. "He's off in the clouds," his teacher complained.

"Staring off into space. He just won't get down to business. The boy doesn't even try."

The LD specialist spent a morning in the classroom observing Claude. Just as had been recommended, the boy was seated at the end of the front row next to the teacher's desk. Unfortunately, this location placed him beside an aquarium and a row of windows that provided a fabulous view of a busy playground.

Claude wasn't "off in the clouds." Every time his attention broke and he looked up, there was something fascinating going on in the fish tank or on the playground. It took several moves to find the right spot for this wide-eyed first-grader who found everything interesting. One place resulted in a neighbour who enjoyed fooling around with him. Another place was so close to the door that he kept watching the activity in the hall. Finally, when seated off to the side by a blank wall, with two studious little neighbours and no interesting animals or vistas nearby, Claude found his ideal location.
(www.ldonline.org/article/5924)

Providing Various Usage Options for Different Purposes

- Create different kinds of areas for different purposes by positioning furniture, shelves and cupboards.
- Use colourful bands or lines on the ground, on the carpet and on tables. This defines the borders between different areas.
- Have "office areas" or "study corrals" with seating options to be used as needed. These areas can be used by all students. In this way, students should not perceive these areas just for the students with special need or for punishment.
- Have privacy boards to place on tables while taking tests or when needed in order to block visual distractions.
- Have different kind of seats as alternatives. For instance, single desk options as opposed to two-person desks for those students who need more "buffer space" or working space.
- Provide an alternative desk, a second desk.
- Have informal areas in the classroom which are carpeted and may have soft cushions, especially for younger students.
- Keep carpet areas away from desks.
- Clearly define areas in the classroom.
- Be flexible and be prepared to change seating options to find the best combination for all students.
- Be aware of students' physical needs which may impact on learning such as thirst or the need to move around.
- Clearly define the rules and expectations for moving around the classroom and using different areas, when students can stand up, when they can drink or sharpening pencil, which areas can be used for which purpose.
- Provide opportunity to all students to use a defined quiet corner when they need.
- Allow students who can not sit for long to stand near their desk while working at certain times so long as they are still productively engaged in learning.
- Provide cushions for students have trouble sitting in their seat.
- Build in stretch breaks or exercise breaks after all the students have been sitting for any length of time.

Storing Materials

- Store materials in clearly labelled bins, shelves or tubs.
- Provide easy access to materials and independent learning activities.
- Provide some students with extra storage space.

Temperature and Light

- Personal preferences concerning room temperature vary widely. While some students fan themselves and complain of the heat, others seated nearby shiver. There is a limited temperature range within which the human brain functions well. When the classroom thermometer registers above 19ºC   (80 ºF), the mind becomes sleepy and sluggish; when the reading falls below 15 ºC (65ºF), discomfort disrupts serious thinking. Young students with ADHD seem especially susceptible to extremes of cold or heat. Consequently, the teacher's personal comfort level shouldn't dictate what's right for an entire classroom. Students need to be taught to adjust their clothing according to the temperature so they can remain clearheaded and alert.
- The amount of light in the work area can have a strong effect on concentration. Some students find that dim lighting makes them sleepy and sluggish, while bright light helps them stay alert. Others find that low light helps them feel calm and focused, while intense light makes them fidgety and nervous. Several studies have shown that poor readers and right brain thinkers tend to prefer dim light for study. As might be expected, many ADHD students find it easiest to learn in a room with low intensity lighting.
- Certain aromas can be used in the classroom. For example, lemon and mint' scents are known to increase one's alertness.

Auditory Characteristics of Classroom

- Reduce or minimize auditory distractions whenever possible. For example, noisy doors, buzzing lights or windows.
- If the room is not carpeted, insert pieces of old carpet on the tips of each chair leg to reduce the noise level.
- Use a listening post for books on tape, stories and music as appropriate.
- Experiment playing background music, instrumental music or environmental sounds, at different times of the day for various activities and purposes. Research suggest this creates calm, motivates and stimulates thinking.
- Allow students to use earphones to block out noise during work seated at desks, test-taking or when needed. The key points are to find out the right music for the student to enable them to focus on the subject and allow all students to experience it, not just for the student with special needs, if it helps concentration and productivity.
- Have designated quiet times during the day.
- Ring a bell or make a sound with a musical instrument to signal a change in activity.

Visual Characteristics of the Classroom

- Have a well organized and visually appealing classroom.
- Arrange the room for the maximum use of space.
- Display student's work.
- Reduce visual distractions such as unnecessary writings on the board.
- Reduce visual clutter and unnecessary visual overload such as pictures or writings on the walls which are no longer relevant to the topic being taught.
- Post all schedules, calendars and assignments on the wall for all to see.
- Display lists of rules and daily routines.
- Post visual prompts, models for students to work to or examples of appropriate behaviour.
- Use a minute timer to show students how much time they have to complete a task and for transition between activities.

- THE MAIN CHARACTERISTICS OF TEACHERS -

The Main Characteristics Needed by Teachers to Create an Appropriate Classroom Climate

Work with Your Heart and Soul

Teacher's willingness and commitment to teaching and their students is one of the key factors in creating a proper classroom climate and success for all students both socially and academically. Teacher's commitment and belief that it is their responsibility to reach and teach all students in the classroom drives the teacher to;
- be careful to identify the psychological and educational needs of students in order to make educational plans and differentiate them to maximise the students' learning.
- be supportive and encouraging.
- be willing to spend extra time and effort in order to help students' succeed.
- review and redesign the lesson plans, activities and tasks as needed.

Knowledge and Understanding of ADHD

The teacher who knows that students with ADHD have a problem that is psychological and neurobiological in nature and have learned instructional strategies to deal with ADHD can provide differentiated work and modifications needed by the student. These teachers can create a classroom environment in which the difficult behaviours are managed. *(See Chapter 2, Let's Learn ADHD & Chapter 4.c, Myths and Facts)*

The teacher who "…………" can help all students including one with ADHD to have success.

Loves children	Loves their job	Is happy / smiles
Has a sense of humour	Is open minded	Is open to learning and change
Has problem solving skills	Has social skills	Respects the differences in others

LET'S ASK OURSELVES

● Do my students enjoy coming to my class and do they feel comfortable?

● Do all my students see themselves as valuable participants of the class?

● Can students develop their personalities and social skills in my classroom?

● Do I feel happy to be in my classroom?

If you have any negative responses for any one of these questions, please try to find a few things to make the answer positive.

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CHAPTER 6

BEHAVIOUR MANAGEMENT AND ADHD

Introduction

By Kate Morrison Dip. Counselling,
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Preparing the teacher, classroom support worker and the classroom environment.
It is important to ensure that the teaching and classroom support staff are emotionally and mentally ready to take on the sometimes challenging behaviour of learners who suffer from ADHD.

It is the teaching and support staff who form the safe environment that is necessary for the learner and young people with ADHD and other behavioural difficulties to flourish within the education system.

A safe environment is:

1. Seating will depend on the type of lesson you have planned. Placing groups around tables for ease of interaction is suitable for cooperative small-group work, but not for individual work. For whole-class discussion, learners are best seated around a big table, or at small tables facing the teacher. The way the desks are laid out can help with behaviour and safety within the classroom. For example, when the teacher is teaching, desks should be facing the teacher so all learners can see and be seen by the teacher.
2. That the teaching and support staff have confidence in their ability to be able to manage the very challenging behaviours that these learners present.
3. Managing stress levels is very important and it is worth spending time during the academic year to check out stress levels of teaching and support staff.
4. Teaching and classroom support staff should have training in active listening so that through non verbal and verbal communication each learner will be heard and understood, to enable the teaching and support staff to meet their individual needs.
5. Encouraging a learner's confidence and self esteem is important in helping the learner to take responsibility for their actions and behaviour.
6. Sometimes we can see learner's poor behaviour as a personal attack. This is very unlikely and is more likely that the learner is experimenting to learn how to behave appropriately, by testing the boundaries in a safe environment.

7. Many learners are testing boundaries to see how far they may be able to go. To stay in control with such groups we need to give all learners a structure, routine and firm boundaries.
8. Consistency is important when working with ADHD sufferers, always try and use the same classroom. Any changes to posters, pictures on the classroom walls etc should be organised with the learners so that they know what to expect when they enter the classroom. (No surprises).
9. Keep any change to a minimum, whether this is the, agreed timetable for the day, the classroom being used or the teaching and support staff learners will be working with on that day.
10. Prepare learners for any future changes as soon as possible. The unknown can be frightening and can be especially so for ADHD sufferers and other learners with behavioural difficulties and can affect their ability to manage incidents that arise during their school/college day.
11. The colour and décor of the classroom, school or college is painted is believed to affect the emotions or mood of learners. For example:
   - RED – action, confidence, courage, vitality.
   - PINK – love, beauty.
   - GOLD – wealth, wisdom.
   - YELLOW – joy, happiness, intellect, energy.
   - GREEN – life, nature, wellbeing.
   - BLUE – youth, peace, truth, spirituality.
   - WHITE – purity, cleanliness.
   - BLACK – death, earth, stability.
   - ORANGE – increases appetite.

Advertising and marketing companies make use of these colours to promote their businesses and sell their products. Website lhp://Ezinearticles.com

CLASSROOM MANAGEMENT TECHNIQUES

***Extracts from Atkinson House School, Information Pack on ADHD
Devised by Richard McGlashan, Head Teacher,
Atkinson House School, Northumberland, UK***

CLASSROOM MANAGEMENT

- Sit distractible learners near to the teacher.
- Give clear instructions about permitted movement around the classroom.
- Avoid sitting learners with ADHD near windows or busy thoroughfares to minimise auditory or visual distractions.
- Always make sure that, when greeting learners at the classroom door, on arrival, you engage with firm eye contact.
- When speaking to learners, individually, avoid staring into the distance or looking at the ground. This avoidance can be seen as a submissive gesture.
- Spend time with colleagues trying to identify the triggers to any of the disruptive behaviour. Then identify how the behaviour manifested itself. If possible look for what the pay-off might be for the learner who started the disturbance. If we can reflect on all challenging behaviour in this way you are more likely to develop successful strategies that can be incorporated into an individual management plan.
- Classroom support staff should be in a position, within the classroom, to identify all of the above and due to their personal knowledge of the learners under their care offer some insightful suggestions for their individual management plan.
- When involved in a disciplinary interaction with a learner get into their line of sight and establish good eye contact to help re-enforce what you are saying.
- Set aside a quiet area away from distractions.
- Sit learners with ADHD next to learners who are good role models.
- When talking to the whole class stand in a position where the teacher can see the whole group. This is sometimes called the teacher's power position.
- Provide the learners with a plan or outline of the lesson to aid understanding.
- Vary the pace and presentation to keep the learners interested.
- Also some learners have bad behaviour so deeply ingrained in them, very often as a survival strategy in their lives outside school/college that many are not even aware of the fact that they are behaving badly.
- Intersperse long periods of inactivity with some brain gym exercises. (Hand eye coordination).
- Use multi sensory presentations to take account of learning styles. For example teach some topics using Powerpoint presentations or interactive whiteboard technology.
- Set short achievable targets and reward regularly for work achieved.
- Ask learners to repeat the instructions or tell you what they plan to do to make sure they have understood the concept.

- Provide co-operative learning activities with each learner having individual responsibility for their section of work.
- Establish classroom rules and routines, making sure they are known, understood and practised. Keep them simple. (Classroom rules work better if all learners contribute and then they can be displayed on the classroom wall for future reference). For consistency the same rules should apply to the whole school.
- Pay particular attention to beginnings, middles and ends of lessons.
- Give warnings prior to the end of a lesson so learners have time to finish their work or tidy things sway.
- Use a time to encourage periods of independent working.
- Praise specific behaviours.
- Move around the room to maximise low level working.
- Make goals short and measurable.

Here is an example of some of the strategies currently being used with diagnosed ADHD sufferers within the classrooms at Northumberland College, Ashington, Northumberland UK that have produced positive results.

1. Firstly it is important to remember that a Learner with ADHD finds it very difficult to 'ACCEPT CHANGE'. If you are aware that a teacher would not be in on a certain day it is important to explain this several times to the learner, along with who will be taking their place. You would need to do this on a daily basis, right up until you actually enter the classroom. If this is a last minute change you should sit with the learner in a quiet area and explain the situation slowly, ensuring that they take the information in. An ADHD learner requires as much detailed information as possible. The same would also apply to timetable and classroom changes.
2. If you have the lesson plan in advance you can explain the topic and what they would be expected to do.
3. People with ADHD are much better at practical tasks opposed to sessions that involve a lot of listening and writing.
4. During a class, if the learner becomes upset for some reason, nine times out of ten this is because they are finding it difficult to concentrate on the topic, they will raise their voice and distract others; this may involve shouting, banging the table or blatantly refusing to do any work. One strategy is to give them a few minutes 'time out', taking the learner out of the classroom and asking about the difficulty they are having and explaining how they are distracting and upsetting others around them. It is always important to give them time to reflect on what you have said.
5. It should be noted, however, that sometimes the learner may try this tactic as a way of getting out of certain classes that they dislike. Monitor and review regularly.
6. Another method would be to explain that they will be kept back in class during breaks or lunch until the work is completed.
7. Mathematical problems can sometimes be solved by adapting the teaching method, i.e. using coloured discs, dice, coins or buttons, making the lesson as practical as possible

8. Keeping the learner focused can be very difficult, one of the only real solutions to this is constant prompting and rewarding with praise when a task is completed.
9. Using a diary to inform Parents/Guardians/carers of any current issues such as homework or mood swings that have developed during the day. This also makes the learner aware that issues are being reported back to their family.
10. Tackle only one target at a time

The following section, below, is quoted from <u>www.addiss.co.uk</u> (ADHD Information and Support) site. Click "teacher information" tab to access this information

Educational Support:
The following techniques can help learners with ADHD in a classroom setting:

General planning:
- Tape recorder – ask the learner to dictate assignments into a tape recorder, as an alternative to writing them.
- State the materials that will be needed in advance – identify all the materials that the learner will need during the lesson, for example, pencil, notebook and ruler. An additional approach to applying this principle is to have extra work supplies available in case the learner forgets his/her own.
- Allow for 'escape valve' outlets – permit learner with ADHD to leave the class for a moment – to run an errand perhaps – to help them settle down. Suggestions for facilitating an escape valve include allowing the learner to stand while completing work or establishing alternative work stations for a restless learner.
- Signpost milestones / give advance warning in lessons – announce 5 or 10 minutes before the end of the lesson how much time remains.

Lesson planning
- Simplify instructions – break tasks down into small bite-size chunks for completion. Provide instructions for the first stage, let the learner complete this step, and then provide instructions for the next stage of the task.
- Provide follow-up directions – after giving directions to the class as a whole, provide additional oral directions for a learner with ADHD, or repeat the instructions in writing on the chalkboard. Additional suggestions to help apply the principle is to use picture clues or collective responses to provide these directions.
- Practice sequencing activities – for older learner, provide supervised opportunities to break down a long assignment into a sequence of short interrelated activities.
- Highlight key points – highlight key words in the instructions on worksheets to help the learner with ADHD focus on the directions.
- Proofread compositions – provide the learner with a list of items to check against when proofreading his or her own work.

Specific lessons:

- Make the most of your materials i.e. graph paper – ask the learners to use graph paper to help organise columns when doing math.
- Take time to re-read problems – encourage the learner to read a math word problem twice before beginning to compute the answer.
- Use real-life examples i.e. counting/money – set up a class store where learner can practice adding up 'groceries' and calculating costs and change.
- Using storyboards for comprehension – ask the learner to make story boards that illustrate the sequence of main events in a story.
- Combine learning with movement – with spelling lessons the learner could jump rope while spelling words out loud.

CLUES FOR DEALING WITH CHALLENGING BEHAVIOUR

Extracts from "Strategies to Encourage Better Behaviour. Working with a Difficult Learner. A Guide for Teachers."

By Christine Merrell and Peter Tymms (www.cemcentre.org)

It is important to remember that it is sometimes difficult for inattentive, impulsive or hyperactive learner to think ahead. Therefore knowing that completing a task or piece of class work is going to be an end in itself and getting the satisfaction through that is itself useful. Having the motivation coming from other people is necessary and therefore frequent praise and frequent rewards are valuable. The types and times of rewards, or the reverse of rewards (punishments), have to be carefully thought through.

Rewards:
1. The simplest reward is praise. Teachers praise is always important for learner and of course for other members of staff. But for learners who have behavioural problems it is particularly valuable in keeping them motivated and on task. Simply to say 'that's good' or 'it's great to see you working on your project' can be reward enough. Praise should only be given for behaviour that you want to encourage.
2. To reinforce desirable behaviour try a reward such as stars on a chart, or in the learner's work book, or maybe some tokens that can be exchanged later for a treat. It might be that if you collect 5 stars then this could trigger some other reward. Or put marbles into a jar and when a certain number is reached a new reward is earned.

These are concrete positive rewards and an external reminder to the learner of how well he or she is doing. There is a danger to this approach and there is a worry that the intrinsic motivation of especially young learner might be undermined. This cannot happen if the learner is not motivated already and it is unlikely to happen with verbal praise from the teaching and support staff. But one always wants to be careful that the rewards given are appropriate. Of course it is possible if one has something like marbles in a jar to actually take them out. This is termed a response-cost tactic and can be particularly effective. Undesirable behaviour can be followed by tokens being taken back and then the learner or learner has to earn them again before the final reward is given.

How to Decide On the Appropriate Re-inforcers:
Try these four methods:

- ask the learner what s/he really likes;

- ask the parent or carer of the learner what s/he really likes;

- do a preference check (try out many rewards before arriving at a choice), this could be actually tried out or arrived at via debate;

- Apply the Premack Principle, "first you work then you play" or "you do what I want you to do before you are allowed to do what you want to do". Use part of the learner's behaviour that occurs frequently to reinforce another less frequently occurring behaviour.

Praise:

Many of our learners have been subjected to highly negative environments and have received little in the area of positive verbal reinforcement or even a show of affection. One of the most potent tools at our disposal is the use of praise and encouragement.

Modelling:

There are occasions when we are trying to modify a learner's behaviour where effective use of the peer group can be made. In these circumstances we would be rewarding the desirable behaviour being exhibited by another learner and drawing it to the attention of our "subject" learner. This is known as modelling and is at its most effective when the "model" learner is of higher status within the peer group.

CLUES FOR DEALING WITH CHALLENGING BEHAVIOUR

Extracts from "Atkinson House School. Classroom Management – Effective Techniques"

Devised by Richard McGlashan, Head Teacher, and the staff team, Atkinson House School, Northumberland, UK

Shaping:
Many learners come to Atkinson House School with behaviour patterns so entrenched that it may be impossible to achieve a total change in behaviour "in one go". In designing a behavioural strategy for a learner it is important that the target behaviour is achievable otherwise disillusionment sets in and the learner gives up. Shaping is a means whereby we can set up approximations to the final desired behaviour or even academic attainment that we want. For example a learner may call out 20 times in a lesson. A target of 15 times may be set in the first instance which may be easily attainable. The teacher would then reduce, progressively, until the desired total for that behaviour is achieved. This could be a zero total. Similarly attainment targets can be set for work cards completed in a lesson. The initial target may be for 5 cards with a bonus for every extra card beyond the 5th. card completed. This would gradually be increased until the learner was achieving their potential. In the process they will have received a great deal of praise and built up their self-esteem and confidence.

Self Specification of Contingencies:
An example of this is; if sitting in their seats is low probability behaviour and using the computer is high probability behaviour, then by allowing the learner to use the computer after a set time sitting in their seat will increase the probability of their in-seat behaviour being evident. Involving the learner in the specification of behaviour is likely to increase its success.

The Importance of Feedback:
When you employ the approaches described above, it is important that the learners should know why rewards are being given and how their behaviour is improving or deteriorating.

Procedures to Decrease Inappropriate Behaviour.

Extinction:
Extinction means removing the conditions that maintain or increase the likelihood that certain behaviour will occur. In other words, it means withholding a reward which has been given in the past, often teacher attention, so that the behaviour which the

reward has been helping to maintain will tend to die out, that is be extinguished. Returning to the neighbour example, if your next door neighbour ceases to smile back at you each morning, you will tend not to smile at them on subsequent mornings. That is, your response of smiling will be extinguished.

If removal of attention is to be used as an extinguisher it must be done consistently. It is no good ignoring a temper tantrum or an aggressive display one day and then finding it intolerable the next.

If you want to extinguish a specific behaviour, you must make sure that it is never rewarded when it occurs. This will involve a whole school approach and close liaison with colleagues. A good idea may be to reward other behaviour which stops the learner carrying out the undesirable behaviour.

Ignoring:
As mentioned above, some behaviour can be extinguished by ignoring as long as the appropriate behaviours are praised and reinforced. Ignoring can result in an escalation of the inappropriate behaviour due to the learner's failure to gain attention. However, ignoring can be a very effective tool.

Non Verbal Signals:
This is where the teacher indicates to the learner that the behaviour they are about to initiate is unacceptable and should stop. This can be communicated by a whole range of signals. Some examples :

- Making prolonged eye contact.

- Frowning or raised eyebrows.

- Shaking of the head.

- Giving the "thumbs down" sign.

Proximity Controls:

This is where the teacher, or learner, helps control behaviour by physical closeness. For example:

- The teacher moves nearer the learner,

- The learner moves nearer to the member of staff,

- The teacher places their hands on the learner's shoulders.

Separation:
Sometimes learners who are disrupting the work or play of other learners need to be separated from their peer group for short periods of time as well as planned ignoring. Separation usually happens within the classroom setting. The learner is separated from their peers by being placed in a work area where the stimulus of other learners is not available. For separation to be effective the other learners in the class must be taught to ignore the learner who is being separated.

Time Out:

Time out is a very effective means of decreasing behaviours. Time out is where a specific room or a designated area within the classroom is for "Time Out". Time out is used to remove a learner from a situation that they can not cope with. The teacher may send a learner to "Time Out". Equally a learner may take themselves to "Time Out". Usually, if the learner returns from "Time Out" quickly and continues in class appropriately there is no consequence to having been in "Time Out".

Self Esteem:

This is the total evaluation that the learner makes of themselves, and the **degree of respect with which the learner has for themselves.** If self image is low and incompatible with the learners concept of their ideal self then self esteem inevitably suffers. Research has shown that learners who have warm, affectionate relationships with parents or carers have higher self esteem even when the learner is relatively inadequate at specific skills. High self esteem provides a learner with the confidence to attempt things without a great fear of failure. A learner with a low self esteem finds it difficult to try new activities or concepts. The learner protects what little self esteem they have and continues to behave in a manner consistent with their low view of themselves. If a learner feels rejected and views themselves as unacceptable and valueless the learner does not regard disapproval as a reaction to his behaviour but as a rejection of him or herself Staff must constantly offer unambiguous messages of acceptance and that the learner is accepted and has value.

- A learner's self concept is, therefore, important and has an overall effect on the way the learner receives and perceives others. In managing learner behaviour the following considerations need to be made in relation to self concept.
- If a learner has a poor self concept, if they think negatively about themselves, then there are fewer constraints on that learner's behaviour. The learner believes that staff expects him or her to behave badly and the learner cares little how staff values them because they do not value themselves.
- If a learner has a poor self concept and is reluctant to face the possibility of failure, then they will avoid situations which might expose them to further failure. E.g. to try something new or attempting a known activity but in a different way.
- An improved self concept will give a learner the security to try and learn something new. They may fail but they are secure enough not to feel failure.
- An improved picture of self might reduce inappropriate behaviour. When a learner thinks more highly of themselves, then old patterns of behaviour become incompatible with the learner's improved view of self. When a learner really thinks that they have value then change can occur.

Issues Concerning The Development Of Learner's Self Concept.

Labelling:
A most important aspect of working with E.B.D. (emotional, behavioural disorder) learners is their perception of themselves. By labelling a learner, for example, as: "dull", "thick" or "
aggressive," staff is then primed to expect certain behaviours. If the learner knows that you have a label for them then they will live up to your expectation of them. Never tell a learner that they are "bad", "thick" or "mad". Remember you are displeased with the learner's behaviour or attitude; you are not displeased with them. You still value them but not the behaviour that they are currently displaying. To maintain the learner's self esteem explain that you disapprove of the specific behaviour or actions but you do not reject or disapprove of them.

Support:
The learner with low self esteem needs support, encouragement and protection.
Some strategies that staff might use are:
- removing the threat of failure, "Don't worry if you find this difficult".
- take some of the blame for failure, "I'm sorry I should of explained that better".
- Offering help early and whilst the learner is still on task. Intervene before they have started to struggle or fail.

Positive Reinforcement:
Non-verbal interactions are a very powerful part of a teacher's behavioural repertoire. A pat on the back, a "thumbs up", a smile or a wink can convey to a learner that you have recognised them as an individual and that you are taking an interest in them. A brief non-verbal interaction offered fairly frequently, when a learner is on task, can keep a learner on task and give a very positive signal.

Talking To Learners in Trouble:
Sometimes we have to talk to learners about unacceptable behaviour. It is important to make sure that these contacts allow the learner to maintain self respect so that self-esteem can be improved. When we ask the learner questions do we give the learner a genuine chance to answer? Do we listen to their point of view? Do we cheek that the learner really understands what has been discussed and the implications that may stem from that discussion? Has the member of staff and the learner:

- Agreed on a definition of the problem, the issue may not be a problem for the learner!

- Agreed a strategy to alleviate, or address the problem.

- Arranged to meet again to review the situation and to see if the strategies have worked?

Avoid The Negative Trap:
All staff who work with learners share a responsibility for their progress and sometimes we find that, as more and more things go wrong for a learner, our interactions with them become very negative. We fall into the trap of only speaking about the trouble the learner is in. Our only contact with the learner is to try and

correct problems and intervene when there is trouble. When the learner is going through a 'good patch" we tend to ignore the learner because we are interacting with another learner who is going through a "bad patch". Try to remember two things

- Even when the learner is going through a "bad patch" remember to refer to and make a significant comment about something, however small, that is going well.

    - When the learner is going through a "good patch" remember to find the time to comment on how well the learner is doing. Continual recognition and praise for appropriate behaviour and actions will prolong those behaviours. That is to everyone's benefit.

Adult Perception:
If staff have good self concept, then it is likely that the learners in their care will too. If staff has high expectations of themselves then the learners will see this as a positive role model. If the adult has a low expectation of the learners in their care then the learners will fulfill that expectation.

Removal from Class:
From time to time it will be appropriate to ask learners to leave a class because of the detrimental effect their behaviour is having on the other learners. Learners who come to school prepared to work and engage with school should not loose out to disaffected, disruptive learners.

RATIONAL:
- The vast majority of learners are in control of their behaviour
- We are a school
- Most learners are prepared to learn and be taught
- Acceptable mainstream behaviour is what is acceptable at Atkinson House School

LEARNERS SHOULD BE ASKED TO LEAVE THE CLASSROOM IF THEY -
1 Refuse to work / engage in the lesson even if NOT disturbing the rest of the learners. This will occur after :
    ♦ Staff effort to engage learner
    ♦ Verbal warnings from staff
    ♦ Planned staff ignoring (length of time is staff judgement from their knowledge of the learner)

2 Disrupt other learners / preventing them from working.
    This will occur after:
    ♦ Staff effort to engage learner
    ♦ Verbal warnings from staff
    ♦ Planned staff ignoring (length of time is staff judgement from their knowledge of the learner)

3   Inappropriate language / verbal abuse / verbal bullying.
    This will occur after:
    - 1 verbal warning
    - 2nd warning and this means that behaviour IEP points are not earned
    - 3rd warning means that the learner will be required to leave the classroom (No physical contact to achieve this)
    - IF LEARNER REFUSES TO LEAVE, involve additional staff either SMT or staff with positive rapport with the learner.
    - IF LEARNER STILL REFUSES TO LEAVE, removal from classroom by staff.
    - **NOTE –** staff will record the inappropriate language used and a letter will be sent to parents / carers stating the exact words used by the learner.

4   Physical confrontation, actual or threatened, to staff or learners
    - Immediate removal

Mild reprimands:
Mild reprimands have been shown to be effective if a learner is not attending to a particular task, and it has also been shown that they can improve the work of learner and learners. However, it is important that any reprimand is given exactly at the time when the incident happens. Delay such as when a learner is told off an hour after something that happened is far less effective. It is also important to explain what it is the learner is being asked to do. In a class discussion for example instead of saying, '**stop shouting out the answers',** it would be better to say, '**please put your hand up if you know the answer'.**
If we think of a learner who has a poor working memory, a long reprimand is not likely to be valuable since it will simply be forgotten as the new bit of the reprimand goes on. So a short quick reprimand and then straight on to the next thing at the time of the incident is the best way. We must also recognise that giving a learner attention ca, in itself be seen as a reward. This opens up a trap for the unwary. If bad behaviour draws attention from the teacher it can reinforce the bad behaviour!

Time out:
It has been shown that when there is inappropriate behaviour, a good tactic is simply to take the learner or learner away from the circumstance for some period of time. If a learner or learner is impulsive or reacts inappropriately simply stop the learner and say, 'No, sit down here'. Later 'We are going to move on to something else now'. In the classroom this can sometimes be difficult because the teacher has to work with the other learner and a quiet space may not be available at that time. It can also be difficult and dangerous to leave a class of young learner unsupervised while dealing with a frustrated individual. A compromise might simply be to allow a learner or learner to change the activity if he or she becomes frustrated and return to the original task at a later date.

Productive physical movement:
Learners who are hyperactive really find it very difficult to sit still and some people have suggested that in our evolution it makes sense for some learner to be naturally physically active and even hyperactive. Perhaps school is not such a good place for those learner and we can make it a happier place by capitalising on their need to be moving around.

INDIVIDUALISED BEHAVIOUR MANAGEMENT

Strategies used by teaching and support staff at Northumberland College

Northumberland College, Ashington, Northumberland UK

It might be worth while looking at productive physical movement in the classroom for learner with ADHD. Learner who are hyperactive find it very difficult to sit still in class and it makes sense for those learner to be given as part of their individual behaviour plan for the teacher to capitalise on the learner's need to move around. Some suggestions might be:

1. Delivering messages to other classrooms.
2. Sharpening pencils.
3. Helping the teaching and support staff by handing out papers or items for the next. topic.
4. Watering plants.
5. Standing instead of sitting at their desk when completing some of the class work.

The learner and young people need clear enforceable guidelines for good behaviour and a clear understanding of any consequences that will be imposed by the school. This might be an individual behavioural modification plan.

When working with young learner with ADHD, keep the following points in mind:

Extracts from http://www.adhd-made-simple.com

1. Make directions clear and short. Repeat if necessary.
2. Make each task specific…in other words; instead of giving several directions at once, split the directions into smaller steps.
3. Give reminders often, coaxing the learner to finish. It is important to complete projects once started to help the learner learn to sequence beginning to end.
4. Use interesting materials; hands-on activities, visual and auditory aids.
5. Reduce classroom clutter. Take down bulletin boards, objects hanging around. To a learner with ADHD it is mind-boggling and confusing!
6. Help the learner organise and keep their work area free of clutter. A defined space for everything helps.
7. Cut down noise and movement in the room. Take a look at who the learner is seated next to.
8. Talk less and use short sentences (this actually is beneficial to ALL learner).
9. Plan activities well. Think in advance what you will do when s/he gets fidgety, can't sit still, and can't follow the lesson. Have plan B in place BEFORE the problem occurs.
10. Reward correct responses. The learner with ADHD is only too aware of his/her failures.

11. Be specific with praise. Instead of, "You did a good job," say, "I see you followed the instructions perfectly! You put all the words in the right place."
12. Let a restless learner move; stand at the desk. Don't take away recess as punishment. Not ever!

13. Mix active and quiet periods. Give the ADHD learner extra time to transition between them. Give warnings as you come to an end of an active period so the learner has time to start readjusting their thinking.
14. Prepare a learner for any change. KEEP a routine! These learner aren't well structured and a lot of their difficulties come from confusion, not knowing what's coming next, and anxiety or over stimulation because of it.
15. Avoid spills/messes by using smaller containers.
16. Set aside a "thinking space" where the learner can go when feeling out of control. This is not punishment. It is simply a place to calm.
17. Keep a notebook between home and school. I call this "both ends against the middle!"
18. Help the ADHD learner develop his/her OWN strategies for when their behaviour gets out of control, by asking, "what can you do when…"
19. Make up games to preoccupy the learner during transitions, such as being as quiet as a mouse while passing the principal's office.
20. Recognize that the learner is going to have "difficult days." Don't take them personally. Help the learner over those hurdles, or help him/her recognize them before they are coming.
21. Differentiate the learner from the behaviour. See the learner first, then the disorder.
22. Help the learner use strengths in a group. If you know the learner is good at math, call on him to give answers in math.
23. Point out the positives. Don't forget to tell him/her when their behaviour is good.
24. Involve parents in what you do. You can't believe how much it helps to know you're not alone dealing with this. Rapport with parents will help minimize difficulty in the learner.

Extract from http://www.learnerdevelopmentinfo.com

Learners whose attention seems to wander or who never seem to "be with" the rest of the class might be helped by the following suggestions.

1. Pause and create suspense by looking around before asking questions.
2. Signal that someone is going to have to answer a question about what is being said.
3. Use the learner's name in a question or in the material being covered.

4. Ask a simple question (not even related to the topic at hand) to a learner whose attention is beginning to wander.
5. Develop a private running joke between you and the learner that can be invoked to re-involve you with the learner.
6. Stand close to an inattentive learner and touch him or her on the shoulder as you are teaching.
7. Walk around the classroom as the lesson is progressing and tap the place in the learner's book that is currently being read or discussed.
8. Decrease the length of assignments or lessons.
9. Alternate physical and mental activities.
10. Increase the novelty of lessons by using films, tapes, flash cards, or small group work or by having a learner call on others.
11. Incorporate the learner's interests into a lesson plan.
12. Structure in some guided daydreaming time.
13. Give simple, concrete instructions, once.
14. Investigate the use of simple mechanical devices that indicate attention versus inattention.
15. Teach learner self monitoring strategies.
16. Use a soft voice to give direction.
17. Employ peers or older learners or volunteer parents as tutors.

Strategies for the Cognitively Impulsive Younger Learner

Some learners have difficulty staying with the task at hand. Their verbalizations seem irrelevant and their performance indicates that they are not thinking reflectively about what they are doing. Some possible ideas to try out in this situation include the following.

1. Provide as much positive attention and recognition as possible.
2. Clarify the social rules and external demands of the classroom.
3. Establish a cue between teacher and learner.
4. Spend personal discussion times with these learners emphasizing the similarities between the teacher and learner.
5. Get in a habit of pausing 10 to 16 seconds before answering.
6. Probe irrelevant responses for possible connections to the question.
7. Have learner repeat questions before answering.
8. Choose a learner to be the "question keeper."
9. Using a well known story, have the class orally recite it as a chain story.
10. When introducing a new topic in any academic area, have the learner generate questions about it before providing them with much information.
11. Distinguish between reality and fantasy by telling stories with a mix of fact and fiction and asking the learner to critique them.
12. Assign a written project that is to contain elements that are "true," "could happen but didn't," and "pretend, can't happen."
13. Do not confront lying by making learner admit they have been untruthful.
14. Play attention and listening games.
15. Remove un-needed stimulation from the classroom environment.
16. Keep assignments short.
17. Communicate the value of accuracy over speed.
18. Evaluate your own tempo as teacher.

19. Using the wall clock, tell learner how long they are to work on an assignment.
20. Require that learner keep a file of their completed work.
21. Teach learner self talk.
22. Encourage planning by frequently using lists, calendars, charts, pictures, and finished products in the classroom.

Behaviour Management Strategies in the Classroom setting used with positive results at Northumberland FE College, Ashington, Northumberland UK.

- As a member of staff working with a learner with ADHD it is important to be firm, fair and consistent in attitude.
- To explain what is expected of the learner and what they will achieve at the end of the session.
- It is important to praise the learner's effort and work in the class by giving positive reinforcement no matter how small the improvement or progress.
- To avoid distracting others it is best to divide the whole class into small groups so that the learner with ADHD is working in a small group with a support worker also working with that group – keeping the learner focussed on the task.
- During the lesson break up the work up into small 'chunk' size activities/tasks – at the end ask the learner for feedback.
- Ask the learner with ADHD to do small tasks/errands for the tutor as part of the session allowing him to move around to avoid boredom, fidgeting and the learner becoming agitated.
- Discuss with the learner any difficulties they may have in class and allow them 'time out' of class if they feel things are becoming difficult. Discuss with learner what 'time out' involves i.e. usually 5-10mins outside of the classroom with a member of staff where they can calm down allowing them to return calmly to class.

DEVELOPING SOCIAL SKILLS

Good Practice for Activities and Games

By Dr Matteo Sclafani and Dr Rosalia Rinaldi (Ce.d.Ap. Centro per i disturbi dell'apprendimento) – AIFA (Associazione Italiana Famiglie ADHD) - Dr Antonio La Monica (Associazione Accademia Psicologia Applicata), Palermo, Sicily, Italy

The development and strengthening of the ADHD child's social abilities is a crucial aspect of the treatment because of the difficulty that the child has in establishing positive relationships with their peers. This happens due to their impulsiveness and impetuosity with which they enter into their interpersonal relationships. When planning a social ability training program we must take into account the child's age period (KDG, primary or secondary school), their characteristics and the nature of their specific social relationship problems. For children already of school age the appropriate approach would be an individualized programme with the focus on teaching about developing social skills. The characteristics of the programme we should concentrate on are: cooperation, turn taking, initiating conversations with others, introducing oneself into a conversation in an appropriate manner and learning how to integrate into a group. For each proposed activity homework tasks will be provided.

The right use of "modelling" techniques develops the following abilities ……..
- Self-teaching (in four phases) that aims to switch from the external dialogue that makes the child think out-loud to an internal one where the child asks themselves these questions "What is the problem?", "What can I do?" ,"Do what works?", "How did it go?".

- Recognition of the non-verbal aspects of communication: carry out role play activities covering the situations raised by either the child or the teacher. Throughout these activities the participants are encouraged to notice the emotional aspects of the non-verbal communication and to understand how someone feels just by looking at their facial expressions and body language.

- Recognition of emotions: the child is asked about the importance of recognizing **his own emotions**. This is done by means of showing them images of people displaying different emotional states. The child is then encouraged to try to understand with which people would it be better to interact and at what moment, depending on the emotional state they are displaying. For example, is it appropriate to ask that person to play with them, or for help with their homework, or with another personal need. Throughout the activity there will be discussions and comparisons through which the child will reflect on their responses and will start to understand when it is better to interact with other people and in what way. In this activity the role play situations presented to the child will be overacted and exaggerated or made more subtle according to the level of comprehension of the child.

- How to join the group: The teacher will introduce the concept of "joining the group" and will then illustrate appropriate and inappropriate ways of doing this. A chosen child will then attempt to join a group formed by other children plus the teacher who will each be displaying a different emotional state. The child will have to recognize the different moods exhibited by the members of the group and then judge who would be the best person to approach in order to join the group. This activity is useful to stimulate the experimentation of functional communication, the frustration caused by rejection and how to manage it, as well as the pleasure of knowing how to enter a group and be accepted.

  Before going ahead the child must proceed to review out loud the four points of self teaching mentioned above.

- Knowing how to make demands and how to refuse them: evidencing the following rights: *to be treated with respect and in a fair manner, to let others know your wishes and preferences*, the teacher encourages the child to express their opinion in respect of others. Then there will be a recreation of various situations in which the child tests their ability to express their demands. There will be an evaluation of their performance in every situation and they will repeat each one in which they don't achieve the expected result. Finally the teacher will provide the child with feedback and with a **modellamento** (specific educational strategies).

REFERENCES
M. Di Pietro, E. Bassi e G. Filoramo (2001), *L'alunno iperattivo in classe*, Trento, Ed. Erickson

Check out **http://www.ldalearning.com** for toys and games to use in the classroom to stimulate sufferers of ADHD.

Social Support:
- Research suggests that 50% of learner with ADHD have poor peer relations. These learners are less likely to make friends, are often rejected by their peers, and might be more likely to experience anxiety, behavioural and mood disorders, substance abuse and delinquency as teenagers. You might like to try:
- Social skills classes – encourage learner to role-play and model different solutions to common social problems. Discuss how to resolve social conflicts.
- Identify social cues – encourage the learner to follow social cues: are other learners really listening to him / her? Are others laughing at the wrong times? By learning to notice the reactions of others, learners learn to monitor their own behaviour.
- Encourage learners to join extra curricular and social activities. Non-academic activities can help a learner discover his or her strengths and build self esteem.
- It is important to set clear goals for the learner, and be realistic in your expectations. By using cooperative teaching techniques, it will help the learner to become a helper / expert and encourage the learner to work in collaboration with others.

Before & After School Activities:
- A learner with ADHD responds well to routines. Work with the learner's parents/caregivers to help include any before of after school activities into a written routine and display the schedule where the learner can see.
- Look to include the learner in activities that require individual coaching, such as tennis, wrestling or diving.
- After school activities involving movement are good options for example sports like running or swimming are popular with learner with ADHD.
- Try to avoid sports that have a lot of 'down time' such as baseball where the learner may end up in a position that doesn't see much action.
- Activities which require a lot of divided attention can be difficult for a learner with ADHD as they require focus on many things at once. With team games for example, look to break down the activity and coach the sport in a step by step approach.

EXTRACT FROM WWW.SPECIALED.ABOUT.COM

Below are two examples of charts that can be used to monitor a learner's positive behaviour during one week.

AN EXAMPLE OF A CHART WORKING TOWARDS POSITIVE BEHAVIOUR

Name:

Date:

Goal or Rule (List below)	☺	☹
	AM PM	
	AM PM	
	AM PM	
	AM PM	
	AM PM	

Totals for the Day: _____   _____

Learner Comment:_____

http://specialed.about.com

TOWARDS POSITIVE BEHAVIOUR

Name:

Week:

Goal(s)

Day of the Week	Number of Times My Goal Was Met (Use Tally)	Teacher Signature or Initials	Parent Signature or Initials
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Below is an example of an individual behaviour management plan used by East Hartford School. East Hartford School is a school for children aged 4 – 11 years old with a statement of, 'special educational needs' and is based in Cramlington, Northumberland, UK. www.easthartford.northumberland.sch.uk

BEHAVIOUR MANAGEMENT PLAN					
PUPIL	Kyle XXXXXXXXX	DATE OF BIRTH	XX / YY / 1999	YEAR GROUP	Y
START DATE	12th September 2007	REVIEW / END DATE	19th December 2007		

POSITIVE BEHAVIOURS	1) Responds to praise and rewards.	
	2) Is polite, helpful and humorous.	
	3) Enjoys being chosen for special jobs.	
	4) Has formed positive relationships with adults and pupils in the classroom.	
	5) Enjoys adult attention and communicates well, on his terms, in small group situations.	

PRESENTING PROBLEMS	1) XXX finds it difficult to trust adults he does not work with on a daily basis, and sometimes those he knows.
	2) XXX can refuse to pay attention and acknowledge adult instructions.
	3) XXX does not like to be challenged on his views or to be wrong.
	4) XXX can be easily embarrassed.
	5) XXX can be violent when upset. This is often caused by him not getting his own way, or being asked to do something he does not want to do.

STRATEGIES / APPROACHES	1) Verbal praise for following class rules and teacher instruction every time it occurs.
	2) 5 minutes "free time" can be earned at the end of every lesson where 0 inappropriate incidents have occurred.
	3) A "Good Behaviour" certificate, to take home, at the end of every day when there has been 4 or fewer incidents of inappropriate behaviour.
	4) Every refusal to follow instruction will accrue 3 minutes detention at break or lunchtime. This will be logged.
	5) When other inappropriate behaviour occurs 3 calm warnings to stop will be used. If ineffective then XXX will be removed from class. These will be logged.

SUCCESS CRITERIA	1) XXX's positive behaviours continue.
	2) By scrutiny of the log for refusal to comply behaviour. Such behaviour to reduce by 60% over the duration of this plan.
	3) By scrutiny of the log of other inappropriate behaviours. Such behaviours to reduce by 50% over the duration of this plan.

Plan Generated By			
	Mrs XXXXXXXXXXX and Ms	DATE	

Disclaimer :

CHAPTER 7

REACHING PUPILS THROUGH THEIR LEARNING STYLES AND MULTIPLE INTELLIGENCES – DIFFERENTIATED TEACHING

A review by: Viorica Alexandru
(Family Learning Expert, Centre Educatia 2000+, Bucharest, Romania)

Chapter 7 is designed to acquaint teacher's with different teaching methods and strategies in order to engage all pupils in classroom activities in general and students with ADHD in particular.

Section 7 a is about multiple intelligence and emotional intelligence leading to individualised learning and teaching. Differentiated instruction / teaching building on various learning styles of the students with ADHD will be approached thereafter.

A. The Theory of Multiple Intelligence

The Theory of Multiple Intelligences was formulated by Howard Gardner in 1983. It was published as a book under the title "Frames of Mind - The Theory of Multiple Intelligences" and it started by questioning the education system which was predominantly focused on logical - mathematical and linguistic capabilities.

Ten years later Gardner published another book "Multiple Intelligences - The Theory in Practice", adding elements of experimental research which contributed in turning discussions about multiple intelligences from a questionable concept into school practice per se. Afterwards, his theory spread and the success of the "multiple intelligences" in schools was a surprise even to him.

In 2008, on the occasion of the 25th anniversary of the publication of his "Frames of Mind : the Theory of Multiple Intelligences"[1] , Gardner had his first public intervention on such myths and misunderstandings generated by the MIT as :
- confusing an intelligence with a learning style;
- asserting that all children are strong in at least one intelligence.

He also emphasized that a serious application of MIT (Multiple Intelligence Theory) ideas in the future should entail at least two components:

In : [1] http://www.howardgardner.com/MI/mi.html : Public Speech at the 25th anniversary of the publication of Howard Gardner's Frames of Mind: The Theory of Multiple Intelligences, 15 April 2008

- An attempt to individualise education as much as possible. The advent of personal computers should make this goal much easier to attain.
- A commitment to convey important ideas and concepts in a number of different formats. "This activation of multiple intelligences holds promise of reaching many more students and also demonstrating what it means to understand a topic thoroughly and deeply".

The Concept of Multiple Intelligence

A pluralist vision on the intellect became important when it was noticed that IQ tests did not identify outstanding chess players, violinists or successful athletes.

"Are outstanding chess players, violinists or athletes intelligent?" If the answer is YES, why do IQ tests not identify them as such? If the answer is NO, the next question that pops up is "What makes them perform successfully in their field of activity"? A pluralist vision on the intellect is the only way out of the dilemma.

The human cognitive capacity can be better described by a set of abilities, gifts and mental skills, which Gardner calls **intelligences.** Gardner considers that the individual is a *collection of intelligences.* An individual could simply have a low level of all intelligences, but could fall in place perfectly in a social or professional setting because of a specific combination of their intelligences.

Each intelligence initially builds on bio-psychological potential: some intelligences are better developed (promising) than others (risks). Intelligences are a biologically independent function of the cortical areas of the brain that control them[2]. Yet, at the level of the individual, they appear like a conglomerate.

The eight intelligences singled out by Gardner

Gardner singled out eight intelligences, as follows:
1. The verbal - linguistic intelligence which has to do with words, spoken or written. People with verbal - linguistic intelligence display a facility with words and languages. They are typically good at reading, writing, telling stories and memorizing words and dates. They tend to learn best by reading, taking notes, listening to lectures, and via discussion and debate. They are also frequently skilled at explaining, teaching and oration or persuasive speaking. Those with verbal - linguistic intelligence learn foreign languages very easily as they have high verbal memory and recall, and an ability to understand and manipulate syntax and structure;

2. The logical – mathematical intelligence is the capacity to operate with categories, models and relationships as well as to group, rank and interpret

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[2] Research on individuals with brain accidents show that function of the affected area, some faculties disappear while others are maintained.

data. This area has to do with logic, abstract thinking, inductive and deductive reasoning and numbers;

3. The spatial - visual intelligence has to do with vision and spatial judgment. People with strong visual - spatial intelligence are typically very good at visualizing and mentally manipulating objects. They have a strong visual memory and are often artistically inclined. Those with visual - spatial intelligence also generally have a very good sense of direction and may also have very good hand-eye coordination, although this is normally seen as a characteristic of the bodily - kinaesthetic intelligence;

4. The musical intelligence, i.e. problem solving and product development capacity based on rhythm, music and hearing; those who are strongest in this may learn best via lectures. In addition, they will often use songs or rhythms to learn and memorize information and may work best with music playing in the background;

5. The bodily / kinaesthetic intelligence is the capacity to solve problems and develop products by movement; in this category, people are generally good at physical activities such as sports or dance and often prefer activities which utilize movement. They may enjoy acting or performing, and in general they are good at building and making things. They often learn best by physically doing something, rather than reading or hearing about it. Those with strong bodily - kinaesthetic intelligence seem to use what might be termed muscle memory. For example, they remember things through their body, rather than through words (verbal memory) or images (visual memory). They have got skills and dexterity for fine motor movements required for dancing, athletics, surgery, crafts and computer engineering;

6. The interpersonal intelligence has to do with interactions with others. People in this category are usually extroverts and are characterized by their sensitivity to others' moods, feelings, temperaments and motivations, and their ability to cooperate in order to work as part of a group. They communicate effectively and empathize easily with others and may be either leaders or followers. They typically learn best by working with others and often enjoy discussion and debate;

7. Intrapersonal intelligence – the capacity to solve problems and develop products by self awareness. This area has to do with introspection and self-evaluative capacities. Those who are strongest in this intelligence are typically introverts and prefer to work alone. They are usually highly self-aware and capable of understanding their own emotions, goals and motivations. They often have an affinity for thought-based pursuits such as philosophy. They learn best when allowed to concentrate on the subject by themselves. There is often a high level of perfectionism associated with this intelligence.

8. The naturalistic intelligence - has to do with nature, nurturing and relating information to one's natural surroundings. This is the eighth and newest of the intelligences, added to the theory in 1999, and is not as widely accepted as the original seven. Those with this intelligence are said to have greater

sensitivity to nature and their place within it, the ability to nurture and grow things, and greater ease in caring for, taming and interacting with animals. "Naturalists" learn best when the subject involves collecting and analyzing things, or is closely related to something prominent in nature; they also don't enjoy learning unfamiliar or seemingly useless subjects with little or no connection to nature. It is advised that naturalistic learners would learn more through being outside or in a kinaesthetic way.

The experimental and moral intelligences are the last for discussion, but Gardner calls the attention of enthusiasts to the fact that they are not yet sufficiently proven in theory or in practice.

Application in schools and intelligence profiles

Gardner's plea is for "apprenticeship" with a "mentor" which contextualizes the learning process, builds on strong interpersonal relations and on the individual intelligence profile. He also stands for individualized schooling as the most effective in maximising individual resources.

Mention should be made that the intelligence profile cannot be identified by applying a test. Repeated observation of the child's behaviour is necessary to see which activities are most comfortable for them, which expression codes are more frequent and which ones they avoid.

Howard Gardner's Multiple Intelligences[3]
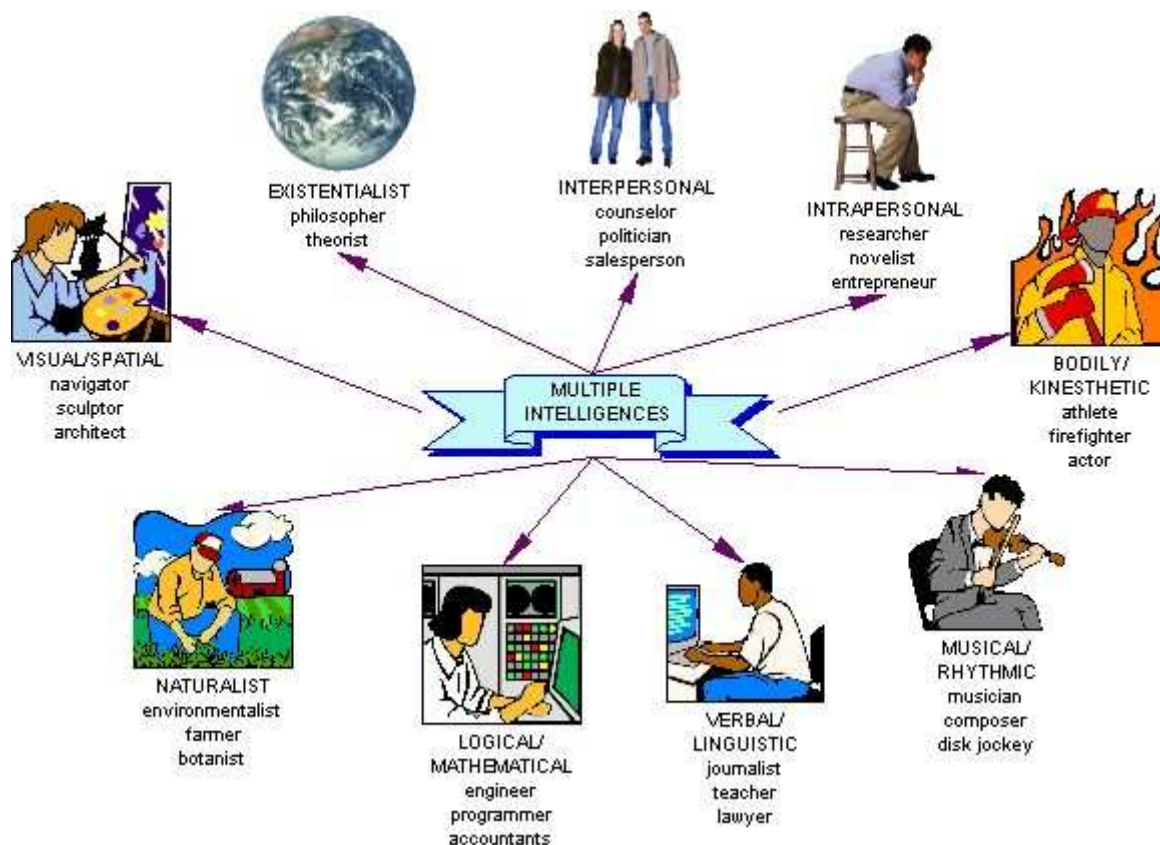
B. The Emotional Intelligence

In 1995, ten years after the first mention of the concept "Emotional Intelligence" (EI)[4], Daniel Goleman published his best seller "Emotional Intelligence" which was questioning the IQ as a measure of success and was proposing "a new way of thinking about the ingredients of life success".[5]

After another ten years his Social Emotional Learning building on EI proved worldwide that "helping children improve their self-awareness and confidence, manage their disturbing emotions and impulses, and increase their empathy pays off not just in improved behaviour but in measurable academic achievement"[6].

The Emotional Competences Model of Daniel Goleman is widely known and builds on the idea that emotional competencies are not innate talents. They are learned capabilities that must be worked on and developed to achieve outstanding

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[3] University of Michigan , Department of Psychology - http://sitemaker.umich.edu/356.martin/home

[4] Wayne Payne's doctoral thesis, *A study of emotion: Developing emotional intelligence* from 1985

[5] http://www.danielgoleman.info/blog/topics/emotional-intelligence/ - Emotional Intelligence

[6] http://www.danielgoleman.info/blog/topics/social-emotional-learning/ - Building Academic Success on Social Emotional Intelligence.

performances. Individuals are born with a general emotional intelligence that determines their potential for learning emotional competences. There are five constructs to the Goleman's Model and include:

1. **Self-awareness** -- knowing your emotions, recognizing feelings as they occur, and discriminating between them
2. **Self management** -- handling feelings so they're relevant to the current situation and you react appropriately
3. **Self-motivation** -- "gathering up" your feelings and directing yourself towards a goal, despite self-doubt, inertia, and impulsiveness
4. **Empathy** -- recognizing feelings in others and tuning into their verbal and nonverbal cues
5. **Managing relationships** -- handling interpersonal interaction, conflict resolution, and negotiations

EI and the learning to learn skills

Research in brain-based learning suggests that emotional health is fundamental to effective learning. According to a report from the US National Center for Clinical Infant Programs, 1995, the most critical element for a student's success in school is an understanding of how to learn. The key ingredients for this understanding are:

- Confidence
- Curiosity
- Intentionality
- Self-control
- Relatedness
- Capacity to communicate
- Ability to cooperate

Academic Intelligence vs Emotional Intelligence

Psychologists are of the opinion that IQ cannot be improved by education. Both psychologists and educationalists consider that some crucial emotional competences can be learnt and developed in school, if we care to teach them.

- Academic intelligence has almost nothing to do with the emotional life. There are examples of people with a high IQ that are not capable of managing their personal life. IQ is known to account for 20% of the success in life, at best. 80% is accounted for by a variety of factors from social status to chance.

- Academic intelligence does not empower the individual to face life's challenges. Although academic intelligence is not a guarantee for economic prosperity, social status or happiness, our education is focused on academic abilities.

- Emotional intelligence abilities have a tremendous effect on an individual's destiny, but they are not taught in schools.

- Emotionally capable individuals who are aware of and manage their emotions effectively, who can perceive and face the emotions of others have an advantage in their professional and everyday life. *Life competence* is what the school could teach children.

- Emotional intelligence deficiencies may generate a whole range of risks from depression to violence, from academic and professional failure to drug addiction.

Aristotle said that the problem is not in the emotions themselves but in the intelligence of the individuals to express emotions as adequately as possible.

Emotional Intelligence and Actions in Life

Goleman says that "...in navigating our lives, it is our fears and envies, our rages and depressions, our worries and anxieties that steer us day to day. Even the most academically brilliant among us are vulnerable to being undone by unruly emotions. The price we pay for emotional literacy is in failed marriages and troubled families, in stunted social and work lives, in deteriorating physical health and mental anguish and, as a society, in tragedies such as killings..."

Emotions involved in the success of an action can be:
1. Initiating emotions : optimism, self respect, relaxation;
2. driving emotions : ambition, determination, anticipation;
3. restraining emotions : integrity, pessimism, fear, lack of self respect. Including integrity here would appear to be inadequate, but for instance, the coherence of the personal identity conscience with self respect would prevent an individual from learning to steal.

About Emotional Education

Emotional education is a meta - process of reflection on the learning process. It is less about learning and more about what does the learner do with that specific learning.

Emotional earning builds on 5 basic principles :
1. Individuals are capable, valuable and responsible and need to be treated as such in order to give them a chance to develop;
2. Learning is a cooperative process: teacher - student, student - student. To make it happen, networked, relations need to be developed in the class. Relations should build on reciprocal emotional understanding;
3. A process depends on the way a product is made; the way a learning process takes place influences the outcome;
4. Individuals have got a positive potential for all human activities ;
5. The potential of an individual can be assessed by the framework of policies, programmes and processes they develop with a purpose to achieve development.

Emotions based learning offers the paradigm by which emotional and academic intelligences lean from one another. Creating an adequate learning environment is

crucial for the students to experience learning as a pre - requisite for problem solving in life.

Learning Styles

To start with, we need to emphasize that:

- Multiple Intelligences are not learning styles;
- Learning Style is simply how each individual learns;
- once the intelligence profile of a student is established, the learning style and teaching strategy can be identified;
- Both the MIT and Emotional Intelligence models suggest an individualized educational process.

http://add.about.com/od/childrenandteens/a/learningstyles.htm

Learning Styles of Children with ADHD

Multiple Intelligence Theory and the Emotional Intelligence concept help individualise the teaching styles according to the capacity of the individual to acquire different types of information, process and perform in the living environment based on the style.

Just as people differ so do their learning styles. Consequently, this is a critical fact to remember when it comes to helping any student learn. Regardless of the age of the learner, whoever is instructing them, their needs should be attuned to the natural, preferred way that he or she masters a new activity, their preferred learning style.

Generally, most experts give credence to three specific learning styles – auditory, visual, and kinaesthetic. Though most individuals use an amalgamation of each (rather than only using one or two styles), there is typically one that holds a stronger appeal for each person.

Teacher's observation alone cannot identify a student's preferred learning style. The Learning Style Instrument is an invaluable tool used to identify student's preferences. This comprehensive instrument measures all 21 elements and has been proven statistically reliable and valid. Many of the 21 elements are not observable to the naked eye. The instruments are divided into 3 categories for students: (K-2), (3 &4), and (5-12).

Most children use all of their senses for learning, but favour one sense over the others. "Visual learners" prefer reading or observing. "Auditory learners" do best with talking and listening. "Tactile / kinaesthetic learners" benefit most from a hands - on approach.

Good teachers choose instructional / teaching methods to exploit each child's strengths. You can do the same with your child at home by tuning in to the ways they learn best.

Visual Learners

How to Spot Them: Visual learners tend to think in "pictures". As spatial learners, they

need to take notes when learning something new; if they simply hear a lesson, there is a good chance that their retention will be low.

How to Teach Them to Read: Because visual learners use their eyes so heavily, they need to be able to see something (such as a picture), not simply hear how to complete a task. If you have this kind of child, they may memorise words as a whole rather than learning phonetically how to put sounds together.

Helpful Tips: About 33 - 40% of all learners fall into this category. Usually, they like to sit in the front row where they can "read" the teacher's body language as he or she speaks

If your child is a visual learner:

- Have them type up class notes or homework in typefaces of varying style, colour and size.

- Use flash cards, drawings, and diagrams to help them study for a test.

- Ask the teacher to provide homework assignments in writing. At home, make a written list of instructions, schedules and routines.

- Introduce Scrabble, crossword puzzles, anagrams and other word games.

Auditory Learners

How to Spot Them: Auditory learners tend to think in terms of sounds. These are the students who only have to hear something once; even if they haven't taken notes, they will remember what was said.

How to Teach Them to Read: Auditory learners do well when taught how to read phonetically, using organised linear patterns, as their thinking is very sequential in nature. But they may have trouble if asked to complete exclusively visual tasks.

Helpful Tips: Although a great many classrooms are set up in an auditory manner, only about 10 - 25% of all learners could be labelled as auditory.

If your child is an auditory learner:

- Have them read study materials into a cassette recorder as if they were a disc jockey or sports announcer. This will hold their interest when they review them for a test.

- Help them recite multiplication tables and other facts to the rhythm of a favourite song.

- Allow them to study with a partner or a few classmates.

- Look for the audio versions of books they're reading in class or for pleasure. Your child may be eligible to borrow recorded textbooks from Recording for the Blind & Dyslexic (rfbd.org) for a modest annual membership fee — or to get non-textbook recordings from the National Library Service at no cost

(loc.gov/nls).

Kinaesthetic Learners

How to Spot Them: Kinaesthetic learners tend to be hands - on. If a kinaesthetic person is asked to describe the word "fluff", he or she will probably talk about what "fluff" (such as the down of a baby chick) feels like, not what the word sounds or looks like.

How to Teach Them to Read: Because kinaesthetic learners have always to be "doing" (rather than hearing or seeing), blocks or other easily manipulated objects and physical aids are suggested during reading classes or sessions. These tactile students work best in an atmosphere where they can dance, move and play while exploring how to read.

Helpful Tips: Approximately 42 - 50% of all learners are classified as primarily "kinaesthetic". Ironically, most teachers are not trained in many methods to instruct these learners. Thus, some children who are actually kinaesthetic learners may be mislabelled as having ADD or ADHD

If your child is a tactile / kinaesthetic learner:

- Provide blocks, jelly beans, or playing cards to use to compute math problems; give Scrabble pieces or alphabet cereal to spell words.

- Create hands-on learning experiences — nature hikes, science experiments, and so on.

- Have them act out scenes from history or literature.

- Explore various materials and techniques for assignments; a collage, diorama, or clay construction.

http://www.addidudemag.com/adhd/article/4023.html the Fall 2008 issue of *ADDitude*
http://www.kidsandreading.co.uk/different-learning-styles.html excellent

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ADHD & COOPERATIVE LEARNING

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THE PLANNED STRUCTURE OF THE LESSON DETERMINES THE TYPE OF SOCIAL INTERACTION AMONGST STUDENTS

All kinds of instructional activities take place in a social context which also develops social relations among students in different ways. In every classroom, instructional activities are aimed at accomplishing goals and are conducted under a goal structure. A learning goal is a desired future state of demonstrating competence or mastery in the subject area being studied. The way of achieving the goal specifies the ways in which the student will interact with each other and the teacher to achieve that goal. Instructional activities can be classified under three headings in line with their goal structures. They are **(I) individualistic, (II) competitive, (III) and cooperative** (Johnson & Johnson, 1999).

Individualistic instructional (teaching) practices are characterized by shaping social relations among students in a way which has **no social inter-dependence**. In these situations, any student's achievement or failure has no positive or negative impact on any other student's achievement or failure. Students do not cooperate or compete with each other while they are learning with this kind of instruction / lesson. Traditional exams are good examples for individualistic learning situations. Typically characteristic of this kind of examination is that, all students are responsible for just their own performance, and nobody's grade affects other classmates' grades.

Competitive instructional (teaching) practices are characterized by shaping social relations among students with **negative social inter-dependence**. In these situations, a student, or group of students, can only be successful if another student, or group of students, fails. The competitive characteristic of instruction / the lesson might be planned by the teacher, or may be unintentional. Academic races and games which create losers and winners are examples of competitive instructional practices. As mentioned above, all kind of instructions define social relations in the class. For instance, even the technique of the teacher in how they respond to questions can shape social relations in different ways. If the teacher only allows a few students to answer questions then the rest of the class cannot have a chance to express their answers. In this context, one student answering a question is the reason another students' answer is lost, possibly affecting their self-esteem. That is why; competition is occurred in the class. An individualistic alternative to this competitive question / response technique can be using response cards as a whole class, by all students. In this technique, all students have their own response cards, and when the teacher asks a question, all students raise their cards together to show their response / answer to the teacher. When the teacher uses this technique, they provide an opportunity for all students to express their responses. In addition the teacher can understand how much of the topic is understood by the class by quickly checking the answers of several students from various ability levels.

Cooperative Learning (CL) practices is characterized by shaping social relations among students with **positive social inter-dependence** and with **individual accountability**. CL can only be seen in small-group work. These groups can consist of two to six pupils. Team members' success are relevant with each others'. Students learn together and learn from each other by face-to-face interaction among group members in CL methods. The teacher plans to create positive social interdependence among the group members and if they achieve it, all group members understand that "they sink or swim together". At this point, it should be highlighted that not all group-work leads to cooperative learning (e.g., traditional teamwork).

In the ideal classroom, all students would learn how to work cooperatively with others, compete for fun and enjoyment, and work autonomously. Although it is usually assumed that cooperation is the most important goal structure and questions and answers from the teacher is the one that should be used the majority of the time in learning situations, nevertheless there is no recommended combination of these three goal structures. The teacher decides which goal structure to implement within each lesson and which one will be used more frequently, according to their professional approach, educational objective and their students' characteristics. For example, if the teacher has a student with ADHD in their class, when they design lesson activities in a competitive manner, the teacher will certainly and frequently experience serious trouble mostly related to the difficulty in impulse control of the student with ADHD. In competitive situations these students can be more easily driven by their impulses such as anger and this brings about disagreements, conflicts and maybe fights. So it is better to avoid using competitive instructional strategies as much as possible in these classes and preferable to design lessons through individual and cooperative approaches.

WHY COOPERATIVE LEARNING?

Cooperative learning methods have some advantages for all students including the students have been identified "normal", "gifted", "bilingual", "at risk", "handicapped" or "with ADHD". Cooperative learning provides opportunities for achieving multiple educational goals related to academic achievement, development of social skills and personality simultaneously and to have a positive effect on students' beliefs, attitudes and values related to school, other students, studying and learning. CL methods requires all students to participate actively; welcome diversity or listen to an alternative point of view by perceiving them as a resource to learn from each other; operate and utilize social context to enhance active learning.

Researchers state that CL methods can increase the social acceptance of students with behavioural disabilities in class by creating an appropriate peer climate that promotes positive social interactions among students (Chang & Mao, 1999; Kennedy, Shukla & Fryxel, 1997) and by developing students' perspective taking skills. Cooperative learning experiences, compared with individualistic ones, promote more cross-handicapped interaction during instruction, more interpersonal attraction between handicapped and non-handicapped students, and higher achievement on the part of both handicapped and non-handicapped students (Johnson &Johnson, 1982). When students work together they can use each other as models and reward each other's behaviour and values.

The importance of cooperative small groups for students with ADHD may be (a) the greater opportunity for active participation, (b) more frequent and immediate feedback, and (c) greater student control over the pace of learning. Students with ADHD report that they enjoy participating and learning in small groups. Because children with ADHD are motivated to affiliate and learn with others, it is important to increase their successful contribution in these contexts rather than spending time and energy trying to get them to remain quiet and still (Zentall, 2006).

Beside all of the advantages of CL methods, teachers should be aware of some particular challenges that can be faced within group work especially while working with students with ADHD. The following may help in dealing with those challenges.

NOT ALL SMALL GROUP WORK LEADS TO COOPERATIVE LEARNING

Teachers' opinions about working in small groups are usually on the horns of a dilemma. On the one hand, they appreciate group work's positive effects on the development of social skills but on the other hand they usually underestimate its crucial effects related to achievement of academic goals and they generalize about some problems experienced in the traditional type of small group work through all group work including CL methods.

Teachers' complaints about working in small groups are based on their daily observations in the class. These are mostly focused on the unequal division of labour among group members and emphasized by the fact that certain students frequently accomplish all tasks in group work. Potential behaviour problems might occur while working in small groups with or without the student with ADHD:

1. Problems related to involvement :

    a. Passive non-involvement, or not participating, disengaging, and inattention.

    b. Active non-involvement, or off-task verbalization, leaving the group, interfering, or refusing to do one's part.

2. Problems related to social skills and interpersonal relations; inter-dependence of group members or doing the work alone, ignoring discussion or being uninvolved, domination or doing all the work, refusing help from others, bossing others in the group, bullying and not sharing materials or decisions.

It is true that only requiring students to work within small groups does not make the work group work and telling them to work kindly and cooperatively does not create the cooperation nor does it guarantee a sharing of responsibilities. In this case, there is group work which is not structured cooperatively. If the teacher experiences problems which are listed above they can check out how much the design of the task, the process and expected outcomes of group work need cooperation and how to plan ahead for possible problems.

At this point, characteristics of cooperative learning can be stressed. Cooperative learning is not a single instructional method but an educational approach. Numerous instructional methods (such as *STAD*- Robert Slavin and Colleagues; *Jigsaw* -Elliot Aronson and Colleagues; *Learning Together* -David Johnson & Roger Johnson; *Structural Approach* -Spencer Kagan; *Complex Instruction* - Elizabeth Cohen and Rachel Lotan; *Group Investigation* - Shlomo Sharan & Yael Sharan) have been designed in line with the approach but are not the same in terms of their theory, procedures and goals. Common and varying attributes among major cooperative learning methods are listed below by adapting from Brody and Davidson (1998). The following common attributes are also the requirements to make small group work cooperative.

THE LIST OF THE COMMON AND VARYING ATTRIBUTES AMONG MAJOR COOPERATIVE LEARNING METHODS *(Offered by Brody and Davidson, 1998)*

ATTRIBUTES COMMON TO ALL CL METHODS
1. All methods stress face-to-face interaction among group members.

2. Competition is avoided. Inter-group cooperation and mutual help is stressed and sometimes intra-group cooperation.

3. Small-group student interaction focuses on a learning activity which calls for interdependence in working together.

4. A common task or learning activity that is suitable for group work.

5. Individual accountability and responsibility for group work and for achieving the planned outcomes.

ATTRIBUTES THAT VARY BETWEEN MAJOR CL METHODS
1. Procedures by which students are organized into groups, (e.g., heterogeneous, random, student selected, common interest).

2. The value of and ways for structuring positive interdependence (e.g., goals, task, resources, roles, division of labour, or rewards).

3. The value of explicitly teaching group work skills: e.g., communication, relational (social) skills, group maintenance, and task skills.

4. The use of reflection, processing, or debriefing among students and / or between teacher and students on communication skills, academic skills, or group dynamics.

5. The value of classroom climate-setting through class-building, community building, or setting cooperative norms.

6. Attention to student status by the teacher (identifying competencies of low-status students and focusing peers' attention on those competencies).

7. The use of group structures for organizing the communication pattern within the group.

8. The question of group leadership, whether responsibilities are rotated among students, shared by structures or roles or not designated.

9. The teacher's role in different phases of the lesson, unit, or process.

10. Emphasis on the value of demonstrating equal participation by all students.

11. The importance of simultaneous interaction among students in pairs or small groups.

IMPLEMENTATION OF COOPERATIVE LEARNING METHODS IN INCLUSIVE CLASSROOMS WITH STUDENTS HAVING LEARNING & BEHAVIORAL DIFFICULTIES (INCLUDING STUDENTS WITH ADHD)
(The list adapted from Malmgren, 1998; Murphy, Grey, & Honan, 2005; Rief, 2005; Zentall, 2006)

✓ General classroom management must be ongoing. Changing a class over to group work does not resolve classroom management problems and may actually exacerbate some. Teachers must set ground rules and expectations, make them obvious to the students by explaining, modelling, role playing and demonstrating. Be sure to administer reinforcers frequently enough to be effective. Teachers should endeavour to ensure that all students have fun and feel successful.

✓ Establish signals to move into groups, to quickly get students' attention by ringing a bell or raising hands, to stop talking and work when students see the teacher raise their hand and other management systems before implementing any cooperative learning.

✓ Clearly explain the academic task and criteria for success.

✓ Be prepared to spend your time circulating throughout the room, observing and questioning students while they are working.

✓ Monitor, provide feedback, and reinforce students.

✓ Be prepared to intervene when necessary to improve a group's on-task work.

✓ Pre-plan instructional decisions about how to structure the groups; their size, roles, materials and room arrangement).

✓ At the outset generate written co-operative learning plans for each topic / lesson. Define, in a step-by-step manner how to implement essential elements in a practical way.

✓ Ensure basic elements of CL are included:

- Positive interdependence,

- Individual accountability,

- Face to face interaction,

- Interpersonal and small group skills,

- Evaluation of group work.

✓ Positive interdependence must exist, meaning that tasks and assessments should be designed in such a way that everyone has to contribute something for the group, as a whole, to be rewarded. This can be achieved by using any of the following:

- By structuring positive goal interdependence:

- By requiring one answer from the group: Randomly select or collect only one product that is signed by all (meaning that all contributed, can explain, and defend).

- By establishing a mastery level required for each member and provide a reward for success.

- Through regular celebrations of group efforts and success.

- By the division of labour – through allocating different roles to students that are necessary for group dynamics.

- By providing resources that must be shared.

✓ Group members must have individual accountability, meaning that each student should be held responsible for learning the content by the following:

- Award points to all group members based on the amount of improvement shown by each and then averaging these scores into a group grade. Students with lower scores usually show the greatest improvement.

- Hold everyone responsible for helpings others achieve.

- Require individual or peer-pair preparatory work before the cooperative group, which could include

  i. Listening to a tape,

  ii. Highlighting text to be read,

  iii. Previewing the vocabulary or parts of the material to be covered.

- Make each student's individual effort and contribution visible.

- Tell student's that their contributions are important to the group.

- Make an evaluation by group members before assessment by the teacher so that group members can target areas or skills in which they can help each other before the final teacher evaluation.

✓ The teacher must provide equal opportunities for success, meaning that students with mild disabilities should be able to contribute to the group's success in a way that does not cause them undue hardship.

✓ Care must be taken in creating the small groups. Groups should be academically heterogeneous, taking care to ensure that conflicting personalities don't cause unnecessary problems.

✓ Select suitable, work partners for target students.

- **For the students with ADHD:** Assign assertive peers to work with them. Identify peer models who are fast, active, loud and talkative. Children with ADHD realize they cannot behave like inactive students and may find these students too slow in a small-group context, which would increase their own

bossiness, off-task behaviour or interrupting responses. In contrast students with ADHD, but not their classmates, copy more active models.

- **For dominating students:** Other group members should be given more powerful roles.

- **For students with behavioural problems:** Appointing them to the role of monitoring the behaviour of others decreases negative interactions and rule breaking and increases positive behaviour in the monitors. Perhaps students with ADHD should monitor only positive behaviours, using a checklist such as in Table 2, below.

- **For students who need attention from peers or who become overly excited in groups:** Allow them to first learn the standards for and individually practice the roles of line leader, paper passer, peer tutor, or storyteller.

- **For students initially reluctant to participate:** Supportive peers would be good models and that a structured role should be assigned to them, such as material gatherer or recorder.

✓ Scheduling must be considered to ensure that students, especially those with disabilities, do not miss blocks of time that has been allocated for group work. Reaping the benefits of cooperative learning is difficult when a student is not present or when their participation is fragmented.

TABLE 2: Checklist of Students' Group Skills (Zentall, 2006)

Seen on These Dates	Behaviour Observed	Comments
	1. Disagreeing without anger or conflict.	
	2. Making decisions and helping lead the group forward.	
	3. Seeking and using help from others and helping others.	
	4. Giving positive responses to positive verbalization from peers.	
	5. Reinforcing or paraphrasing others' ideas.	
	6. Initiating ideas and solutions.	
	7. Making eye contact when speaking to others at least some of the time.	
	8. Listening and questioning *(Students with ADHD may experience difficulty formulating questions or waiting for a response and might need to be taught.)	
	9. Describing possible strategies and elaborating on their explanations can be difficult for students with ADHD.	
	10. Responding to negative verbalization from peers or ignoring responses from peers by politely repeating requests or input, as if everyone were hearing impaired. *(Students with disabilities were more often ignored when they requested help or attempted to make contributions in cooperative groups.)	

✓ The tasks assigned to the groups must be cooperative in nature and lend themselves well to group completion.

✓ Use tasks with less emphasis on verbal and written abilities and more emphasis on construction, observation or artistic skills such as multimedia, drama, experimental and field study activities.

✓ Use open-ended tasks with multiple correct solutions especially after students have developed initial group skills.

✓ Ensure students are initially taught co-operative learning social skills including listening, asking and answering questions, sharing ideas and information, taking turns, encouraging others, cooperating, trust building and responsibility taking by

using explanations, modelling, guided practices, role playing, teacher feedback and student assessment.

✓ Provide ongoing monitoring and reinforcement for the use of social skills.

✓ Provide bonus points to group members who help others use social skills more consistently. Tangible rewards or stickers might be necessary initially, but over time, emphasis should be placed on social reinforcement.

✓ Teach students to perform a number of roles by initially using a role model, such as leader, person responsible for resources, record keeper, spokesperson, runner, accuracy coach, facilitator, observer, summarizer, checker, elaboration seeker, initiator of positive statements, and demonstrator. Some teachers use laminated 'role cards' that contain a description of the role responsibilities and appropriate phrasing of verbal statements on the back of the card.

✓ Ensure the intervention is sufficiently long – failure to develop maturity, as a group, will lead to reduced effectiveness.

✓ Intervention needs to be sufficiently long. The group must be allowed to develop and mature.

The following should definitely NOT be done by teachers who wish to effectively implement cooperative leaning:

☒ Implementation of a co-operative learning lesson without including essential elements.

☒ Implementation of a co-operative learning lesson without a written plan of how to implement each element in a step-by-step format.

☒ Use a generic co-operative learning plan for all lessons.

☒ Implementation of a lesson without equipping student's with necessary co-operative learning social skills.

☒ Intervention and providing too much assistance. While monitoring is important, intervention alters group participation.

☒ Trying to change an assignment of the target student.

Cooperative learning group work creates new opportunities for all students to respond and practice new skills by allowing students to learn through interaction with their peers. In addition, teachers can improve their ability to individualize work for a wide range of students with varying abilities by focusing on a handful of groups instead of a myriad of individuals. Although obstacles to the positive functioning of cooperative learning groups in inclusive classrooms are plentiful, success is possible for teachers who implement the strategy with thoughtfulness and care.

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INSTRUCTIONAL STRATEGIES AND ADHD – META-COGNATIVE STRATEGIES

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Students with ADHD exhibit a reduced capability to exert self-control and self-regulation. This can sometimes result in devastating consequences to the student's academic and social lives. A crucial aspect can be observed in the student's difficulty to restrain their impulsivity and to put into practice meta-cognitive processes of self-control, often coming up with inadequate answers.

The student's problem derives from their inability to regulate their attention and concentration which are fundamental requirements in learning. The focus is now on the factors of self-control and self-regulation. Several studies conducted by Schunk and Zimmerman (1994) demonstrate that these aspects depend on an appropriate use of self-regulation strategies, an orientation towards having an aim of control, rather than performance, a monitoring and evaluation process and finally a good perception of self-efficiency. If the student follows these parameters they will switch from an external dialogue thought out loud where their behaviour is dictated by the external stimuli of a given situation to an internal dialogue in which they can impose their own method of acting or behaving. A cognitive-behavioural approach based on the internalization of the action method appears the most appropriate treatment. However, it is important not to miss out on the particular neuropsychological characteristics of every individual student and to personalize the treatment in accordance to this. During the training it is essential to simplify the proposed strategies as much as possible by communicating to the student in a plain and direct way to ease the process of acquisition of self-control in learning. It is also recommended that you make the student evaluate the efficiency of the outcome themselves.

A program based on the teaching of the meta-cognitive strategies will be formed in several phases:

- A problem-solving approach to help the student manage their impulses better in a social context and to assist them in understanding the nature of their social problems ("stop and think" – "consider the problem" – "contemplate all possibilities" – "choose and check the efficiency of the response").

- Use of behavioural techniques which reinforce the delivery of the right kind of response (token economy approaches) to maximize the motivation to come up with adequate / appropriate responses rather than random and accidental ones. The "token economy" technique is based on providing the student with tokens earned on the basis of the appropriateness of the answers given in response to the questions and explaining to them that a wrong, impulsive or

inadequate answer will incur a cost as well. When students have earned a certain number of tokens these can be exchanged for prizes or rewards.

- Application of the "modelling" technique to show them the behavioural patterns which indicate the desirable way for them to act in various situations and encourage them to reflect on their way of acting or behaving.

- Making use of "role-playing" exercises to help the student appreciate the point of view of someone else.

- Implementation of the social and emotional ability to reach a point where they can recognize and understand their emotions and those of others.

All of these phases will allow the student to acquire the appropriate meta-cognitive ability of self-control and hence raise the motivation and the sense of self-effectiveness when performing these acts of behaviour monitoring.

Applying these meta-cognitive strategies to their academic life means transferring the same cognitive approach to the school setting. This is in order to evaluate the efficiency and effectiveness of the attitudes and behaviours regarding their study habits.

In particular the children with ADHD are supported to:

a. Analyse their own study behaviour to single out the potential problems and their respective solutions;

b. Reflect on the benefits of using the most efficient study strategies such as underlining the most important parts of the text to help them understand and focus on the highlights, the underlining of keywords, the use of brief summaries to fix on the main argument;

c. Learn to assess the difficulty level of a given task;

d. Learn to assess the effectiveness of the responses they provide when performing the task.

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CHAPTER 8

ADHD & ATTENTION

Engaging, Maintaining and Regulating the Attention of the Student with ADHD Through Learning

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???

- How can I get the attention of the student with ADHD to learning activities?
- How can I encourage them to maintain their attention throughout the lesson?
- How can I actively engage them in learning activities?

1. Why the adjustments, modifications and effort to get and sustain the attention of the student with ADHD are necessary?

2. Which attention problems are experienced by the student with ADHD and what are the effects of those problems on their learning?

3. What are the educational principles and strategies behind getting the attention of the student to the learning activities in the classroom?

4. What are the educational principles and strategies to maintain the attention of the student to the learning activities in the classroom?

5. Which clues should be kept in mind about distractions?

All Students Benefit From The Strategies for Getting & Maintaining Attention Not Just The Student with ADHD

Achieving success in education is not possible without getting students to focus on instructions and to engage them actively in tasks and learning activities. The only way to reach the objectives of any training is through active participation and involvement of the students. Although getting and maintaining students' attention in classroom activities is a precondition of education, it is not always achieved easily. It is very important for all students, especially students with ADHD, to have a teacher who is careful to ensure this requirement is met. Regardless of their age, all students with ADHD (1) start a task with an attention span which is lower than required, and (2) have shorter attention span comparing with their peers. Therefore, while starting and maintaining a task students' with ADHD are relatively disadvantaged comparing with their peers.

There are three definite causes which highlight the necessity of strategies, adjustments and modifications for increasing the attention of the student with ADHD in the classroom. These are;

a.   The serious problems and troubles the student with ADHD experiences   in academic study are usually based on their inattentiveness. The student can not usually control their inattention, but it drives their behaviour. Student's attention spontaneously turns to colourful, shining, interesting objects and events. Instead of trying to change the neurological characteristic of inattention which even the student can not control by themselves try changing the settings and make adjustments and modifications in your teaching. Aim to create educational materials, tasks and activities which are more attractive for the student, which seem more realistic and bring about positive outcomes. Otherwise the student can not focus on learning activities and can not learn even though they have enough potential to do so.

b.   When the student is unable to pay attention during educational activities or instruction, or displays off task behaviour they, unsurprisingly, engage in activities which are usually non-academic, attractive and can easily get other students' attention. If the teacher does not make the necessary adjustments and modifications to the lesson to engage the student with ADHD the student with ADHD can easily be a distraction for all the students and their attention problem can become the problem for the whole class.

c.   All strategies, adjustments and modifications to increase the attention of the student with ADHD also benefit almost all the other students so improving everyone's learning through both preventing distractions and increasing their attention.

In this way all the effort by the teacher is valuable and important to all the students in the classroom, not just for those students with ADHD.

ADHD and Subtypes or Characteristics of (In)attention

SUBTYPES OR CHARACTERISTICS OF (IN)ATTENTION

In the literature on attention, there is a hierarchical order among the subtypes of attention from simple to complex. These are **(1) focused attention,** the most basic form of attention that involves the child's ability to respond to a specific visual or auditory stimulus or event without a shift in attention. **(2) Sustained attention,** this relates to the child's ability to maintain attention and persist on task until the task is completed. **(3) Selective attention,** this involves the child's ability to maintain a specific cognitive set in the face of competing distractions. **(4) Alternating attention,** this includes the idea of "mental flexibility", such as when there is a need to shift attention between tasks that access different modes of information processing or different response patterns. For example, the student who has to listen to the teacher and take notes alternately whilst retaining the information. **(5) Divided attention** this is the most complex form of attention that requires the ability to respond almost simultaneously to two or more tasks having different demands. This process may involve rapid alternation of attention or a somewhat automatic or almost unconscious processing and responsivity to one of the tasks. For example, a pilot in the cockpit responds to demands for action that comes from continually monitoring gauges, auditory sounds and multiple-response switches. (Flick, 1998).

Studies on ADHD and education usually emphasise that children and young people with ADHD frequently experience problems related to two subtypes of (in)attention. These are selective attention and sustained attention.

2.1. Selective Attention:

The human mind can not focus on all stimulation, visual, auditory or tactile in the environment. It filters the information to choose some to pay attention to and some to ignore. Studies on selective attention frequently emphasize the effects of factors such as age, arousal level of the individual and the characteristics of the stimulation on the selective attention. (Iris, 1997; Brodeur & Pond, 2001). Our daily lives are full of examples about how the mind selects which stimulation will be focused upon which will be not. Not all stimulations have an equal appeal for everyone. For example, one who waits to meet a short, slim and dark hair friend at an airport probably focuses on the people who are short, slim and dark haired more than others. If someone heard their name called out in a crowded place they probably recognize their name among all competing voices.

Selective attention can be differentiated according to both given conditions and individual differences. While some individuals have a tendency to focus on objects or events of high level / intense stimulus, some may have the opposite tendency. For example, autistic people or individuals having Asperger's Syndrome are highly sensitive to stimulation therefore they prefer to pay attention to objects of low intensity stimulus which are familiar or similar.

2.1.1. The Effects of Selective Attention Bias on ADHD Students with Academic Tasks

There are several studies which claim that the difficulties experienced by individual's with ADHD is related to "selective attention" and this may be the core of ADHD. (Goldstein & Goldstein, 1998) It is argued that students with ADHD may not have attention deficit, rather they have an attention bias or preference. They direct their attention to objects or events of high stimulus intensity because of their selective attention bias. For this reason they are more likely than their peers to pay attention to what is brighter, bigger, more colourful, louder, moving, novel or unfamiliar. They have trouble in selecting the stimuli which is most important to pay attention to.

All academic and social tasks, especially at the beginning, have selective attention requirements. (1) The student needs to direct their attention to relevant information. (2) The student needs to ignore irrelevant information. Relevant information includes teacher's instructions, peers' task-related talk, student's thoughts and feelings and specific attributes of tasks or context such as sequence, structure and organization. There is also much irrelevant information. These may be perceptual, what is seen or heard, ideas / thoughts or motor events.

It becomes more important to ignore all irrelevant information and to concentrate on academic tasks when the task (1) is new or unfamiliar; (2) complex; (3) or unstructured. Meanwhile, increased age and experience can reduce the selective attention requirements of tasks.

Maintaining attention on a task and reducing the response variability required to have an optimum amount of arousal which can be provided by the stimulants inherit within the task regarding the students' under-sensitivity to the stimulation.

2.2. Sustained Attention:

Sustained attention is described as the ability to maintain attention until the task is completed, to persist on task requirements. For example, while one is reading an article in a newspaper their attention span and intensity of concentration are related with the characteristics of their sustained attention.

2.2.1 Effects of Characteristics of Sustained Attention of Student with ADHD on Academic Tasks

Short attention span, at least based on specific laboratory measures about sustained attention, does not reflect the core deficit of children with ADHD. (Goldstein & Goldstein, 1998) However, it is usually emphasized that regardless of age, individuals with ADHD, lag behind their peers in their ability to maintain attention, even though the ability of sustain attention increases with age.

How individuals with ADHD compared with their peers;
- In kindergarten, more moving about activities and lower attention span.
- By the first years of primary school more restless, getting up or down, changing activities during homework or independent class work. Lower attention span during games or class work.
- At the secondary stage, are off task more especially during academic tasks.
- During adulthood, make more changes of vocation / job and residence / where they live.

In contrast with selective attention problems, sustained attention problems are usually increased by the end of the task. In this period more errors occurred and the performance of the student starts to decrease.

If the task is
- long,
- familiar,
- rote or repetitive,
- not active,
- not interested or meaningful for the student,
- not reinforced with a reward,
- not supervised by an adult,
- highly practiced by the student,
The student with ADHD will have greater difficulty in sustaining attention.

While performing these types of tasks students with ADHD have a tendency to look around, move about or rush through the task and make careless mistakes. They change the focus of their attention or are off task in order to find intrinsic or extrinsic stimulus. They get bored or change the subject of conversations more than their peers. In addition, latter repetitive performances are usually more messy or scattered than earlier performances. Furthermore, if there is no stimulation in the environment and the characteristic of the task is not appropriate to the needs of the student with ADHD the student can self-generate stimulation through inappropriate activity, disruptiveness or talking.

However, if the task
- is meaningful for the student,
- is about the subjects which the student is interested in,
- is novel and attractive,
- provides opportunities to the student to define their assignments according to their interests,
- provides opportunities for active engagement and responses,
In these circumstances the student with ADHD can sustain attention for a long period of time.

There is also much research which shows interesting findings focusing on learning and attention interaction in students with ADHD. Briefly some of those findings show:

- There is no difference in performance and maintaining attention between the students with ADHD and their peers during computerized learning activities.
- Although the students with ADHD are more challenging about the relevance of the tasks and have less motivation to do repetitive tasks compared with their peers they have a greater tendency to be curious and ask questions on the topic.
- Some students with ADHD quickly identify the interesting or humorous aspects of a topic. They can easily see the different aspects of the subject and can have intense interest in it. In this context the student's ability to tolerate chaos and ambiguity may define those characteristics.
- Students with ADHD, compared with their peers, tell more creative stories and prefer to play games which have no definite rules such as Lego. In this way they

can reshape those neutral objects into new forms and then they can increase their attention span.

- Gifted students with ADHD (IQ of +115), when compared with their peers having similar IQ scores use more nonverbal information to solve problems and have higher scores in creative thinking. Similarly, teachers and parents of children with ADHD show more creativity, too. (Zentall, 2006)

The main reason for difficulty in education for students with ADHD is the expectation to be successful in all subjects, all lessons and with all teachers. Some students' positive traits can be observed when the learning context is changed. When the student is given a particular project or provided with a flexible learning environment they surprise everyone with their excellent work.

Most of students with ADHD are more successful at college compared with primary or secondary school. The reason is mostly related with providing opportunities to make choices for studying and also related with achieving some qualifications. At this age students are able to make changes to their own learning process.

Principles and Strategies to Increase Selective Attention

Because the students with ADHD have neurological based difficulties in paying attention this should definite the kind of academic tasks that are provided for them. In spite of being attracted to stimuli that is more shinny, bigger or more colourful teachers should organize the learning process and practices taking regard of the characteristics of the students.

Three main principles should been considered as determinants to increase student's selective attention through the learning process. These are:

MAIN PRINCIPLES TO INCREASE SELECTIVE ATTENTION (Zentall, 2006)

1. **Highlighting** and emphasizing important and **relevant information**.
   - Structure of the topic or task, provide relevant details and cues.
2. **Eliminating non-relevant information**.
3. Providing **more opportunities to practice**.
   - Previewing the task, preparation activities.
   - More additional practices.
   - Extra time. (Accept slow progress or student's self- pacing)

STRATEGIES TO INCREASE SELECTIVE ATTENTION
(Adapted from Flick, 1998; Goldstein & Goldstein, 1998; Rief, 2003, 2005; Zentall, 2006)

1. Change the Visual Characteristics of Task
   → Clearly organize the structure, steps and main ideas of the topic or task
   → Provide materials such as graphics, flow charts, diagrams to highlight the structure, steps and main ideas
   → Provide instructional check lists or step by step job cards, especially for independent work.
   → Use prompt cards or posters to highlight expected behaviours especially for unfamiliar tasks or during transition times
   → Use visual reminders and cues such as pictures or cartoons
   → Use key words on the board or overhead projector during presentations
   → Illustrate. Draw pictures or cartoons, encourage yourself and your students to do so. It is not necessary to draw well. Simple and untalented drawings are better
   → Use coloured dry-erase pens on the board or coloured overhead pens and highlighting tape for transparencies to emphasize important information
   → Write or highlight with colour what you want to emphasize on materials

   → Make students highlight or write with colour what you want to emphasize on

materials
- → Provide colourful exam papers in colours which the students like
- → Use a flashlight or laser pointer to point to information
- → Use visual cues for a specific reason such as showing time is up;
    1. Flash the lights.
    2. Raising your hand. When students see this they stop working and talking then raise their hand. The teacher waits until all the students raise their hand and pay attention
- → Use a bit of theatrics, playfulness and props to get attention
- → Create anticipation and awake interest in the topic by showing a movie or a picture related to the upcoming lesson
- → Bring objects relevant to the upcoming lesson into the classroom. Awake curiosity and interest by hiding or covering these in a box or a bag and then let the students generate questions to find out what the items are
- → Use and let students use different colours for different math facts. For example, write or highlight + in red, - in blue. In this way, the student more easily realizes facts change.
- → Provide sufficient practice exercises which are similar in shape or type with those which will appear in the exam.
- → Remove or cover visual distractions. For example unnecessary information from the board.

2. Change the verbal characteristics of tasks
- → **Verbally emphasize the steps of a task by using numbers. For example, There are 3 things which you should remember 1……2…………3……….**
- → **Ask students to repeat verbal instructions.**
- → **Eliminate extraneous detail and description from instructions.**
- → **Use auditory signals to focus specific reasons such as indicating changes in activity.**
    1. **Ring bells.**
    2. **Use clap patterns.**
    3. **Play a fragment by any musical instrument**

- → **Use clear and definite verbal signals (1,2,3, eyes on me, this is important, …everybody)**
- → **Use your voice to get attention, making use of effective pauses, tune variation. Whispering also works.**
- → **Ask speculative and interesting questions, read a short passage or poem to arouse curiosity and generate discussion for an upcoming lesson.**
- → **Tell stories, especially personal ones. Regardless of their age all students like these.**

- → **Use emotional expressions while presenting important information. (Use exiting, curious or dramatic tones).**
- → **Use humour to get attention on a topic.**
- → **Ask and answer questions to clarify and reinforce understanding such as "How many questions will be answered?", "Which pages will be studied?" "Is there any information to explain how we will do it?" In this**

way, auditory learners can understand better what needs to be done.

3. Change The Setting
→ Use transparencies or an overhead projector. This equipment efficiently facilitates learning. Because they
  1. Highlight and frame important information.
  2. Block unnecessary information by covering part of the transparency.
  3. Provide more opportunities to face the students and not you're your back on them in contrast to when using a whiteboard.
  4. Reduce teaching time while writing and erasing on the board.
  5. Preparing transparencies before the lesson creates more time for teaching.

→ Be sure that all students can easily see the board and they have eye contact with you. Always allow students to readjust their seating and tell you when their visibility is blocked.
→ Increase your profile while walking around the classroom.
→ Walk with vigour and purpose.
→ Gain the student's attention to events or the subject via a classroom bulletin with your voice, body language or gesture.

4. Teach Skills Related to Selective Attention
→ Teach students how they can find out important information by scanning, reading headings and end of chapter questions.
→ Teach students how to organize materials and events by time or topic.
→ Teach students they can represent information by using diagrams.

Principles and Strategies to Increase Sustained Attention

Three main principles should been considered as determinants to increase sustained attention through the learning process. These are:

MAIN PRINCIPLES TO INCREASE SUSTAINED ATTENTION
(Goldstein & Goldstein, 1998; Zentall, 2006)

1. **Brevity and clarity**
   - Reduce the quantity of material and time dedicated to practicing or re-doing a task at any one sitting.
2. **Increase novelty** at various **intervals** during tasks especially towards the end of repetitive tasks.
3. **Enriching visual and auditory stimuli** in the environment avoiding isolation of the student.
4. Improve self monitoring skills.
5. Monitoring use of medicine, if taken.

1. Brevity:

Because students with ADHD have a short attention span, brief instructions are the most appropriate for them. The principle of brevity definitely does not involve decreasing expectations of the student or limiting objectives. Targeted objectives of the grade should be targeted for the students with ADHD, too. To ensure these objectives are achieved by the student the teacher should break aims and objectives into segments and let the student progress step by step. The brevity principle should also involve structuring academic tasks, design and choose educational materials and learning activities. In line with this, for example, academic tasks should be structured by breaking assignments into manageable tasks instead of long tasks to be completed all at once.

2. Variety and novelty:

While students with ADHD, compared with their peers, need to have more practice and more repetition to achieve defined educational objectives for their grades, they are also quickly bored during repetitive tasks. The intensity of their motivation and attention are significantly reduced. There is a challenging dilemma experienced by teachers relating to this. Teachers have to do two opposing things at the same time. These are ensuring students have sufficient practice and ensuring students do not feel bored by perceiving the sameness of the tasks. In this context, teachers should slightly change the tasks or should provide differentiated educational activities to achieve a definite objective. Additionally, teachers should provide opportunities for students to study and examine their interests in order to increase the students' attention and efforts on classroom work. (Goldstein, 1998)

STRATEGIES TO INCREASE SUSTAINED ATTENTION
(Adapted from Flick, 1998; Goldstein & Goldstein, 1998; Rief, 2003, 2005; Zentall, 2006)

1. Eliminate Goals of Completing Long Tasks During One Time Period

→ Frequently use short tasks and tests
→ Break long tasks into smaller parts to be completed at different times. (Instead of assigning student to write one long report require them to write three short reports)
→ Give multiple breaks during rote tasks.
→ Use distributed practices or tasks rather than whole class practices or tasks.
→ Provide opportunities for students to alter or switch between tasks on their own.
→ Provide interesting tasks which can be done while completing the main task.
→ Provide proof-reading and edit work with / by a friend.

2. Increase Novelty & Use Performance Standards

→ Provide certain quality standards as a challenge.
→ Use technology within instructions. (Computer, video, film, etc)
→ Provide opportunities to explore the student's interests (E.g. science fiction, folklore or animals)
→ Provide multi-sensory (visual, auditory, kinetic) tasks and materials and differentiated instructions. (E.g. provide opportunities to achieve the same educational objectives through different kinds of tasks)
→ Present repetitive material in slightly different ways or different applications.
→ Use pictures, graphics, anecdotes, art, games, puzzles, group projects during the performance of familiar tasks.
→ Rather than relying on memory provide "real world" projects. For example, the game "What is my verb?" One team acts out a verb whilst the other team guess it and use it in a sentence.
→ Alternate low and high interest tasks so that students complete less interesting tasks while looking forward to the more interesting tasks.
→ Use instrumental or environmental music during repetitive tasks.

3. Increase Opportunities for Motor Responding and Active Engagement During or After Task Performance

→ Allow children to "play with" objects with their hands during longer tasks or listening to instructions.
→ Incorporate demonstrations and "hands on" presentations into your teaching whenever possible and high interest materials.
→ Use study guides and partial outlines. While you are presenting a lesson, students fill in the missing words based on what you are saying or writing on the board. Use graphic tools for this purpose.
→ Use questioning strategies that encourage student success without

STRATEGIES TO INCREASE SUSTAINED ATTENTION
(Adapted from Flick, 1998; Goldstein & Goldstein, 1998; Rief, 2003, 2005; Zentall, 2006)
→ humiliation. E.g. probing techniques; providing clues, asking students if they would like more time to think about the question. → Structure lessons to include a variety of questioning that involves whole class, group, partner and individual responses.
4. Increase Opportunities for Self Monitoring
5. Increase Opportunities for Choosing Unique Interested Assignments and Topics

CLUES FOR DISTRACTIONS (Zentall, 2006)

WHEN DESTRUCTORS CAN BE DESTRUCTIVE
1. When the task is selectively more difficult for the student then these destructors will produce greater disruption.
2. Interesting cartoons and toys are placed within the context of listening tasks.
3. Interferences occur at intervals during long tasks.
4. Detail and description are added within a listening comprehension task.
5. When the task is unfamiliar, complex or the children are young conversations overlap thinking time and make thought more difficult.

WHEN DESTRUCTORS ARE NOT DESTRUCTIVE
1. When gadgets are added during complex maths and easy but boring tasks.
2. When cartoons are presented during a video game.
3. When noises are added during familiar visual tasks.
4. When instrumental music is listened to during reading activities.

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CHAPTER 9

STRATEGIES FOR ORGANISATION, TIME MANAGEMENT AND STUDY SKILLS

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???

What are the necessary tasks in order to develop organization, time management and study skills for my pupils with ADHD?

- What are the shortcomings of the pupil with ADHD in relation to organization, time management and study skills?

- What are the effects of the anticipated problems on their education?

- What are the necessary strategies in order to develop organizational skills for pupils with ADHD?

- What are the necessary strategies in order to develop time management skills for pupils with ADHD?

- What are the necessary strategies in order to develop study skills for pupils with ADHD?

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Shortcomings of Pupils with ADHD on Organization, Time Management and Study Skills

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Shortcomings of Pupils with ADHD on Organisation

Pupils with ADHD may have some difficulties in several areas related to organisation. They experience problems with organisation of their own belongings, school equipment and materials, class tasks and homework assignments and with their working areas. Moreover, they lack the ability to prioritise their tasks or homework assignments, preparing their work schedule and following it, evaluating performance and identifying new strategies taking into account the evaluation. They have a weakness in recording tasks and homework assignments. The other sort of difficulty that the teacher has to deal with is the student's inability to identify the necessary documents, school materials and tools to do the tasks or homework assignments. Other common troubles that can be anticipated in relation to pupils with ADHD is bringing or returning work or resources to the right place, knowing where and when assignments should be handed in and being sure that they complete their tasks and homework assignments

Shortcomings of Pupils with ADHD on Time Management

Pupils with ADHD face some difficulties related to the planning of activities, prioritising tasks and homework assignments, preparation and following working schedules, assessment of the process and the determination of new strategies to overcome shortcomings. Moreover pupils with ADHD have problems with estimating how much time the pupil with ADHD needs to complete their tasks or homework assignments, handing in tasks or homework at the right time and being ready on time.

Shortcomings of pupil with ADHD on Study Skills

Pupils with ADHD may have several problems concerning study skills including starting to do tasks or homework assignments, studying from books or lesson notes and the organisation of them. Sustaining attention for a certain period of time and concentrating on study, note taking, actively participating in the lesson, tests and remembering the necessary information for tests.

Effects of Anticipated Problems on Education

It is necessary to teach pupils how to 'learn to learn' by using information and communication technology in a rapidly changing world. Since acquiring life skills in their school years will help them to reach success in many fields in their future lives. Pupils with ADHD experience many difficulties, as stated above, in relation to organization, time management and study skills in their daily lives at school, home and social community because of nature of this disorder. At the same time they sometimes have difficulty in coping with the impact of the disorder so they need assistance, support and training from their teachers and parents.

The learning and studying capacity of pupils with ADHD can be increased with cooperation between teachers, parents, pupils and student boards. Without collaboration successful outcomes can't be obtained.

Teachers who have pupils with ADHD in the classroom has to pay special attention to them not only for improving their learning but also for increasing learning capacity of the classroom. Therefore, teachers must model, monitor and reinforce with pupils with ADHD in order for them to acquire the necessary skills to cope with shortcomings on organisation, time management and study skills.

Although some of the pupils spend a long time and great effort in it's rare for them to show academic success at school. It's deemed that either pupils with ADHD don't have the proper skills for efficient and effective studying or develop inappropriate habits. Several researchers conclude that if pupils including those with special education needs like ADHD acquire study skills at school at an early age they will also obtain success in their future academic life. At the same time they will enjoy the learning environment at school, develop positive attitudes and feel happy there. On the other hand, if they try to gain these skills at an older age, they may have some difficulties in planning, assessing their learning needs and concentrating on it. Therefore, besides pupils with ADHD, teachers and parents should help and teach their pupils how to acquire study skills at school age. They should model, monitor and reinforce them.

The quality of the teachers who are to benefit from this book is quite important because they have to show pupils with ADHD how to be well-organised, manage time and be successful at school. First of all teachers should be a model for the pupil with ADHD so training of the teacher on this matter is a very significant part of the solution. If the teacher is well-organised and uses the time effectively and efficiently in the classroom, that means they can be a model for pupils with ADHD on these issues. Therefore, before the teacher goes into a lesson, they must be well-prepared and organised. A well-prepared and organised lesson plan is a good guide for teachers because they can predict beforehand what kind of problem may occur so they can decide what the lesson objectives are (what the learners and the teacher are going to achieve), what methods and techniques they are going to use, which activities they are going to do, what the aim of each activity is, how long each activity will take, what kind of material they are going to use and what pupils already know. Moreover, they can take notes about the difficulties they experienced in the lesson

and   next
time they can avoid these difficulties and prepare the lesson accordingly. On the other hand, a very detailed lesson plan will be hard to follow during the lesson so it should be well-prepared but it must be flexible because demands, interests and creative ideas of the pupils may cause some changes in the activities. In addition to teacher planning, administrators, teachers, pupils, parents, curricula, building of the school and the physical condition of the classroom may affect organisation of education environment in a positive or negative manner.

As a result, if the teacher explains, shows and practise with ADHD pupils in a well-prepared and well-organised class taking into account pace and time, the pupil with ADHD will observe, will actively participate in the activities performed in the class, will obey the rules, they will learn how to prepare, organise tasks / homework and activities.

Strategies for The Development of The Organizational Skills of Pupils with ADHD

Organisation of their own belongings, school supplies, materials, tasks / homework assignments and working areas.

- Teachers should recommend that pupils with ADHD get notebooks of different colours or pictures in order to distinguish one from the other. They should write their names and each subject in big letters on the notebook. An improvement in the pupil's organisational skill may be supported by the use of various kinds of notebooks including coloured subject dividers, pocket folders, calendar, planners for recording assignments, pencil pouch and lesson schedule. Teachers should show the pupil with ADHD how to categorize the notebook according to their studies such as 'homework assignments', 'to be returned home, to be returned to school', 'to be done at home", "to be done at school', 'unfinished', 'finished', 'graded' or 'to be handed in'. Teachers may show how to organise the notebook of a subject such as maths and then the pupil practices it for the other subjects. After that, the teacher and parent should check notebooks of ADHD pupil regularly in order to develop the habit of organization in them, this is especially important during the first four weeks of school.

- The teacher may give both parent and pupil with ADHD the syllabus for each lesson and the parent can help prepare the pupil in how to organise their notebook accordingly.

- As well as a notebook for each subject a list of school equipment needed for each lesson should be given to the pupil with ADHD.

- Pupils with ADHD can be easily distracted by their surroundings. Therefore, their working places should be empty, as much as possible, at school or at home. Materials, school equipment and books should be put in an easily accessible place in case the pupil needs to use them. A tray or box can be put near to their desk so they can get materials, school equipment and books as needed.

- The teacher may organise the classroom with clearly labelled shelves, coloured folders, boxes, trays and bins so that pupils can place their work in the correct place and easily find equipment. For example the pupil can keep their completed homework in a folder.

- The teacher should allow time for the pupils to clean out and organize their notebooks, desks and backpacks.

Recording tasks and homework to be done, deciding upon necessary material, documents and school equipment for doing tasks and homework, bringing and returning them to school, knowing when and where tasks and homework will be handed in and to ensure they are handed in.

- As well as verbally telling the pupil of the tasks and homework assignment the teacher should also provide the information in written form, including the date the work needs to be completed by and handed in.

- The teacher may assign one of the other pupils who is inclined to provide help for the pupil with ADHD as their partner. This is a voluntary task but this responsibility will help the pupil to develop their social skills. For example, the partner may check whether the pupil with ADHD records their tasks and homework assignments or the partner may answer the ADHD pupil's questions on homework or tasks, necessary materials, documents or school equipment to be used. They can exchange phone numbers and call each other asking questions related to school tasks when they are at home. Moreover, the teacher may divide the class into pairs and each of them can check each other, whether the have ADHD or not.

- The teacher may send a copy of tasks or homework assignments on a daily or weekly basis that needs to be done at home or at school. Dates of exams can be sent via fax, e-mail or by phoning the parent of pupil with ADHD.

- The teacher may provide a tape recorder for ADHD pupil to record tasks or homework assignments.

- The teacher may provide a folder where pupil can put tasks or homework into the folder and the teacher can check them at the end of each lesson or one of the pupils may collect them and teacher may check whether homework is handed in or not at the end of lesson.

- The teacher should recommend that pupils with ADHD use 'post-its' by sticking them to their notebooks, books or lockers as reminders of important dates, activities and homework.

- After the teacher ensures the pupil with ADHD has recorded their tasks or homework assignments in the notebook for each subject the teacher may put a list of necessary documents, materials, books or school equipment in written form as a reminder for the pupil. The teacher may teach the pupil with ADHD that they should list documents, materials, books and school equipment that is needed at school or at home according to the subject and should double check whether they have put them into their backpack. If some of them forget to bring school equipment into class they may borrow them from their teachers or a classmate but it is important that the borrowed equipment is less desirable than their own or they will never bring their own equipment. Moreover, if they have a habit of not bringing them into class the teacher can contact parents and ask them to provide extra equipment. If the pupil forgets to take equipment home parents can have extra suppliers at home.

Furthermore the teacher may also use a homework assignment sheet, as shown below. The pupil with ADHD writes the name of the subject, the assignment, the due date, books and materials that are needed and the teacher ensures that they fill them in correctly, place the required materials and books in their school bag, hand in their assignment on time and signs the teacher initials part and other related parts on the sheet. After that the parent of the pupil with ADHD checks whether their child has completed the assignment or not and put it into their bag. Then the parent initials their part of the form. When used this monitoring system can be useful for ADHD pupils, teachers and parents.

HOMEWORK ASSIGNMENT SHEET

DATE:--------------------------

Subject	Assignment	Due Date	Date Handed In	Teacher Initials	Books / Materials Needed	In Bag	Finished / Filed	Parent Initials	In Bag
Special projects to be completed									
Tests to study for tomorrow or future date (specify)									
Materials / clothes needed for special events									
Teacher notes or requests									

This sheet is based on original adaption of Flick's 'Homework Assignment Sheet'. It can be found in Flick, Grad. L. (1998). ADD/ADHD Behavior-Change Resource Kit. West Nyack, NY: A Simon&Schuster.

- Homework assignments, if the pupil with ADHD can't complete them on time the teacher may be tolerant and flexible allowing the work to be handed in at a later date.

- The teacher may give various rewards to the pupil with ADHD who completes their homework, brings materials, books, all school equipment and actively participates in lessons. The teacher can increase the pupil's motivation by using positive reinforcements.

- The teacher may send a weekly or monthly report to the parents of a pupil with ADHD to inform them about their child's progress at school.

WEEKLY PROGRESS REPORT

Student's name………… Number…………….. Week Starting…………

Work Habits	Citizenship
---Worked hard to complete assignments- Great job!	---Excellent behaviour-tried hard most of the week
---Participated and used time effectively most of the week	---Acceptable behaviour most of the week
---Work completion so-so this week	---Behaviour so-so this week (some difficulties)
---Poor work completion (class and/or homework	---Behavioural problems-difficult week ---Parent / teacher conference needed
---Parent/teacher conference needed	

Missing assignments that must be done are listed on the back

Teacher Comments	Parent Comments
Teacher's Signature Date	Parent's Signature Date

(Rief, S. F&Heimburge, J.A., 2006, p.195)

Strategies to Develop Time Management Skills

Planning and prioritising activities, tasks and homework assignments. Preparing and following up a work schedule, assessing how to undertake a task and determining new strategies whilst taking into consideration the dysfunctional aspects of ADHD. Estimating the time the pupil with ADHD will need to complete task or homework assignments and hand them in at the right time. Being ready on time and using a watch or clock.

- Teachers should model for the pupil with ADHD how to prepare a work programme with a weekly work schedule. Teachers should point out that the pupil should list tasks, homework assignments, exams and activities that will be done at school and extracurricular activities during the week with dates. Moreover, the pupil should estimate how much time a job will take and the work programme should be prepared taking into consideration this factor. However, a pupil with ADHD has difficulty in estimating how much time they need to complete the tasks or homework assignments because of a lack of awareness of time. The teacher may help them raise their awareness of this issue. The teacher may select a place in the city or town and ask them how much time it takes to reach the school from the selected point by walking. The pupil gives their estimation and if it is possible the pupil then walks and checks whether their estimate is reasonable or not.

Meanwhile, the teacher may prepare an 'orienteering activity' for the pupil with ADHD for predicting time, sustaining the activity and following the instructions. As an example the teacher prepares a city tour on paper and chooses some well-known places in the city such as a museum, park, shopping centre or theatre building. The teacher writes the names of the buildings and draws pictures of them. The teacher then writes instructions to show the pupil what route to follow and adds a starting time, predicted time for completion and the time for reaching each section of the route.

For instance, the pupil with ADHD starts their tour in front of the named shopping centre and they have to reach the named park. They will fill in the start time and predicted time of arrival on the paper.

Instructions: 1) Fill in start time and predicted time of arrival,
2) Cross the street (name),
3) Turn right,
4) Walk straight ahead. At the end of the road you will see the park.
5) Write the time you arrived and compare with your guess.
6) Take photo of yourself in front of the park.

This activity can be modified in line with the age of the pupil. The teacher can change the instructions and add more creative ones.

- It is recommended to prepare a monthly work programme in order to see all of the extracurricular activities, homework assignments and tasks. The teacher should teach the pupil with ADHD how to record them in priority order and divide their tasks into smaller sub-tasks. Daily, weekly and monthly programmes should be prepared and the teacher should teach the pupils with ADHD how to use them.

- The teacher should tell the pupil with ADHD that the notebook related to a lesson should be used to help with those tasks and homework assignments. Each completed tasks or homework assignment should be ticked and reviewed. Reasons for uncompleted work should be analysed and added to the list for next week. The habit of using a wrist watch should be acquired by both the teacher and parent. How to tell the time and apply the skill to real life situations should be taught.

- An alarm clock can be used at home if the pupil with ADHD has some difficulty getting ready on time. Sometimes waking up in the morning or being at an appointment on time can be a problem for them so they can arrive at school or for the appointment late. Alarm clocks and bleepers can be set for waking up in time in the morning and it helps the pupil with ADHD to be at school on time. Timers can be used to provide self-control for the pupil with ADHD over tasks or homework assignments and activities.

Strategies for Developing Study Skills

Kesiktaş (2006) pointed out that study skills are defined generally as 'the using of certain techniques in order to learn'. It is not easy to acquire study skills for pupils on their own so the teacher, parent and pupil have to work collaboratively. Even teachers and parents don't have much knowledge about the subject. If they are good 'learners' that means they are good teachers at the same time for their children and pupil. Therefore, teachers and parents of pupils with ADHD are important because they are integral in assisting the pupil acquire study skills.

The two hemispheres of the brain work differently. The left hemisphere of the brain is logical, linear, rational, analytical, realistic and dominant in sequencing, listing, categorising and seeing details. On the other hand the right hemisphere of the brain is dominant in creating, smelling, touching, imagining, hearing, responding to music and moving. Although people use both sides of the brain, one side is usually dominant and most pupils, whether they have ADHD or not, are right-brain dominant. Therefore, teachers should have a vast range of strategies in mind and use different methods and techniques after taking into account the different learning preferences of the pupil's they teach.

Rief (2005) stated that it is helpful if, from the first week of school, teachers communicate to their students something like, "Each of us has our own unique way of learning, and may need different kinds of help in order to do your best at school. Therefore, I will probably treat each of you differently throughout the year, to make sure you all get what you need to be successful in this class." The teacher may be a visual learner. For example, they like learning from pictures or colourful cards and they want to see the text and write everything down that is on the board or overhead projector. They like reading and do so quickly but they have difficulty remembering the information on the page. Moreover, they have trouble remembering the sequence of verbal instructions and following material where you have to listen without seeing the text. If the teacher teaches their lessons according to it, some of the pupils won't be successful in the classroom. Therefore, teachers have to be aware of their own way of learning but they should have broad knowledge about the other types of learning styles to help the pupils who have a different type of learning styles. It's known that pupils with ADHD are often visual and kinaesthetic learners and they don't learn if the teacher educates them by only using traditional methods and techniques.

In this context, recent statistical data gives us a clue regarding the preferred learning styles of pupils. They remember and learn 10% of what they read, 26% of what they hear, 30% of what they see. Pupils memorize 50% of both what they see and hear, 70% of what they say and 90% of what they say and do. For example, "doing a presentation" is one of the best ways to increase the learning of pupils. Therefore, teachers should use different methods and techniques in the classroom that would

make the pupil's learning process easier. Each pupil, with or without ADHD, can learn if the appropriate support is given by their teachers and parents.

The teacher may meet some difficulties while they are assisting a pupil with ADHD to acquire appropriate study skills but the teacher has to know that they are not alone and if they need help they may get support from relevant books, internet, more experienced colleagues, guidance counsellor in the school, the parents of the pupil with ADHD, special education staff or from a psychologist.

In addition, teachers may use various sources to get information on study skills. One of them is; James Madison University's Special Education Program developed a website (http://coe.jmu.edu/LearningToolbox) to respond to the needs of pupils with learning difficulties and ADHD. More than 60 learning strategies are discussed on that website including organisation, exams, study skills, note-taking, reading, writing, maths and advanced thinking titles. For instance, if a pupil with ADHD needs to help stay focused when they are studying they may use "S2TOP" as a study skills strategy and the teacher should explain how to implement it.

1) Set a timer and sit down to study.
2) When your mind has drifted off, tell yourself that you are not studying and you have to go back to your study.
3) Draw a circle and when you drift off, put a mark inside the circle.
4) Organise your thoughts.
5) Start to study.
6) Count the number of marks you put in the circle.
7) Try to decrease the number of marks next time.

Some strategies for teachers regarding the development of study skills;
- Using an overhead projector or P.C. and interactive whiteboard is more effective than using a blackboard because the pupil with ADHD is frequently a visual learner so the teacher can create an interactive environment and make learning easier. In addition, the teacher may frequently use graphic organizers, charts, story mind maps, flowcharts, diagrams, flash cards, videos, CD's / DVD's and Venn diagrams.

- The teacher may keep a place on the board for key points so the whole class can look at them at the same place on the board whenever they need to.

- The teacher may place key words in more than one part of the classroom so that all the pupils can easily see them.

- If a pupil repeatedly makes the same error the teacher may use a memorable colour to highlight the errors so the pupil can see the errors and remember not to make this error in future.

- Highlighting or underlining specific words, phrases or sentences, using colours and noting key words are useful techniques for pupils with ADHD.

- The teacher should encourage the pupil with ADHD to repeat new information immediately. Before a class or a test the pupil with ADHD should again repeat the information.

- The teacher should encourage the pupil with ADHD to recite information aloud, to break memorizing into short periods of time, to visualize words or pictures, to associate memorized words or facts with key words to help with remembering information. In addition, mnemonics can be used to recall information. The first letters of the important facts are written separately and a memorable key word is created to help remember the original information.

- The teacher may suggest that the pupil with ADHD should spend extra time studying the middle sections of the lesson because the beginning and end parts are more easily memorised.

- The pupil with ADHD may have some difficulties while they are taking notes in the classroom because of their inattention, impulsiveness and poor fine-motor co-ordination. Therefore, the teacher may give a copy of their lecture notes or they may allow the pupil to get copy of lecture notes from one of their classmates. The pupil with ADHD can use a tape recorder in the classroom to minimize the trouble of taking notes and to help them follow the lesson. In addition, the teacher may highlight the key points and one of the pupils in the classroom who is good at taking notes can copy them for everyone. This designated pupil can make copies of the notes and put them in a box and the pupil who needs them can take a copy.

- The teacher may want help from the parent of a pupil with ADHD for monitoring the child and checking that homework is completed.

- The teacher may need to have contact with the parent of the ADHD pupil. At the same time, daily and weekly reports can be sent giving information on the progress of the pupil with ADHD.

HOME NOTES

Name: --   Date:-----------------------

Please rate this student in each of the following :

Completed class work	☺	☺	☹
Followed class rules	☺	☺	☹
Got along well with others	☺	☺	☹
Used class time wisely	☺	☺	☹

Comments --

(Goldstein & Goldstein, 1998, p.575)

- The teacher should often control where the pupil sits, their notebook, and the completed tasks and homework assignments of the pupil with ADHD. Instead of giving negative feedback each time the teacher should reinforce positively. If the pupil with ADHD is in the habit of not doing their homework the teacher should talk with them about the reasons for this.

- The teacher may provide extra lessons for the pupil with ADHD.

- If the teacher gives too complicated or over-long homework assignments or tasks then the pupil with ADHD may get bored or feel anxious about completing their homework or tasks. They may forget or not allow sufficient time to complete them. Because of this it is better to break them into manageable segments.

- Teachers should explain to the parents of the pupil with ADHD how to arrange their child's room at home in order to create an efficient and effective working environment by decreasing distractions and increasing motivation. Teachers should inform them about what their child has to do before starting work and maintaining it. For example, the pupil with ADHD should organise their room into the most appropriate working place by taking into account light and noise.

- Usually teachers look at speed, accuracy and completeness of the task or homework but pupils with ADHD often work very slowly and if the teacher takes into consideration only speed or completeness of tasks or homework the quality of it will decrease so it is better to look at quality of the task or homework instead of quantity.

- Some teachers may punish the pupil with ADHD for running in the class or for disturbing their classmates by making noise, talking or not doing their homework or tasks. One example of punishment can be "writing sentences or words a hundred times" This approach is not helpful in solving the problem. Instead of using punishment the teacher should reinforce the good behaviour of the pupil with ADHD and each time this occurs the teacher should reinforce the behaviour with a reward.

- Ground rules can be determined in partnership with the pupils in order to improve discipline, increase learning and raise self-esteem. These rules give the pupil's responsibility so they also help the teacher have less class control problems. As Wheldall and Glynn point out "If the students can propose and discuss the application of new rules and participate in the exact formulation of rules, it is more likely that they will learn something of how to change their own behaviour and will challenge the rules less" (Wheldall & Glynn, 1989). However, the number of rules must be kept to a minimum, rules must be determined according to the aim and they must strengthen positive aspects and weaken negative ones. As a result, all pupils and teachers must obey them. They can display them on the wall so if there are some problems or

someone breaks these rules they can be reminded of them and what kind of consequences may result.

Moreover, As Zentall (1995) notes, "the education environment for ADHD children must be structured to allow them to talk, move and question; such a program will allow them to start, stop and engage in tasks in a non-disruptive fashion' (Goldstein & Goldstein, 1990). In addition, for the classroom discipline of inattentive students, Lasley (1986) suggests that "effective teachers develop a workable set of rules in the classroom: (1) respond consistently and quickly to inappropriate behaviour, (2) structure classroom activities to minimize disruption, and (3) respond to but do not become angry with or insult the disruptive students. If implementation of these three goals is achieved in the effective classroom environment, academic success and improvement of their behaviours are observed". (Goldstein & Goldstein, 1990)

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CHAPTER 10

POSITIVE AND NEGATIVE EFFECTS
OF ADHD ON LEARNING

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- What are the Direct Effects of the Symptoms of ADHD on the Student's Academic Achievement?

- What are the Co-existing Learning Difficulties?

Having ADHD puts students at risk of problems in school. Research tells us that 90% of these children will experience serious difficulties in school. ADHD children do worse on objective measures of achievement such as grades, group tests, and individual achievement tests. ADHD predicts other school-related impairments, such as special education placements, retention, and suspension. Children with ADHD have problems applying the knowledge they have (Rief 1993, Robin 1998). Even those with an IQ in the "normal range" will have difficulty dressing without supervision and doing homework or chores (Dornbush & Pruitt 1995).

Direct Effects of the Symptoms of ADHD on The Student's Academic Achievement

 The Effects of Inattention

Attention is a system of self - control that can help students with such things as working consistently each day, focusing on the right details when reading and thinking ahead about what to say. Students with ADHD have different kinds of attention problems. There are multiple forms of attention dysfunction, a heterogeneous group with varied patterns and specificity and that recognition of different patterns has enormous implications for how we can help specific children (Levine 2002, Surucu 2003, Ziegler Dendy 2000).

- **Doesn't Have Enough Mental Energy:** Automobiles require fuel in order to move down the road. Similarly, a student requires fuel (or energy) to pay attention to information, tasks, and people in the classroom. Mental energy controls are especially important when students face tasks and situations requiring sustained effort, e.g., reading for comprehension, writing lengthy essays, solving long math problems or studying for a test. The student with ADHD:
    o Has difficulty concentrating and complains of feeling tired or bored.
    o Has trouble in sleeping or does not have regular sleeping patterns. They do not seem well rested and fully awake during the day.
    o May seem bored or lazy in school and has trouble concentrating on work that is less interesting.
    o Has inconsistent work patterns which negatively impact on the quality and quantity of their output.

- **Has Difficulty in Listening to Instructions:** The student with ADHD:
    o Can easily be distracted and can lose their attention and interest in the lesson at any time (at the beginning, middle or at the end).
    o While they are sitting in their seat in silence, their mind may be everywhere.
    o May be interested in things which are not related to the instruction or draw pictures or have day dreams during the lesson.
    o Has trouble to refocus their attention on a task when they are distracted.

- **Has Difficulty in Attending to Important Information:** The student with ADHD:
    o Often processes too little or too much information because they cannot distinguish what is important and what isn't.
    o Appears to focus on things too superficially, not thinking about the details of what they are learning.
    o Has difficulty connecting new information with information that they already know. The student's mind seems to wander to related or un-related ideas when new information is introduced.

- **Experiences Problems Copying Work:** The student with ADHD:
  o Doesn't have good note-taking skills, e.g. doesn't pull out the important information from lectures or textbooks,
  o Doesn't have an efficient system for taking or organizing notes.

- **Problems with Managing Time and Effort:** When in school students are expected to follow routines and complete assignments within certain time frames. The student with ADHD:
  o Doesn't know how to get started on homework assignments, reports, or projects
  o Takes frequent breaks. Even if they do not stand up from their seat, their mind may be elsewhere.
  o Rushes through their work, not taking the necessary time for a thorough job.
  o Takes an excessive amount of time to complete their work.
  o Has difficulty making deadlines, e.g. getting assignments in on time.
  o Gives up easily or shuts down before the homework or schoolwork is completed.

- **Problems With Study Skills:** Study skills are techniques that make learning more efficient and more rewarding. The student with ADHD :
  o Doesn't have good note-taking skills, e.g. doesn't pull out the important information from lectures or textbooks.
  o Doesn't have an efficient system for taking or organizing notes.
  o Has difficulty preparing for tests, e.g., doesn't know what topics to study or how to go about studying them.
  o Is passive when studying they don't use strategies to learn or remember information.
  o Doesn't plan ahead or set goals for themselves when studying or doing homework.
  o Doesn't monitor how their studying is going, e.g., doesn't check to see if their strategy is working well, or if they need to change their approach.

- **Problems With Taking Exams:** The act of taking a test requires that students coordinate multiple skills, often under the pressure of time. Students must organize their time effectively and work at an appropriate pace. They may be required to recall information precisely and accurately, or to provide an elaborate response to a problem or question. The student with ADHD:
  o Cannot use the time to the optimum.
  o Is highly interested in what is going on around them especially during the exam.
  o May be easily distracted at the beginning, in the middle or at the end of the exam. May correctly answer the first few questions of the test and the rest of them may be answered incorrectly.
  o Doesn't read the directions and questions carefully.
  o May give incorrect answers even if they know the correct answer because of misreading or not reading the passages till the end.
  o Doesn't glance over the entire test before beginning in order to preview what's in store.

Effects of Hyperactivity

The student with ADHD usually experiences difficulty in sitting in their seat in silence during the lesson. If the student with ADHD is forced to sit in their seat without being given permission to move, especially for a long time, they can not focus on the subject and can not learn. They shift from one uncompleted activity to another. Chattering is also a sign of hyperactivity which may have a negative impact on the student and their classmates.

Effects of Impulsiveness

The pupil's poor impulse control is neurologically based. Impulsivity may be manifested by one or more of the following behaviours and has a direct effect on learning.

- Acting without thinking.
- Answering before questions are completely asked.
- Beginning work before all the directions have been given.
- Difficulty in listening, reading or following verbal directions.
- Making careless errors.
- Rushing through assignments.
- Talking to others during quite activities.

Effects of Poor Organizational Skills

Developing good organizational behaviour can play a key role in efficient school performance. School is much easier for children who know how to organize themselves, their materials and their work space. Having effective organizational tactics will continue to be a valuable asset throughout a student's education and career. The student with ADHD has different kinds of organizational problems:

- o Doesn't have materials ready when it's time to begin an assignment, e.g. spends time searching for a pencil or looking for paper.
- o School bag, notebooks and materials are usually disorganized.
- o Has difficulty keeping track of their materials, e.g. loses their homework or leaves their books at home.
- o Doesn't keep an adequate work space, e.g. creates such a mess that nothing can be found or has too many distractions in the area.
- o Can not sequence and organize their opinions.

Effects of an Impaired Sense of Time

There is an optimal rate for accomplishing most tasks. Taking the appropriate amount of time for a task is largely dependent upon both a student's temporal - sequential skills and their attention abilities. The student with ADHD:

- Doesn't accurately judge the passage of time while they are on task.
- Doesn't properly anticipate how long tasks will take and does not manage time well.

- Has difficulty managing time during exams. They may finish it early or they may tackle a question and forget how much time they have to complete it.

Effects of Sleep Disturbance

The child usually can not fall asleep easily and does not have a restful sleep so they may be sleepy in class. It is hard for them to be attentive during the boring and passive tasks and it negatively affects their learning.

Co-existing Learning Difficulties

According to studies on ADHD two-thirds of children with ADHD have at least one other co-existing problem. The more complex the attention deficit disorder the greater the risk for multiple problems. Up to 50% are suspended, 15% have math and or reading disabilities, 80% - 90% are significantly behind in school by the fourth, fifth, or sixth grade (Barkley 1998, Flick 1998).

Several learning problems, not directly related to ADHD, often occur along with ADHD and affect the learning process. (Flick 1998, Rief 1993, Ziegler Dendy 2000).

a. **Problems with Oral Expression:** The student with ADHD,
   - Has difficulty responding to questions where they must think and give organized, brief answers; therefore they may talk less and give unrelated answers.
   - Is reluctant to speak in class during discussions because of their slow processing speed and difficulty in organizing ideas.

b. **Problems with the Speed of Processing:** The student with ADHD,
   - Slow processing of information: they read, write and respond slowly. It may take twice as long to do homework, class work or complete tests and they may have no time to check their answers.
   - They may have difficulty in remembering the things which are stored in their memory such as math facts, algebra formulas, foreign words, historical events or grammar rules.

c. **Poor Fine-Motor Coordination**
   Many children with ADHD have difficulty with fine motor tasks, especially handwriting. They often show many "battle scars" from various accidents associated with poor coordination which is combined with impulsivity. While many of these children have trouble with fine-motor coordination, they may have little difficulty with gross-motor skills. They may even have very good motor coordination skills needed for sports or art.
   - They may have poor handwriting. Sometimes it may be small and difficult to read.

- They may write slowly, therefore they may avoid writing assignments and doing homework.
- They may product less written work.

d. Problems with Written Language:

Of all academic skills it is writing that students with ADHD tend to struggle with the most. These students experience enormous frustration trying to keep up with the teacher's expectations and the speed of their peers when it comes to writing. Students with ADHD,

- Are poor spellers.
- Have poor handwriting.
- Have difficulty organizing their thoughts in written expression.
- Have a weakness with the mechanics and written organization.
- Have difficulty with the speed of written output.

e. Problems with Maths:

Students with ADHD often have specific difficulty with maths computation skills:

- Compute carelessly and with inaccuracy.
- May be inattentive to processing signs.
- May have trouble memorizing and recalling basic facts.
- May have trouble in computing basic math facts automatically and they may do it slowly.
- May have difficulty in remembering multiplication tables.
- Misalignment of problems on paper.

f. Problems with Reading Comprehension:

- They may have problems understanding or remembering what they read especially if it is long, therefore they need to re-read it.
- They may make mistakes while they are reading. They may skip words, phrases or lines or they may lose their place while reading.
- They may have difficulty in identifying and remembering the main idea from the reading.

g. Long Term Memory Problems:

- They may have problems putting the information into their long term memory and in recalling it.
- They may have difficulty recalling multiplication tables, math facts, algebra formulas, grammatical rules, foreign languages or historical dates.
- They can not quickly remember the information which is stored in their long term memory.
- They might not remember the things which were just memorised the night before such as math facts or spelling words.
- They may not be good at tests which requires recalling information from their long term memory, even if they have studid.

h. Short Term and Working Memory Problems

In children with ADHD, memory problems are often reflected in difficulty with their working memory, the memory function that is active and relevant for short periods of time. The student with ADHD,

- Forgets something that they wish to say when it's their turn to speak.
- Has difficulty in remembering teacher's requests, multiple directions or verbally presented with math problems.
- Has difficulty in holding the information in their mind while actively processing it. For instance, they may have difficulty holding a maths problem in their short memory while recalling the facts and algebra formulas from their long term memory.
- Cannot remember to bring the "right key to unlock the tool chest".
- Forgets the things needed for daily routines such as books or tools.
- Forgets to give completed homework to the teacher.
- Forgets special assignments, catch-up work or tests.
- Frequently looses their materials or equipment.

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STRATEGIES TO INCREASE LISTENING AND FOLLOWING DIRECTIONS

by Banu DUMAN, English Teacher, Ankara Provincial Directorate for National Education, Ankara, TURKEY

1. What kind of difficulties do pupils with ADHD meet related to listening and following directions?

2. What are the necessary strategies for developing listening skills in pupils with ADHD?

3. What are necessary strategies in order to develop following directions of pupil with ADHD?

4. What different activities can be devised in order to make listening more attractive?

"In order to be able to have effective communication, we have to be aware that all of us perceive the world in different forms and we use these perceptions as a guide for our communication with the others."

Anthony Robbins

We know that we are all human beings and some of us have psychological, socio-psychological and socio-environmental problems inside and outside the class. Pupils spend much of their time in school so it is very important for them and their teachers know that many of the problems these pupils experience are related with school. Communication between administrators, teachers, pupils, parents and other staff in the school is essential for success. If there is a healthy interpersonal verbal and non-verbal communication in the school environment it helps to minimize problems, increase efficiency and the quality of education.

The classroom atmosphere is generated by the teacher, the task and the pupils. They should spend their time in a relaxed, unstressed, free, warm, funny, enjoyable and lively classroom atmosphere. Moskowitz (1978) states that "The lively classroom is full of learning activities in which students are enthusiastically and authentically involved. Each student is genuinely respected and treated as a human being by his/her teacher. The learning involves living."

Therefore, the involvement of the pupil and the teacher in a task is very important for learning because that means they are sharing the subject matter to be learned by using words, tone of voice, their feelings, emotions, experiences and by taking responsibility, having respect for each others' rights, performing activities in a living, authentic and enthusiastic atmosphere, trying to understand each other, being aware of their strengths, capacities and themselves. As a result, there is a direct relation between learning and communication so effective learning requires effective communication.

Verbal and non-verbal communications are two components of interpersonal communication. Language is vital in verbal communication because we express our feelings, thoughts, ideas and all things that we want to explain by using it as a tool. On the other hand, there are 2 main components of non-verbal communication. They are tone of voice and body language. People usually enhance speech with gestures or sometimes they try to express their feelings or thoughts by just using their body language without using any words. According to the research results of Albert Mehraban; words 10%, tone of voice 30% and body language 60% are effective in the interpersonal communication. It shows that non-verbal communication is quite important in the communication.

Sometimes the teacher complains about pupils in the class like "They never understand me" or pupils criticize their teachers such as "We don't understand what the teacher says." As a conclusion, good communication between teachers and pupils makes learning easier. In order to provide this, the teacher should check out

the style of communication, as Flick (1998) emphasizes that both a passive and an aggressive style causes problems but an assertive approach is the most effective in the communication. Teacher encounters problems in stating the rules and implementing them with the passive communication style. Commands, directives and requests are often given in question form and a decision is expected from the pupil. For instance; "Don't you think you have to record your homework for the Math lesson?" For the aggressive type of communication, the teacher tries to implement rules or give commands, directives or requests by using threats, various punishments and humiliating words. The teacher thinks that by using this approach they will show power and provide control over the pupil and the pupil will follow the requests of the teacher. On the other hand, if the teacher expresses their ideas, feeling, requests or commands clearly and directly by respecting the rights and feelings of the pupil in an assertive type of communication. There can be some choices and decisions depending on the pupil. If the expected change in behaviour happens then the teacher may give a reward for this change such as "When you complete writing from the board you may draw a picture for 5 minutes at the activity corner of the class." Meanwhile for the pupils it is necessary to be a good listener and a good speaker so their speaking and listening skills have to be developed.

According to Galvin (1985), engaging in social rituals, exchanging information, exerting control, sharing feelings and enjoying yourself are the five main reasons for listening. In real life, there are two ways of listening; casual and focussed listening. With the former we listen without any particular purpose or without much concentration such as listening to music while doing our homework or watching TV while doing our housework. Later, we listen more closely and try to pick up the necessary information we need. For example, if we ask someone how to reach the place where we want to go, at that time we know the aim of listening so we concentrate on listening and we try to get this particular information by listening to someone describing it. Teachers expect focussed listening from their pupils but if they don't tell them what they expect from their pupils and what they will be listening for then the listening activity will be difficult for their pupils. Teachers may give simpler listening task and guiding questions. For instance, if the listening text is about the daily activities of John, the teacher may discuss with the pupils before they listen; what they do in the morning or afternoon or evening or which activities they perform within a day. This helps the pupils predict what the text is about. Then the teacher may ask some questions to enable the pupils to be able to concentrate on the main points in the text. There are two basic approaches to a text; **"extensive listening"** or "listening for gist" and **"intensive listening"** or "listening for details".

If a pupil is asked to order difficulties amongst four language skills; listening, writing, reading and speaking, many pupils will probably choose 'listening' as the most difficult one. Usually people like speaking but they don't want to listen too much. However, your speaking skill can't be developed unless your listening skill is developed. According to Gürgen (1997), "listening includes patience, being open and willingness of understanding and it is one of the qualities of personality. When person is listened by the other person, her/his self-confidence increases, possibility of being happy and peaceful with him/her rises." Successful listening requires understanding what the speaker is saying, making a conclusion and getting the whole message by combining all the information in the text. The level of understanding of the meaning of an individual piece of information, particularly grammatical structures and the

meaning of vocabulary used in the text show how listening is performed. Recognising the words used by the speaker, distinguishing and recognising sounds correctly are other components of successful listening.

If the teacher listens to the pupil effectively that means they understand what the pupil is saying and proves it by using own words and giving feedback. The teacher should respect, have empathy with and be sincere in order to listen to pupils effectively. Empathy means to put themselves in the pupil's place and try to understand events, pupil's feelings, problems and thoughts by looking at the pupil's point of view. If the teacher has empathy then the pupil feels they are in a safe environment and worthy because the teacher understands and respects them.

Pupils encounter some problems with listening. They can not control the speed of the speaker so they may miss some utterances or they may have difficulty in comprehending what the speaker wants to say. Another difficulty is if utterances aren't understood well, pupils may not want the speaker to repeat the words but control over this is not in the hands of the pupil. Besides, the choose of the vocabulary depends on the teacher, it is in the hands of the speaker. The pupil tries to follow and comprehend what the teacher says, sometimes they can be asked to stop and clarify or the pupil tries to guess the meaning of the word or words from the context. Moreover, if pupils are unfamiliar with the context, they may have difficulty in interpreting the words that they hear; also facial expressions, nods, gestures and the tone of voice may cause misinterpretation. In addition, they may not know what they should do before, while and after the listening stage. They have a lack of confidence and are discouraged. Furthermore, they don't take notes in the lessons where they have to listen.

According to Gibbs and Cooper (1989) a kind of communication problem may be seen in more than 90% of children with specific learning difficulties. Many Attention Deficit Hyperactivity Disorder (ADHD) pupils anticipate some problems in listening because they have difficulties in paying attention, remembering information and sequence. However, it mustn't be forgotten that listening, understanding and remembering are vital parts of effective communication.

Listening is an active process consisting of three stages; attention, understanding and assessment. Attention requires focussing on the message that is said by removing distractions such as to stop talking to your friend. However, pupils with ADHD are easily distractible and have difficulty in focusing on what the speaker is saying. They can't follow the lesson at the beginning, middle or end, they start to concentrate on the surroundings or they day dream especially if the lesson is boring and not interesting to them so they miss some parts of the communication or they may not get the whole message. In this situation the teacher may decide on a private signal with the ADHD pupil and when they lose their attention they may use this predetermined signal to attract the attention of the pupil to the task. As an example the teacher may put their hand on their own face or cheek.

Pupils with ADHD have difficulty with controlling their behaviours; they can't immediately stop and give a response to request from the teacher, they can't easily stop what they are doing. The teacher can't be sure whether the pupil with ADHD is listening properly or understands what they should because of inattention problems.

While the pupil with ADHD is taking notes they may face problems in following directions, in writing down the main points, key information or homework. Furthermore, they interpret what the speaker says incorrectly, they behave and respond according to their own interpretation so this situation causes negative interaction, communication and arguing. That generally occurs in group activities. Besides, the pupil with ADHD may forget the sequence of directions and requests of the teacher because they have a short term memory weakness.

In addition if the teacher uses long listening activities, complex, long sentences and more verbal instructions, distractions from outside factors and poor quality materials all affects successful listening.

Strategies to Develop The Listening Skills of Pupils with ADHD

- In order to build successful communication with ADHD pupils it is important to treat them with respect. If the teacher gives positive feedback instead of negative comments the pupil will try to change their behaviour and correct their mistakes because the teacher's opinions are quite important to them. For instance the teacher may tell the pupil "You are brilliant and you are getting better." or if the pupil gives an incorrect answer the teacher may say "Think again and try to find other alternatives for this question."
- The teacher may give limited alternatives for the tasks, not more than three. Pupils with ADHD may choose one of them and it supports them in producing more work, they are more compliant and less aggressive.
- Instead of criticizing and blaming the teacher can describe the problem in general. Using 'I' messages instead of 'you' messages is also a very useful strategy. In addition, when the pupil misbehaves the teacher can ask them to evaluate their behaviour by considering if their behaviour is a good choice or a bad choice.
- The teacher shouldn't start talking unless all the pupils are ready to listen. A signal can be determined with the pupils and if needed it can be used for listening such as "count up to 5". When the teacher reaches 5, silence occurs and they listen to their teacher.
- Pupils should feel and observe that the teacher teaches the lesson with pleasure, fun and enormous enjoyment. The teacher should use focussed listening, they should teach the lesson in a short and concise form.
- The teacher shouldn't allow the pupil with ADHD to behave differently from their classmates by stressing their weaknesses.
- A lot of different listening texts such as stories, conversations or descriptive talks can be used in the classroom in order to increase the listening experiences of the pupils. Meanwhile, the teacher should use authentic activities and texts as much as possible in the class because the pupils can build a relationship between what they are doing in the class and what happens in real life.
- The teacher should ensure that the pupils know why they are listening, what they will do, that they understand the instructions clearly and they carry out the activities correctly.
- The teacher may use a tape recorder, video or text during the listening activity. Just reading the text is not enough. Before the lesson starts the teacher should check that the equipment works and the quality of it such as sound, pronunciation, intonation and image quality of speakers.
- The teacher may suggest that pupils have a tape recorder because they can learn how it works so this increases their confidence, worry about the lesson; they can have a chance to practice more and listen to their own voice.
- When pupils have difficulty with listening, they can think they will never be successful so they may lose their self-confidence. In order to help pupils, the teacher may explain the process of listening and choose the texts or activities so that they may achieve. If they experience success with activities with listening, their self-confidence will increase. After that the

level of difficulty can be increased step by step. On the other hand, if classroom activities are chosen that are too easy the pupils can get bored. Meanwhile, the teacher should encourage them that the listening task can be completed and understood even if they miss some of the words.

Failure of pupils in the classroom while they are undertaking listening activities can be caused by insufficient information about what is expected of them. This may be through lack of instruction and guidance, the quantity or over-complexity of language used. Therefore, when appropriate direction is given this increases the possibility of achievement in the listening task for pupil with ADHD.

According to Willis (1981) ways to give better instruction;

(a) use gesture while giving instructions and explaining,
(b) demonstrating, miming, acting,
(c) speaking very slowly and clearly all the time,
(d) speaking, simply but with natural stress and intonation,
(e) repeating and paraphrasing, giving students time to think it out for themselves sometimes,
(f) giving lots of examples and using visual aids where possible,
(g) establishing routines in class for various activities such as pair work, so that students know what to do without being told.

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Strategies for teachers in order to give better instruction;

1) Teachers should check their own instructions by listening to themselves, recording or asking others to watch them and getting feedback.

2) Teacher should pre-plan their instructions by analyzing them beforehand. To give instruction effectively it is very important for pupils to understand and know what they are going to do. Instructions should be simple, clear with short sentences, demonstrated and in stages. If the teacher doesn't give a sequence of instructions in a sensible order it can cause misunderstanding. The pupils may be unsuccessful and demotivated about what they are going to do. Instructions should be given one by one not all in one sentence. Parrot (1993) suggests that "teachers should aim to demonstrate to the pupils as simply and as clearly as possible what they have to do. Non-verbal instructions are often more effective than verbal." The teacher should demonstrate each step at the same time while giving instruction or the teacher may model just the first and second steps. "Let's do one or two examples together". The teacher may use visual cues such as pictures, diagrams, gestures and graphics at that time and leave them in the classroom.

3) While the teacher is giving directions to the class they may write key words, phrases, picture cues and page numbers on the board or overhead projector. Circling, underlining or highlighting them with different colours and drawings are very effective techniques that helps get the attention of the pupil and helps them remember the information. There is no need to draw well in order to illustrate vocabulary and concepts. Meanwhile, the teacher may prepare task cards including visual prompts, simple written instructions and may deliver them in the class as the task is being performed.

4) Before starting giving explanations and instructions the teacher has to get the attention of the whole class by giving a signal such as using a bell or turning on and off the lights. One of the requirements of the communication process is to get eye contact with the pupil. The teacher may walk into the class and touch some of the pupils to get their attention before giving instruction. If instruction is given to a pupil with ADHD individually the teacher comes close to them then they should gain eye contact and use their name before giving instructions. Scrivener (1994) points out that "In class, separate instructions clearly from the other chit-chat, telling off, joking that goes on. Create a silence beforehand, make eye-contact with as many pupils as possible and make sure they are listening before you start. Use silence and gestures to pace the instructions and clarifying their meaning."

5) More difficult and complicated instructions make the task difficult so the pupils feel discouraged and demotivated. Until the pupils feel more confident and encouraged it is better to give an easy, less verbal, clear, step by step instructions. It is important to speak clearly and in a normal tone of voice by repeating commands a number of times without shouting. Directions should be pointed out in a simple form by emphasizing what you want the pupil to do such as "tidy your desk before leaving school". In order to check whether the pupil understands your command or directions ask them to repeat them and if they do so correctly, give positive reinforcement immediately. For example; "Excellent. You got the message and please, do it now". Avoid negative comments such as "I know you don't understand what I mean."

However, if the teacher has to give complicated instructions it is better to write them on the board in stages and demonstrate to the pupils what they have to do. If they have difficulty in repeating give then the correct words and ask them to repeat again. If they still have problems, it is better to change the way of repetition instead of using the same way or the teacher can decrease the speed of speaking and repeat again. There may be a hearing problem or the commands or directions are too complex and you need to divide the commands or directions into segments. If each one is completed successfully give verbal praise for each step. Time is also important. While the teacher is giving instruction, how long the task has to be completed should be given to the pupils. Also the instruction should be asked and repeated by a volunteer pupil, or a group, in order to check whether all the pupils understand what they are going to do or not. In addition, a buddy system that is helpful for clarification and assistance can be used and the pupil can explain to their partner what they have to do. For example; "What are we going to do second, Robert?" Then "Robert can you tell your buddy the next step?" The teacher wants the pupil with ADHD to repeat the instruction and also the teacher may ask short and simple questions to check whether they understood the instruction. The teacher should pay attention not to put them into a difficult position in the classroom. The teacher may use an auditory or

visual signal that indicates that the pupils will stop whatever they are doing and listen to their teacher. The teacher should inform the pupil what signal they are going to give when the time is up. For example, the teacher may tell the pupils that they will clap their hands when the time is up. All the pupils will do the same and they will stop the task immediately. After that the teacher should tell them how feedback will be obtained from them. For instance, "when you have finished your task choose pairs from the group and have a conversation."

6) Planning, monitoring and evaluation are the three most important parts of the instruction.

7) The teacher should give verbal praise for each correct sequence immediately it occurs and should give a message that shows that they understand what the pupil with ADHD wants to say.

8) The teacher shouldn't accept different behaviour from the pupil with ADHD compared with their classmates because of difficulties in language development.

9) Tasks and homework assignments or questions asked by the teacher in the classroom can be modified according to the condition of pupil with ADHD. For example, the number of questions may be decreased, directions can be simplified etc.

10) The teacher should keep in mind that the pupil with ADHD may need more assistance and support to follow their directions.

According to the Rief (2005); most of the pupils around 8 years of age obey 60% to 80% of requests given by adults and if it is less than 60% it shows that there is a problem with their attention, understanding or motivation. Therefore the following recommendations can be used to increase compliance.
- The teacher should give directions or commands directly related to the desired behaviour or action without using question form. For example; "Susana, take your dictionary". The language of the teacher that is used shouldn't be open to interpretation and lack of information such as "Don't look outside." The teacher should point out to pupils what they want to see. For instance; "Open at page 12 and try to solve problem 5."
- After the teacher gives the direction or command they should remain silent and wait for ten seconds before the pupils start their tasks. If it doesn't happen firstly they should state the name of the pupil and then repeat the command or direction by using "You need to" such as "Maria, you need to go back to your seat now." If the pupil complies with the direction or command the teacher should give positive reinforcement or praise immediately. On the other hand, if it doesn't occur the teacher should provide a mild negative consequence.

Activities

<u>*Pre-listening Activities;*</u>

- **Looking at pictures and talking about them:** Pupils may remember some words that they forget and they focus their attention on the topic to be listened to while they are talking about the pictures. Work in pairs, group discussion, general and question-answer techniques can be used in that activity.
- **Looking at a list of items or thoughts:** This type of activity is useful in order to practise newly learned vocabulary. When pupils look at the words, ideas, thoughts or phrases before listening, this will lessen the stress about what they will hear and pupils may remember them better. If the teacher recognizes that the list is too easy for the pupils they can distribute words, ideas, thoughts or phrases on the list randomly or put them into alphabetic order.
- **Reading a text:** Pupils may read the text before listening to it and they may check the facts while listening. It is a useful activity if pupils feel more secure when printed text is in front of them.
- **Reading through questions:** The pupils read the questions before listening and they try to get answers to them while listening. Type of question gives information about what they will hear.
- **Labelling:** This activity is helpful for revision of known vocabulary. Pupils may work in pairs and they try to complete all the labels before they listen. When they listen, they can check whether they are right or not.
- **Completing part of a chart**: Pupils may complete the chart before they listen and they can compare their answers with the listening text. This activity can be used in order to get pupils' own views, preferences and judgements.
- **Predicting or speculating**: Background information, information about the topic and speaker(s) are given and pupils predict/speculate on what will be said in a more general way.

<u>*While-listening Activities;*</u>

- **Marking or checking items in pictures:** Pupils are expected to respond to questions or statements by marking things on the picture.
- **Matching pictures with what is heard:** Pupils try to find the right picture by hearing a conversation or description.
- **Storyline picture sets:** While the teacher reads the story or the pupils' listens to it from a tape recorder, they try to find sets of pictures which represents the story.
- **Putting pictures in order:** Pupils try to put the pictures in order in line with the text they have just listened to.
- **Completing pictures:** By following the instructions the pupil tries to complete a picture by drawing.
- **Carrying out actions:** Pupils carry out the actions when the teacher tells them "Simon says…" such as "Simon says take your pencil". If the teacher doesn't start the sentence with "Simon says", pupils shouldn't do the action.

- Making models or arranging items in patterns: The pupils try to produce a model or pattern by listening and following the instructions. It can also be done in pair or group work.

- Completing grids: The teacher prepares or asks pupils to draw a grid such as a block of boxes with each column and row labelled. Then the pupils try to complete the boxes correctly by listening to the information given in the text that is read to them.

- Form or chart completion: Pupils listen to the text and try to complete a form or chart.

- Labelling: Pupils try to label the diagrams by recording the information they hear.

- True or false: This activity can be used for both listening and reading comprehension. Pupils read the statements given in the exercise before listening then they try to decide which ones are true or false by listening or reading the text and putting a tick against the appropriate statement.

- Multiple-choice questions: Pupils read the questions before they listen and they try to choose the right answer while they listen to the text. It may be necessary to stop or pause the tape recorder so the pupils can decide upon their answer.

- Gap-filling: The pupils try to complete the gaps in the text while they listen. The pupils may have some difficulty in this activity so the teacher may spend extra time in the pre-listening stage. The pupils may guess some of the gaps or some can be completed with the teacher if the text is too long or fewer gaps can be given in order to increase success. Stories, poetry or song lyrics are useful for this activity.

- Spotting mistakes: Pupils try to find and correct the mistakes in the picture or printed text by listening.

After Listening Activities;

- Form or chart completion: The pupils listen to the text and try to fill in a form or chart while at the listening stage. Some sections can be completed after listening but this requires memory rather than listening skills so the pupils should be prepared that they do not need to remember too much information for completion of the task.

- Extending lists: Pupils make a check list or a tick list while listening and they add extra points after the listening stage.

- Matching with a reading text: The pupils listen to the information carefully in order to match and try to match the heard word with the written word.

- Extending notes into written responses: The pupils take notes while listening to the text and these can be extended into written text. The pupils check their work after listening. However, taking notes is difficult and this can be done by able pupils.

- Summarising: This can be done by using extended notes at the listening stage or the pupils may summarise by remembering the information that they have heard.

- Using information for problem-solving and decision-making activities: The pupils try to get information from the text they have listened to or other sources such as reading the text, pictures or a chart in order to solve the problem or make

decisions. Collecting the information can be done at the listening stage, interpretation can be done after listening. The pupils can discuss in pairs or groups and write a paragraph or letter by using their answers or opinions.

- Jigsaw listening: Pupils are divided into small groups, each one listens to a different text but the topic is the same and then they share the information to complete the picture.

- Identifying relationships between speakers: The pupils try to understand the relationship among speakers. If relationships are to be discussed after listening the teacher may give one or two questions before listening so the pupils will focus on them while they are listening.

- Establishing the mood, attitude or behaviour of the speaker:

- Role-play or simulation: Simulation or role play can be based on role cards, stories, listening to passages or characters seen on TV. It provides for the transfer of listening information into speaking.

- Dictation: While the teacher is reading the text the pupils try to write it down. In order to write the text accurately concentration is needed. The main goal is to elicit the meaning of the written text, to try to understand utterances and show this comprehension by writing. The emphasis shouldn't be on spelling and writing the text correctly. The teacher may check whether the text that is being to is listened to is understood, or not, by repeating the text orally.

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THE DEVELOPMENT OF READING SKILLS IN PUPILS WITH ADHD

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- How to anticipate the difficulties pupil's with ADHD will have with reading?

- What can be done in order to develop reading comprehension skills in my pupil with ADHD?

Reading skill requirements and what are the anticipated difficulties for the pupil with ADHD at that time?
- **Symptoms of reading difficulties**
- **Learning to read and what is the research data relating to reading difficulties?**

What are the reading difficulties of pupils with ADHD and in adolescence?
- **What can be done to develop fluent reading skills in pupils with ADHD?**
- **What can be done to develop reading comprehension skills in pupils with ADHD?**
  - ➤ **Before reading**
  - ➤ **While reading**
  - ➤ **After reading**

What different activities can be undertaken in order to make reading more attractive?

Reading Skill Requirements and The Difficulties Experienced by Pupils with ADHD at That Time

Reading is one of the academic skills which is essential for life. Basic academic functioning expected from pupils starting primary school is to learn to read and write because this is one of the main ways of learning to read. Reading is a determining factor affecting the success of pupils not only in Turkish lessons but also other subjects like maths, social studies, social science and science. It is obvious that pupil's who read quickly and accurately understand, comment on what they read and provide better oral and written explanations will be more successful throughout their school life.

Reading is an activity that understands symbols and makes them meaningful in writing. Reading is a psycho-motor skill which uses the perceptive side of the brain to a quite high degree but the motor side much less. Eyes and brain work together during reading. Reading is a function of the central nervous system that is defined as 'to voice' as it is necessary to follow the passage with eyes and comprehend. While speaking is a natural function reading is an act that needs to be taught and learnt. It is necessary to translate writing into related concepts. Reading letters means to translate them into related sounds, sounds to syllables and words. It is necessary for the person who starts to read to be aware of the sound structure of words in speaking language and then to grasp sequences of letters in writing that represents sounds.

The main goal of reading is to understand. However, firstly pupils should learn to read words in order to comprehend the meaning of the words. There is a strong relationship between the reading ability of a pupil and their reading comprehension skill.

Learning to read words and sentences requires mastering a large range of skills. Requirements that should be learnt by pupils during this period are :
    (a) to scan the page from left to right;
    (b) to grasp that each written symbol represents a sound. For example, 'd' letter which is next to 'b' represents a different sound.
    (c) to compose words from sounds and sentences from words.

There are two different types of reading; reading aloud and silent reading. Reading aloud is defined as saying sets of words that they notice with their eyes and comprehends with their mind helped by the speech organs. On the other hand, silent reading is reading only with the eyes without the use of any voice organs, body or head movements. Organs related to speech are used when reading aloud. There are visual symbols for each word in language. Making these symbols meaningful during the reading process depends on knowing them beforehand, in the reader's memory. Nevertheless, a text doesn't consist of only symbols that belong to words. Symbols like capital and lower case letters, punctuation marks and also paragraphs, title, italic style occur in writing. When teachers give too much reading material to be undertaken by silent reading and reading comprehension some problems occur and the gaining of these skills becomes difficult. It is seen that teachers of pupils with

reading difficulties use more repetitive methods. Instead of using different strategies they focus on sounding out words and use attractive reading material.

If the pupil has effective reading skills, they should become fluent readers. In order to read fluently the number of times the reader refers back to previously read material and repeating words should be almost none. At the same time, reinforcement is the most important factor both for reading and learning. The most significant problem for pupil's who don't read fluently and face problems with reinforcement is "attention". Akyol (2003) states that "attention" is one of the related factors about being ready for reading.

In order to be a good reader the pupil should have good information processing skills and should see books as fun and as a source of information. Indeed, reading should be undertaken with happiness and turn into a social habit.

Symptoms of Difficulties in Reading

There are a broad range of difficulties in reading. It is possible to categorize them as first and second symptoms as identified below:

- Primary symptoms
  — Rotating: It usually occurs in b-d or p-q letters.
  — Reversing: Reversing vertical parts of letters having similar reflexes like m-w or b-p.
  — Replacing: Replacing of one letter in a word such as bahçe-baççe.
  — Form Comprehension Mistakes   (difficulties in recognising letters and sounds)
  — Differentiation Mistakes: (weakness in distinguishing letters similar to each other and sound similarities; bringing consonants and vowels together; expressing and memorising some letters, words and sounds).
  — Spelling Mistakes: (Difficulty in spelling; estimating the missing letters left blank; finding out appropriate letter in a word; analysing and syntesizing; reading with a frequent pauses).

- Secondary Symptoms
  — Changing behaviour: Difficulty in reading and writing can cause work avoidance behaviours such as running away from school, delaying completing homework or an exaggerated need for attention.
  — Failure to Succeed: Difficulty in reading and writing can extend to other areas like social science, science and foreign languages.
  — Disruptive behaviour towards the environment: Changing behaviour in reaction to failure can become more overt. Pickpocketing, lying and attacking are examples of overt changing behaviour.
  — Disruptive Behaviour Towards Self: Biting nails, sucking thumb, anxiety, high stimulation condition and lack of self-confidence are examples.
  — Difficulty in Speaking: Difficulty in reading feeds a negative attitude towards language and speaking in pupils. Thus influencing such things as a secondary stammer.

For the pupil with ADHD having a specific learning difficulty it becomes difficult to understand and read text due to a structural deficit occurring at the level of dividing phonetic units in order to recognise, understand and memorise words or analyse the words grammatically. Difficulties in the visual perception of symbols of sound, differentiation and particularly the recognition of sound symbols and rapid vocalisation affects reading speed, accuracy and comprehension. Perceiving words in reverse or rotated forms, wrong coding, completion mistakes and failure of phonetic division are observed in pupils who experience difficulty in visual and auditory perception and differentiation. These negatively influence the acquisition of reading and writing skills and suppresses academic success with academic underachievement for both age and intelligence of the pupil. (Erden, Kurdoğlu, Uslu 2002).

Taking into consideration the reasons for a reading difficulty changes from child to child the need for an accurate diagnosis becomes crucial. It is deemed very important to link a difficulty in reading to individual reasons.

What is the Research Data on Learning to Read and Difficulties In Reading?

Much research has been done about reading over the last 30 years. This represents a range of the research findings. Research in this subject tries to find an answer to the questions listed below:

— How do children learn to read?
— Why do some children have difficulty while they are learning?
— What can be done in order to prevent reading difficulties?

According to the research data;

- One of the main reasons for a pupil to repeat a class or to have special educational needs is not being successful in learning to reading.
- Factors that affect learning to read can be expressed as contributing environmental factors at school and home, spending time with the child and the methods used in teaching reading. According to the results of observed research done on this issue, high profile encouragement and spending too much time on reading are helpful approaches in order to learn this skill as are one to one teaching.
- If effective teaching of reading is provided in primary school and effective language development is developed in kindergarten then 50% of reading problems are solved.
- There is a strong relationship between the reading ability of children and the skill to divide the sounds that make up words. E.g. to separate and hear the spoken word into each sound such as ball b/a/l/l.
- Kindergarten children having a sound ability gives information about their reading skills and success level. Sound ability provides more information than IQ.
- It is possible to reduce special educational needs by increasing alphabet and sound awareness. 80% of children have special educational needs because of the difficulties in reading.
- It is necessary to be aware of sounds that are the smallest structure of words, consecutive syllables that consist of combining sounds and separate words that are composed of syllables.
- It is certain that the child who has a hearing impairment will find learning to read difficult. They also have a difficulty combining the sounds to written letters.
- One of the most frequently observed difficulties in reading that is seen in children and adults is the inability to read known words correctly and to be slow in analyzing or sounding out unknown words.
- The most "high risk" children in pre-school education who will probably face difficulty in reading are those children who experience difficulty in understanding the structure of sound, sensitivity about sounds and knowing letters.

- 80% - 90% of children who have difficulty in reading can have their reading level increased to the average level by early intervention programmes and prevention strategies. Research shows that educational arrangements are quite important in the acquisition of reading skills. When the teacher focuses on whole class reading activities the number of pupils who are found to develop negative academic and social behaviour is higher. In addition, it has been found that whole class intensive reading activities are more time consuming.
- Structures and arrangements should take part within an effective reading teaching programme aimed at the development of phonic awareness, reading fluency, word knowledge and comprehension skills.

When research is examined, it is seen that basic linguistic difficulties cause reading difficulties at all ages. Individuals who have difficulty in reading show weakness in phonological function, word recognition and fluency. Older pupils who have difficulty in reading avoid because their reading is slow, tiring and irritating. For this reason, it is more difficult to develop this skill in older pupils. They can't read so they don't enjoy it. Learning to read requires effort and it is not enjoyable for them. They are not familiar with literature, organisation of text, structure of words and sentences because they don't read much. Their comprehension skills decrease with time so difficulties in reading and writing increase.

Reading Difficulties in Pupils with ADHD

It is quite often anticipated that pupils with ADHD have difficulty comprehending and memorizing read material because they have a weakness in the administrative function of the brain and doesn't give the task attention. Even ADHD pupils without dyslexia aren't strategical readers and have difficulty comprehending the text although they have strong decoding, word recognition skills and they appear to have mastered reading. This is often referred to as "barking at print".

DYSLEXIA

- Approximately 30% - 60% of pupils with ADHD have certain learning difficulties. The most common one is reading difficulty. Some of the children may have difficulty gaining reading skill because of difficulties at certain periods of their development such as visual or auditory perception, short term memory, linguistic awareness and expressive language skills.
- Dyslexia is a language based learning disorder. It is defined as a specific difficulty where an individual has difficulty relating to reading and certain language skills. A pupil with dyslexia may have difficulty with other language skills like breaking the words into syllables, reading and writing. Recent research shows that 15% - 30% of the population has a reading difficulty to some extent. It is thought that 85% of this is dyslexia.

It is necessary to make a psycho-educational assessment in order to decide whether a child has a problem relating to specific learning difficulty or not.

The following points below are common difficulties for children and teenagers with ADHD and learning difficulties:

- ***Difficulty benefiting from meta-cognitive strategies:*** Benefiting from meta-cognitive strategies is a period relating to the self-assessment of a person by identifying problems in comprehending the read text. Many pupils with ADHD have difficulty at this period with connections to the administrative function of brain. In summary a pupil with ADHD who has reading difficulties means that they can't ask questions themselves listed below in order to continue active reading of the text.
    - What is the main idea?
    - What does the author want to tell in this paragraph?
    - What did it remind me of?
    - What will happen next?
- Another effect of a reading difficulty results from the administrative function of the brain having a weak memory that causes limited recall of read material. Weak memory affects comprehension of the text. (Some difficulties occur in some issues such as summarising, scanning and answering the questions relating to the text).

- Comprehension of the text is adversely affected because of the missing words and important details being omitted while reading.
- It is quite difficult for pupils with ADHD to undertake silent reading. They need to hear their own voice in order to maintain attention to the reading material.
- Pupils with ADHD have a weakness with structures and diagrams that will guide them and help them find the main ideas and important parts of text that they frequently read.

Many pupils with ADHD have difficulty in understanding, following the directions and maintaining their attention. For this reason it is likely that the following problems will occur in class:
- They have difficulty paying attention to the text and story while both are being read loudly in the class.
- When one of the pupils is reading loudly in the class following the read text with the others is difficult for ADHD pupils. Many of them may lose the line that is being read in the text because of poor attention. At that time, they are usually at the wrong page. They may have difficulty in following the reader if their fluency and tone of voice isn't engaging.
- Many ADHD pupils face difficulty while they are reading because of losing their train of thought. Namely, they may have difficulty in connecting thoughts that are related with their reading. Even they have early understanding and problem solving skills. Poor attention may block the processing of knowledge. This problem is increased if an especially difficult, boring or not interesting reading materials is given to the pupil with ADHD.

In Order to be able to Develop
Fluent Reading Skills for Pupils with ADHD

Reading fluently requires the ability to solve words correctly without fear of making a mistake. The automatic recognition of words while remembering them is necessary to be able to increase the speed of reading.

In order to be able to develop fluent reading skills :

Phonological education (rhyme, sound blending, segmenting, education relating to spelling and reading) should be overtly taught to ADHD pupils with difficulty in reading. Participation by and correct answers from these pupils in the class should be recognised and they should be encouraged to gain fluently reading skills.

Computer supported technologies (reading words from left to right and illumination) can be used to develop reading skills and decrease the inappropriate behaviours of the pupil with ADHD.

Practising reading aloud may be done to increase fluency. It is important in the class but it can also cause some problems. A story can be read to pupils in the class one by one. If the method of reading aloud one by one is used then pupils with ADHD may panic and they may try to guess their part and practise it. For this reason they can't understand the other parts read in the class. Because of that the teacher should read out loud, the text properly and show how it should be read. If the teacher calls on the pupil they read the same paragraph again. The teacher shouldn't force pupils on this issue, if they don't want to read out loud in front of the class and feel uncomfortable.

Group activities can be done. All pupils in a group or in class can read all together at the same time. This practise can be an excellent strategy that develops fluent reading if it is done with a short text that attracts the attention of the group. Reading the text with pupils is a method to be practised in the class. Different variations can be done such as just reading a line, only girls reading, left side of the class or the right side of the class.

Text can be read aloud in the class but missing some words in the text. Pupils can try to find them aloud in the class and fill in the gaps while they are following the text at the same time.

Mirror technique. Pupils follow the text from their course book or overhead projector and then they can read aloud. After reading part of the text like this they leave modelling and can read certain parts of the text without the teacher reading any.

Repetitive reading. Short and attractive text is read repetitively until pupils reach a certain fluency level. Mistakes that occur at the beginning on repetitive reading and within this context, progress in reading can be recorded on a graph.

- Paired reading. Firstly, pupils choose a partner for reading. It is explained that to begin with the pairs will read the text alone and then one of the pair will read aloud. After completing the reading the other one will read aloud. Usually one book is shared among two pupils in this activity. If the pupil is easily distracted when they use the same book, reading from their own book can be provided. Pairs will help eachother to guess unknown words in paired reading. They summarize their reading to eachother. The teacher can prepare questions that each partner can answer relating to the text.

- The teacher should support the pupil to read to younger children.

- If possible, it can be useful to sit the pupil with ADHD near to a pupil who has better concentration and who follows the lesson better.

- Teaching meta-cognitive strategies and techniques such as paired teaching, taking short notes and self-questioning can be useful for pupils. The pupil can maintain focusing on the text or subject by means of techniques that require active participation, thinking on what is read and providing answers.

- Pupils with ADHD can frequently face problems. For example, they can't visually focus on reading and they loose their place. These pupils can be encouraged to follow the text by using their fingers or rulers. Another strategy is to block a part of the page by using a card or paper. An alternative is to use thin, coloured and transparent plastic that gains the child's attention on the page and the reading of words. Some pupils can read the text by using a "window box". It helps to focus on the sentence that they read. The window that is opened to the middle of card can be cut to the wanted length and width.

- The pupil with ADHD can focus on the reading material more easily with selective attention techniques. One of the selective attention techniques is to teach spelling by using finger spelling method.

- Pupils with ADHD show an interest in stimulations such as colour. It is possible to attract their interest by underlining words with a colour. It is observed that the addition of colour can increase their spelling performance. The reason for this can be the attraction of colours.

- Use coloured cellophane overlays for the ADHD pupil, with or without reading difficulty, in order to know each word. It is stated that the colour blue is especially effective on this issue.

- Decrease noise during oral sessions in the classroom. While reciting the alphabet for ADHD pupils, noise at the back can result in more mistakes being made.

- Individual reading is critically important in order to provide fluency in reading. In order to feel pleasure while reading the pupil shouldn't see the book as to difficult, boring or a monotonous course tool. In order to have fluent reading the pupils' interest in reading should be developed. It is important to be able to choose books at different levels and to have easy access to them. For this reason

every school and class should have extensive libraries. The intention is that there will always be an interesting book for everyone regardless of their reading level.

One of the methods to identify whether a book is at an appropriate level for a pupil is '5 fingers'. According to this method the pupil reads a page from the selected book. When they face an unreadable word they raise their finger. If the number of fingers is more than 5 on one page it means that the book is not appropriate for that pupil.

One over twenty is another method. Choose a part from the book that is selected for silent reading. If the pupil makes less than one mistake per twenty words it means that the reading material is suitable for the pupil.
Excellent alternatives to books that provide enjoyable reading can be found for your pupils:

- Interesting and suitably illustrated books,
- Humorous books and comics,
- Cartoons and magazines,
- Books including colourful pictures and short passages of text,
- Music sheets of their favourite songs and poems.

Information can be obtained from libraries and bookshops about books that pupils enjoy.

Don't forget…

- Many pupils can have problems understanding language and words in books that are suitable for their age. However, they should have a chance to discuss and hear literary texts that challenge them.
- Even when a pupil has difficulty in reading and understanding words of the text they can take part in reading high level text by different types of reading and explanation techniques such as shared reading, reading aloud, teacher guided reading and paired reading.

In order to increase the range of words a pupil understands:

- Give the direct meaning of words.

- Describe meanings by using synonym or antonym words.

- Give examples of the word in context.

- Teach how to guess the meaning from hints in the rest of the text.

- Use word plays such as scrabble, word counter, word hunting etc.

- Form word walls or word banks in the class.

- Encourage pupils to use a dictionary.

- Read to the pupils.

In order to be able to Develop the Reading Comprehension Skills of The Pupil with ADHD

The prior aim of reading is to understand but frequently we are faced with the situation that many ADHD pupils can't remember what they've read and so they can't understand. Pupils with ADHD, even those who aren't diagnosed with reading difficulty, skip or miss the words and important parts of the sentences.

Pupils with ADHD prefer reading in quiet places in order to comprehend what they have read. They use active participation techniques such as underlining or note-taking, take coffee as a stimulant, very often they take a break or they repeat and read for understanding and memorise the material.

What can be done to develop reading comprehension skills?

There are many activities for developing reading comprehension before, during and after reading.

Before reading:

It is important to increase readiness or to activate preliminary knowledge of the reader related to the subject before reading in order to comprehend the text, develop an interest and motivation for reading. Those listed below can be done in order to help them:

- Link the reading material with experiences and past knowledge of the pupil. You can provide this by classroom debates, brain storming and collecting preliminary knowledge. (For example; what do you know about ….?)
- You can ask the pupils to list everything they know in order to activate their preliminary knowledge about the subject. Making a list will increase motivation for the reading material.
- Use interesting stories in order to develop comprehension skill of pupils, interest to reading can be increased in this way. Even let them prepare projects and read according to their interest.
- Arouse the interest of pupils in the subject before reading by using visual and concrete objects that address different senses about the subject. (Maps, music, photographs, video or DVD).
- Give time to students for reviewing key information in the text before reading. Reviewing or scanning is the first reading of the pupil that is done alone before individual studying and repeating the reading.
- Red coloured cellophane overlays can be used to develop reading comprehension skill for ADHD pupils with reading difficulty or not.
- Words that are difficult to understand can be discussed before reading. If silent reading is expected from the pupil at their desk it may be necessary to have new unknown words related to the subject on the blackboard or in front of the pupil.
- Magnify a page of the book and prepare transparencies of it. Take pupils near the overhead projector and teach reading by underlining.

- Highlighting the text that will be read with colour or underlying the text with colourful pens can help the development of comprehension skills.

While Reading:

- Split big text that will read into smaller parts. Encourage the pupil to complete only selected parts or sections.
- In order to encourage the thinking of pupils related to reading material, the teacher should teach them what will be done while reading and should model it. Self-questioning is important while reading. The reader should ask these questions to themselves. Where does the story take place? What is the problem? What will the character do next?
- Many of pupils with ADHD need auditory stimulation and they can't find meaning when they read silently. These pupils should read quietly in order to hear their own voice, maintain attention and find meaning in what they read.
- Teach pupils how to explain a paragraph, the main idea and important details in their own words. Some of the pupils can describe a paragraph or section and then record it as a useful technique.
- Teach the structure of course books to the pupils. E.g. the importance of bold or italic print, the title and sub-titles.
- Teach pupils how to find introductory and summary paragraphs.
- Teach pupils how to find the subject, main ideas and how to distinguish important details from unnecessary and irrelevant words.
- Give pupils "post-it notes" for taking notes while reading. They can take notes, write words and write questions about what they don't understand.
- Use story maps in order to help with the comprehension and memorisation of the text that is read. (Identification of main characters, place where story takes place, problem, events and developments). These maps are a technique that helps pupils to build causality and identify relationships.
- Support pupils to visualize and activate their imagination while reading.
- Guided teaching includes these stages; forming a goal, sharing preliminary knowledge, conducting estimations, a few minutes silent reading to give an answer to the question asked by the teacher and then giving a response, debating the answers that have been given.
- Reading can be divided into smaller parts in order to increase interest and attention to the text during individual reading. Restrict reading to a particular time. Reward pupils by giving a break after they read to a particular point.
- Use educational group activities like think, pair and share.
- Teach pupils to use meaning maps and classification methods in order to extract the main idea(s) and supportive details from the text.
- The ELVES method that covers all the suggestions listed above can be applied for developing reading comprehension skill. Actually, this method had been developed for listening comprehension but it is also an effective method for reading comprehension. ELVES is composed of bringing initial letters of 'excite', 'listen', 'visualize', 'extend' and 'savour'. Firstly, various questions are asked about the text and content of it by this method (excite). The goal of it is to extract preliminary knowledge of the pupil and motive them in the text. The

aim of ELVES is to develop the reading comprehension skill of pupils as they read the text. It is also read once more by the teacher and the pupil listens at that time (listen). While the pupil is listening to the answers to the questions they have a chance to compare them. After reading the text the pupil is expected to identify themes or draw a picture (visualize). After that, in order to give an opportunity to release pupil's thoughts with regard to the text questions are asked of the pupil. These questions enable pupils to reach a conclusion (extend). The purpose is to establish a connection between text and the accumulated information in the mind (What does it remind you of?). The last stage is to learn the text that was read and memorize (savour). It covers asking questions aimed at building connections between text and actual life on the one hand, text and pupil's own life on the other.

After Reading:

After reading strategies are used to require the pupil to think more deeply and discover the material that is read.

- Use after reading information to organise tables and graphic organizers.
- Make character analysis and in-depth discussions with regard to concepts or events in the text.
- Undertake writing activities after reading.
- Undertake extensive activities related to the theme and content of the text.

Different Activities to Make Reading Attractive

- ✓ The amount of homework can be decreased in order to help children to read more at home.
- ✓ Activities that develop creativity can be used such as to illustrate the book, turning it into a cartoon, preparation of a book divider or draw a cover picture.
- ✓ Poems are both appealing and readable materials for pupils having difficulties in reading. Attention can be caught in this way. A poem corner can be set up, poem days or parties can be organised.
- ✓ The teacher can require the pupil to a research a person whom they admire and make a presentation or write a letter after their research.
- ✓ The teacher can require the pupil to select a weekly list of TV programmes from a TV guide that they will watch. This sort of easy reading activity may be enjoyable for them.
- ✓ If it is possible, the translator or the author of the book that is used during the class can be invited to the classroom.
- ✓ Pupils often can be taken out to book fairs or exhibitions.
- ✓ Illustrative graphics linked with the reading process help the organisation of knowledge that is read and guides critical thinking. Examples in relation to the use of different illustrative graphics and techniques are presented below.

Framed Draft: These are draft copies of the read text that is prepared by the teacher and includes missed information. Pupils fill in the missing information in draft via reading or discussion. Prepared framed draft is shown by the overhead projector, in order to acquire this skill and the missing part is identified.
This part is an excerpt from…………………………………..
This character encounters with a problem in……………….
First of all, s/he……………………………………………
After………………………………………………………
Afterwards………………………………………………..
I guess …………………………………………………… in the next part.

Picturing the Tale: Divide a board or sheet into pieces. Require pictures or writing in the order of event in the tale in each box.

Story Maps: This graphic consists of vital elements of the story. (Place of the event, characters, time, conflicts, action, events and ending.)

Time Line: This technique is used to visualize the story chronologically.

Guess Table: Tables drawn for reading the story are named as guess tables. Pupils make a first guess related to the subject by looking at the title and case and quoting. During reading, stop pupils and ask what will happen next. Continue to ask questions, accept guesses and record. With this method, it is easy to see that the good reader is the one who continually guesses.

Venn Diagrams: Venn diagrams can be helpful to show differences and similarities among characters, books, index of events, subjects and events.

Flow Chart: It is used to organise a sequence of events in a logical manner. Generally arrows showing the sequence is used.

Comparison Chart: These are extended Venn schemes that indicate differences and similarities of more than two events, concepts, characters and themes.

5N Table: Having read an article or part of a text, pupils find out answers for 5N questions and they fill the answers into a table. (Who, What, Where, When and Why).

Favourite Part Graphic: The class describes one or more stages or a part of a book which is graphed. Each signs their favourite part on the graph. Counting individual signs, the most favourite part or stage is found.

Character Graphic: The name of the character in the book can be written in the center, while the qualities of that character can be written in the circle by means of arrows stemming from the center.

Wanted Posters: Pupils can prepare posters that identify the characteristic features of characters in the book.

Before / While / After Reading Technique: This technique is composed of a table divided into three columns.
- First Column: It denotes the facts known beforehand about the subject. This stage activates preliminary knowledge of the pupil. Ideas formed during brain storming by the class are registered.
- Middle Column: This column is what pupils want to learn and find out about the subject. Answers to the questions related with what is wanted to learn determines the aim of the reading.
- Third Column: The information learned from reading is placed into this column. (What did we learn column).

Question - Answer Relation: Different ways to categorise questions are taught to pupils by this technique.
There are three kinds of question type:
1. 'Completely there' questions: Answers to these questions are found directly within the text. Answers to these questions can be found immediately with simple comprehension.
2. "Think Search" questions: It is not easy to find answers of these types of questions. They are found anywhere within the text. It requires comprehending the text more deeply. It is necessary to comprehend the real message and intention of the text. Finding out the main idea of the text requires reading in detail.
3. "Self questions" are more abstract and answers may not be found in the text. These questions require reading beyond the text and having higher level thinking skills such as analysis, assessment and creative thinking. (What do you think reason for………………..? What kind of other solutions can you consider for this problem? can be an example of these kinds of questions.)

Summary: Summary is one of the most important reading comprehension skills. It requires the determination of the main idea. It is sometimes easy to find out and determine the main idea. Sometimes it is implied and hidden within the text.

Supportive exercises in order to explain using the pupil's own words, summarize the text by one or two sentences as follows:
- Pupils can summarize the text orally. (Explain to your partner what this paragraph is about).
- Summary of the text can be supported by graphic organizers.
- Pupils can write a summary sentence or a paragraph.

Text Structure of Tale: How the main ideas and supportive details are diagnosed is taught to the pupils. While the title gives the main idea and subtitles indicate major ideas in general. Not only to what extent a dictionary, content, index, table and graphics are used but also how to use scanning techniques of the text to find the answers are taught.

Hot Chair: In this activity, pupils volunteer to sit in the 'hot chair' becoming a character in the tale. Pupils prepare questions that will be answered by that character and these questions are answered by the pupil on the hot chair.

Reader Theatre: One part of the story is converted into dialogue and read aloud in the class as a play.

Literature Meetings: Groups meet in order to analyse the book after individual reading. Pupils are responsible for taking notes relating to what they read before the meeting with the group. Members of the group discuss the text by undertaking various roles. In line with the size of the group, these roles can be:
- Leader of the group (debate administrator): they are responsible for asking questions that require high thinking skills.
- Literary Intellectual Person: They are responsible for reading important parts of the memorable text aloud.
- Connection Founder: They are responsible for building connections between other and the present text.
- Word finder: They are responsible for finding meanings of unknown words.
- Artist: They are responsible for illustrating the text they portray.
- Summarizer: They stress key points of the present reading.
- Travel Agency: They are responsible for following where characters travel.
- Researcher: They are responsible for providing past relevant information, (author, geography, historical events).

Drawing Activities:
- A map or diagram of the story, event directory can be drawn.
- A poster that advertises the book can be prepared.
- A book cursor that includes pictures and symbols on one side a summary of important events at the other side can be prepared.

Design Activities:
- The pupil can identify the place of events and happenings by writing to a friend on the reverse-side of a postcard where events in the books are occurring as if they are the main character of that event.
- Using symbols a T-shirt that shows the personality of characters or events in the book can be prepared.

- Pupils can match the main events with words or pictures.

Writing Activities:
- A letter that describes the most exciting parts of the book can be written to a friend.
- A letter that shows what would happen if the main characters acted in a different way can be written.
- A new ending can be written.
- A TV advertisement can be written for the book.
- A journey diary that lists the places visited in the story can be written.
- A letter can be written to the author.
- A crossword puzzle can be prepared that includes characters and words in the story.

Presentation Activities:
- An original song can be presented related to the story.
- Telephone conversation that happens between two or more characters can be presented.
- A reader theatre that is prepared using a book can be presented.

**Many of the activities explained above, that have intention to develop the reading skills of pupils in this chapter are also useful in the development of other skills like writing and self-expression.

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ADHD & WRITING SKILLS
Improving Writing Skills of The Student With ADHD

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Why does the student with ADHD have writing difficulties?

How can I support and help the student with ADHD to improve their handwriting and written expression skills?

- Components of the Writing Process & Common Writing Difficulties Faced by the Student With ADHD
- Preparation and Organization Difficulties
- Memory Weaknesses
- Spelling Difficulties
- Impairments in Grapho-motor Skills
- Editing Difficulties
- Written Language Difficulties

- Strategies in order to improve writing skills of the student with ADHD
- Safe Writing Environment
- First Step: Improving Fine Motor Skills
- Establishing Writing Fluency
- Improving Written Expression and Editing Skills

- Strategies in order to motivate the student with ADHD to express themselves in writing

- Activities in order to make writing enjoyable

Components of The Writing Process & Common Writing Difficulties Faced by The Student with ADHD

Writing is not usually a favourite activity for children. The existence of so many rules which define how letters should be drawn, how the page should be laid out, how writing should be neat, what the rules of grammar are and spelling all reduce the appeal of writing. If teachers have high standards and have strict rules for writing then the students try to reach these standards and pay more attention to the rules and less attention to the meaning of writing. Teaching the standards and rules of writing are important but it is also important how they are taught.

Written expression is the most common academic area of difficulty among students with ADHD. Students with ADHD often have very creative ideas for writing an essay but often they have great difficulty writing their ideas down on paper.

Teachers usually complain that the students with ADHD have poor and messy handwriting. Students with ADHD have difficulty with taking notes while the teacher is lecturing and they have difficulty with copying from the board or book onto paper. They often have trouble keeping the notebook or worksheets on the desk appropriately. They sometimes write too slowly while trying to write neatly. Conversely, sometimes they write too quickly and rush through writing assignments so that even they can not read their own messy handwriting. While they are writing they may have trouble with observing the rules of grammar, they may join words to each other or have incomplete words. Teachers may assume that these writing mistakes may indicate the immaturity, disinterest or maladjustment of the child. They may believe that if the child has more writing practice their handwriting will improve. Asking the student with ADHD to rewrite the assignment typically does not result in better handwriting indeed it makes the handwriting worse. Long assignments and repetitions reduce the quality of handwriting.

Students with ADHD are aware of the low quality of their handwriting. The causes of having difficulties in writing are related to the student's incompetence in some areas. Therefore, there are numerous crossed out and then rewritten words on the pages of the note books of the student with ADHD. Because of these struggles with handwriting students with ADHD may feel frustration. This it is usually followed by withdrawing or aggression while they are writing. If the complexity of the task is taken into account and the complexity required for the written expression it is clearer why students with ADHD have problems with it. It requires using and integrating different functions of the brain and several skills, such as organization, self monitoring, spelling, motor skills, planning, memory and language simultaneously.

Common Writing Difficulties:

Preparation and Organization Difficulties: This is the most challenging and neglected step which requires abilities for generating, planning and organizing ideas

for students with ADHD throughout the whole writing process.   When students with ADHD are assigned a written task they mostly get stuck at this point. They may have trouble with what to write about, how to organize, begin, limit and focus on the topic. Sequencing of ideas, opinions will be written down is very important to organize writing.

Memory Weaknesses: Students with ADHD usually have difficulty with remembering. Long term memory is important for writing because students need to remember grammar, spelling, punctuation and words and ordering and sequencing of thoughts which are recalled from long term memory during the writing process. The working memory is also important. It requires keeping thoughts, opinions or information in mind long enough to remember to write them down.

Spelling Difficulties: Students with ADHD usually have deficiencies in phonological awareness and phonological processing that cause difficulties in learning letter sound correspondence or discriminating between letters. They have visual sequential memory deficits that cause difficulty in remembering and using words in a sentence in the correct order. They usually have poor spelling, especially for students with ADHD who also have learning disabilities such as Dyslexia. All those can cause mistakes in writing. Therefore, there are careless mistakes related to punctuation and the use of capital letters which are missing in sentences.

Impairments in Grapho-motor Skills: Most of the students with ADHD and learning difficulty have trouble with grapho-motor skills which makes the physical task of writing and the visual organization of the paper difficult. The following problems are related with grapho-motor skills; holding the pencil incorrectly, illegible writing, getting tired quickly and feeling down.   The writing skills of students with impairments in grapho-motor skills develop slowly and writing is very tiring for them. Hence students with ADHD prefer not to write italics.

Editing Difficulties: Students with ADHD have difficulties reviewing and editing their writing. They tend to hand in their writing assignments without revision because they think revision is boring and takes time. They are inattentive at finding and correcting mistakes.

Unsophisticated Concepts: They have unsophisticated concepts in some definite skills such as choosing and analyzing a subject to write about, generating new ideas and comparing these to previously learnt information, screening and synthesizing of it.

Written Language Difficulties: Students with ADHD can have trouble in expressing their opinions logically and coherently. Hence their writing assignments consist of simple and short sentences. Further, the difficulties experienced in different areas referred to above may cause difficulties in written language too.

Strategies in order to Improve the
Writing Skills of The Student with ADHD

Firstly Establish a Safe Writing Environment

Most of the students with ADHD tend to avoid writing because the feel anxious. When they eventually start writing they can not easily remember the words they want to write and they are usually afraid of being criticized by the teacher. In order to improve the writing skills of these students firstly the level of anxiety needs to be decreased. Even though having a safe writing environment in class is necessary it is not enough to make students good writers. It is just a precondition to improve their writing skills.

Trying to improve the writing skills of students who have difficulty in writing is not meaningful in a class which emphasises comparison and assessment. Writing skills can not be improved by focusing on mistakes, grading, comparing among students, blaming students for not being better writers or for not expressing their ideas better. Writing reasonable assignments which have grammar is valuable but the preferred aim of improving writing skills should have been to encourage students to explore their emotions and opinions, to generate sophisticated ideas and to express themselves openly and honestly.

"Acceptance" is the main element to ensure a safe environment for learning writing skills. Writing increases self awareness. Emotions and thoughts can come into the open and reflect the writer's thoughts through writing. In this regard, writing is a crucial practice for individuals to face themselves. Writing activities can be done individually or in a group. Students can appreciate the impact of their writings on others during group work. They can improve their writing skills through working, producing and enjoying the task together. Teachers can learn more about students from their writing. It helps teachers to appreciate changes in students' emotional and intellectual life, in this way it also helps teachers to communicate with students better. Moreover, improving writing skills by sharing and accepting thoughts and feelings in written assignments, reading or listening to other students' work and being understood by them increases the students' self esteem.

Teachers should consider and be sensitive to student's anxiety about writing. Students may feel they are unable to write or they are embarrassed about their messy handwriting. Teachers should not show the student's writing to classmates without getting their permission and not force them to agree. Teachers should allow them to share their work when they are ready to do so and should avoid making them feel embarrassed.

First Steps:
Strategies to Improve Fine Motor Skills

The small muscle movements required in writing can be weaker in children with ADHD compared with their developmental stage. Hence they frequently avoid handwriting and their handwriting is messy or illegible. Students with ADHD may also have a co-existing learning difficulty called dysgraphia. The following are some of symptoms which can be seen in students who have fine motor difficulties:

➢ Difficulty holding and positioning their fingers on a pencil is caused by difficulty controlling grip and release.

➢ Messy or illegible writing is caused by difficulty controlling motor movement.

➢ Uncompleted assignments result from their slow speed of fine motor movement.

➢ Difficulty putting pieces in the correct place in games such as dominoes and puzzles caused by difficulty griping and releasing.

➢ Difficulty copying and designing.

➢ Pencil lead breaks frequently and pages are torn off because of exerting lots of pressure while writing and difficulty controlling their strength.

➢ Difficulty with clothing such as with buttons, tying string or shoelaces and pulling up and down a zipper.

➢ Preferring outdoor activities.

➢ Clumsiness, irritability, frequently dropping down or breaking objects.

➢ High muscle tension while doing fine motor tasks.

➢ Illegible writing even when they have enough time and having paid attention.

➢ Inconsistency in letter size, shape and formation.

➢ Pen and paper held in a strange, awkward way.

➢ Wrist is held in a strange, awkward position.

➢ Thinking aloud or watching their hands' moving while writing.

➢ The content of the writing does not reflect the student's present language expression skills.

Activities for Improving Fine-Motor Skills:

⇒ Do finger warm-up exercises. E.g. open / shut, snapping, touch each one at a time to the thumb.
⇒ Roll out and form clay or play-dough into snakes and other shapes.
⇒ Squeeze a stress or squishy ball to build strength in the hand muscles.
⇒ Allow students to help you to do activities requiring the use of paper clips or clamps on objects.
⇒ Do activities with small Lego pieces.
⇒ Use Jigsaw puzzles.
⇒ Do stringing, lacing and threading activities such as making necklaces.
⇒ Learn how to knit or crochet.
⇒ Sort small objects such as buttons or dried spaghetti.
⇒ Pick up small objects with tweezers and tongs.

Strategies and Activities for Teaching Hand Writing and Improving Legibility

⇒ Teach the appropriate pencil grip in the early grades. Teach the appropriate position for making hand and wrist movements easier for writing.

⇒ Encourage students to have an appropriate sitting position, posture and the anchoring of paper while writing. Teach students to keep their paper stable with their non-writing hand or arm to keep it in one place while writing.

⇒ If the student struggles to hold and manipulate a pencil there are a variety of pencil grips that can be used to make it easier. E.g. triangular plastic, moulded clay and a soft foam cushion that slides through the pencil)

⇒ Have students trace letters in sand or salt trays using their fingers while speaking the letters sound or name.

⇒ Have the student write letters on their neighbours' back using their finger and ask them to guess it.

⇒ Use special paper with extra space and vertical lines to help space letters and words appropriately, if needed.

⇒ Make sure there is always a sufficient supply of sharpened pencils and erasers available.

⇒ Have realistic, mutually agreed expectations for neatness and legibility. Make sure that the student understands the standards of acceptable work. Those standards may be; writing their name and date in a specified place or using a definite type of paper or pen. The teacher should be able to reduce the level of expectations for writing, if needed.

⇒ Say words slowly while dictating to help the students realize the order of sounds in words.

⇒ Provide a strip or chart of alphabet letters (print or cursive) on the student's desk for reference regarding letter information. .

⇒ Practice the correct letter formation by tracing letters written on a variety of textures. E.g. carpet, paint or sandpaper.

⇒ Use an overhead projector to model letter formation (print or cursive) or create a pattern in words by colouring in.

⇒ Write letters in the air with large muscle movements while giving a verbal prompt. Holding the student's wrist, write in large strokes in the air while talking them through the strokes. For example, with the letter B, give the following instruction:
  ▪ Start at the top.
  ▪ Straight line down.
  ▪ Back to the top.
  ▪ Sideways smile. Sideways simile.
  ▪ Then repeat without guiding the student's hand but observe that the formation is correct.

⇒ Allow students to speak aloud during writing to describe their actions as writing letters down can help students to pay more attention on the task.

⇒ Provide sufficient time and information to learn letter formation. Use gestures, body language, exaggeration and models to do it such as writing letters in the air with exaggerated strokes and gestures at the front of the classroom.

⇒ Provide interesting visual or auditory prompts through directions to teach letter formation such as defining the strokes to write letters by referring to imaginative body shapes between the lines on graph paper. E.g. the head is on the top line, the belt is in the middle and foot are on the bottom line.

⇒ Provide students with sufficient time to write in order to avoid time pressures.

⇒ Provide a lot of practice at home and school when students are learning how to print or write in cursive script. Observe carefully as students are practicing and intervene immediately when you notice errors in letter formation. Gently correct if you observe students making the strokes incorrectly, bottom – to - top rather than top – to – bottom and circles formed clockwise rather than counter-clockwise).

⇒ Inform families about how the letters are being taught in class so there can be consistency at home.

⇒ Don't force the student to write in cursive script unless it is really necessary.

⇒ Encourage the student to use a computer.

⇒ Ask students to check and correct their own mistakes in their writing and to circle correct words or letters.

Strategies for Establishing Writing Fluency

Firstly efforts should be focused on **sentences**. Teachers can start out by asking students to write a few sentences every day about a picture, a cartoon, an interesting paragraph or a short story they read to the students.

Then efforts can be focused on **paragraphs.** Students need lots of practice with writing in paragraphs before writing a few paragraphs in an essay. The teacher can choose a subject to discuss for this practice such as asking students why we can not drive a car without a license. Then they can write transition words such as firstly, secondly, thirdly and finally on the board or on a poster. Then they can call on a student to volunteer to use a transition word at the beginning of their short speech. For instance the teacher can ask why getting a license to drive is necessary or important and ask students to begin their responses with those transitions words. This method can help students to learn more about the subject and to learn how they express their opinion about the subject through paragraphs.

Teachers should gradually increase the length of writing assignments. Next, students may begin writing at least one brief paragraph four or five times a week.

After writing fluency is achieved then improve the grammar, spelling and punctuation.

Students should be encouraged to write in a journal. Students may feel freer to write in a journal than to speak and they can express their opinions more frankly. Teachers should tell students to write two sentences about what they are feeling or thinking at that exact moment. After reading from an inspirational book, showing an interesting picture or watching a movie students' can briefly discuss it then they can write their opinions down. This kind of activity and practice can encourage students to write in their journey.

Teachers should model skills for students. Teachers can write poems or essays with students in class and take students through the process step by step while using an overhead project. Students can contribute to the essay by brainstorming and giving suggestions for topics identifying four to five paragraphs developing supportive sentences for each topic and writing an opening and closing paragraph. After the teacher models these steps in class the students can complete the same steps for their own personal essay.

Modify assignments:
— Give extra time for written assignments and essay questions in tests.

— Reduce written work. Shorten assignments. Expect answers to essay questions to be brief, comprising of only a few short sentences.
— By-pass writing. Use other means of communication such as a recorded or oral report, a project instead of a written report or multiple - choice or true - false tests.
— Allow students to write with a pencil to feel more comfortable because of frequent errors and rubbings out.
— Provide opportunities for students to write a report cooperatively in a small group. Students may be assigned different roles such as researcher, barnstormer, proof-reader and illustrator.
— Provide opportunities to write different types of written assignments such as essays, poetry, science fiction stories, tales, scenes, anecdotes or graffiti.

Modify testing and grading.
— Teachers should avoid criticism and be sure feedback is focused on the task not the child. Students' writing should not be compared each others'. Students should not be forced to agree with the teacher's opinions. Feedback should be expressed in a positive way even for low level achievements.
— While improving students' writing skills they should gradually share their work with their classmates and get feedback from them.
— Teachers should not grade early work. They should not grade the content but simply give the student credit for completing the assignment. Too much criticism early on is terribly discouraging and may result in the student giving up.
— Next, focus on the content but do not deduct marks for spelling or grammar errors initially. Errors can be marked by the teacher and then the students can revise and make corrections. In addition the teacher can give the student a word bank with the correct spelling of key words to be incorporated into the essay.
— One aspect of the essay can be chosen to being marked. For instance the teacher can grade the students only on their use of verbs, nouns, spelling or capital letters. The teacher should tell the students in advance so they will know which part to review most carefully.
— The teacher can give the student two grades and an average for each essay. For example, if grammar, spelling, and punctuation are being graded one of the grades can be given for creative content and the other for grammar, spelling and punctuation. Then the two grades can be averaged. Additionally, the students' effort and motivation should be considered for grading.

Students should be encouraged to use technology. Students' with ADHD should be encouraged to use computers for written work as early as possible. In addition students can be taught how to use the spell and grammar check as part of the computer program.

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Instructional Strategies and Techniques to Improve Skills for Writing and Editing an Essay

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What can teachers do to improve the written expression of students with ADHD? Most of the students with ADHD usually have difficulty with written expression and writing essays. The writing process requires the integration of several brain functions such as language, attention, memory, sequencing, organization, planning, self monitoring and critical thinking. Teachers usually expect students to achieve high standards in a range of different types of writing. Unless it is not a realistic expectation the following steps and suggestions can be helpful to students with ADHD to improve their written expression.

Strategies to Help Preparation: Preparation is a critic stage in the writing process. It requires generating ideas and deciding how these ideas will be expressed, organized and planned before beginning to write.

- Brainstorming sessions before writing can be challenging for many students with ADHD because of the topic selection and the need to generate ideas to write. Teachers may help the students to start generating ideas.
- **Brainstorming** sessions should be short and should not be longer than 3-5 minutes. During the session students can call out whatever comes to mind related to the topic while someone else records all the ideas.
- **Quick writing:** The teacher can give students 1-4 minutes to write down everything they can think about related to the given topic and can model the same uninterrupted writing along with the students at this time. Students can share these ideas with each other and the teacher by writing them on Post It notes. Students should not give positive or negative feedback.
- **Writing Topic Folders:** In order to improve their readiness for the upcoming writing topic teachers can have students keep a folder, card file or notebook about the topic including places they have visited, jobs they have done and other relevant information.
- **Reference Books and Writing Prompts:** In order to support students to generate ideas teachers can give out reference books including mysteries of nature, airplanes, music, astronomy, mammals, dinosaurs, sports, fashion or provide stimulus, such as poems, stories, songs, pictures, cartoons or headlines, to groups of students. Additionally, keeping a file of pictures from magazines, old calendars, postcards and so forth can help to offer students a variety of sample topic sentences, story starters, and writing prompts when they are struggling for an idea.
- **Self Questioning:** Teachers should teach students to talk themselves though the planning stage of their writing by asking: "Who am I writing for? Why am I writing this? What do I know? What does my reader need to know?"
- **Telling Personal Stories:** In cooperative groups students can be asked to orally respond to prompts by telling personal stories. These can be about, favourite meals, a challenging situation they experienced, activities they

have done with friends or siblings, favourite books or favourite movies. After telling the story orally and sharing them in small, cooperative groups the students can write a rough draft or an outline of the story they have told.

- **Tape Recorder:** Teachers can encourage the use of a tape recorder with some students so they can articulate what they want to say before transcribing their ideas onto paper.
- Generating questions, formulating and organizing thoughts and recording them on paper are necessary for writing a story. In order to do these writers can ask themselves the following questions before they begin to actually write.
  - Who will be the characters, and what will they be like?
  - What will the setting be, its time and location?
  - What will the main problem be?
  - What is the plot and action?
  - How will the problem be solved?
  - What will the ending be?
  - Will the main character have changed in some important way? How?
- Teachers can ask students to describe a situation or an activity step by step.
- **Graphic Organizer:** Following graphic organizers can help students with difficulty in writing to formulate and organize their thoughts.
  - ➢ **Mind mapping:** Draw a circle at the centre of a page. The topic is written inside the centre of the circle and related ideas are written on lines stemming from the circle.
  - ➢ **Diagrams:** For example, Venn diagrams can be used. The diagrams are graphics of overlapping circles that show a comparison between two or three items, topics, characters or books.

Strategies for Building Skills In Written Expression

- **Organizing written ideas by brainstorming**
  - All ideas about a topic can be brought together in a group. Some key questions such as what, when, where or who can be considered to form groups. Alternatively, groupings can be done by considering the pros and cons of the topic.
  - If ideas in brainstorming were written on a computer then all the ideas can be classified on screen by cutting –pasting.

- **Providing opportunities to facilitate writing.**
  - Teach students figurative language. Ask students to find out and list metaphors, similes, personifications and analogies either individually or in groups. These activities help students to create their own figurative language. In addition, word games and activities using these metaphors and analogies can be another enjoying activity.
  - Ask the students to imagine something and describe it in detail. For example, ask students to picture in their mind a happy moment from their childhood and go on the instruction by asking questions focusing

- on: where they are, what does it look like, who there are, what was the time of year and the time of day.
- Teach words which signal sequence, transition and phrases. E.g. first of all, to begin with, furthermore, meanwhile, subsequently; however, consequently, in addition, therefore, so, as a result; I suggest…. and I believe… Display these words for reference or provide a copy on the student's desk.
- Essay organizers can be used especially while working with students who are just beginning to learn to write. Usually information listed under "who, what, when and where" sections is included in the first paragraph of the essay. Information under "why and how" is expended to provide the main paragraphs of the essay. These question sections can be numbered to indicate their order in the essay.
- The teacher can help students to use alternative words rather than frequently used words. Word banks including ordinary and uncommon words can be used for this purpose.

Words cost 1 Cent	Words cost 1 Euro	Words cost 5 Euro
Run	Race	Skedaddle
	Fast	Slippy

- Teachers can ask questions regarding the five senses to help enrich the essay. For example: These can be about memories.
  Sight: What do you see? Who else is there? What are you wearing?
  Smell: What do you smell? E.g. Food or granddad's after shave.
  Taste: What do you taste? E.g. Salty tears or cake.
  Hearing: What do you hear? What does it sounds like? E.g. Music or the buzz of talking.
  Touch: What does it feel like? E.g. Rough, smooth, cold or soft.
  After the student has written this material ask them to go back and add to adjectives to each sentence.

Helping Students with Editing Their Writings

For the students with ADHD the editing stage of the writing process, revising and proof-reading, is very difficult. Because they have struggled to write the first draft many are reluctant to make changes. The editing stage requires revising, adding or eliminating information, making corrections, redesigning sequences of sentences or paragraphs to create better expression.

- Teach students editing skills. Firstly, the teacher can make transparencies of an anonymous student's unedited work or they can use teacher generate examples of writing with errors in the use of capital letters, punctuation and so on. Then the students can then edit the piece of writing as a group.
- Teachers can provide opportunities for students to read each other's writing and let them think about it and share their opinions on it such as what they like and what may need to be improved in the writing.
- Teachers can conduct a teacher-student writing conference. The teacher can provide feedback, the student can reflect on their own work and both share what they like about the writing. The student's self-evaluated improvement can be supported in the conferences. "My writing has improved in ……………. e.g. sentence structure, use of paragraphs, fluency, creativity, organization, use of capital letters, punctuation, and spelling."

- The teacher can hand out examples of writing with errors for editing and require the students to make changes and corrections.
- If the students have recently learnt to write teachers should not make to many corrections on their work because it can make the students feel frustration and it makes them avoid writing the next time.
- Use computers to make editing and revising easier. Encourage students to write on the computer and teach the editing tools and options on a word processing program.
- Teach editing symbols and provide a reference chart e.g. insert, delete, capitals or new paragraph.

Helping Students in Evaluating and Refining Their Writing
- Provide students with a self-editing checklist. The following are sample questions which may be included. The list can be modified by selecting some questions that are appropriate to the age and developmental stage of the child.

    ♦ Did I use complete sentences?

    ♦ Did I begin all the sentences with a capital letter and end these with a final punctuation mark?

    ♦ Have I used capital letters for all proper nouns?

    ♦ Have I checked all my spellings?

    ♦ Have I indented my paragraphs? (If that is the required format).

    ♦ Are verb tenses consistent?

    ♦ Is the paper neat and organized?

    ♦ Have I used adequate spacing?

    ♦ Did I erase carefully?

    ♦ Is my writing legible?

    ♦ Have I given enough information?

    ♦ Have I started with a title or a main idea?

    ♦ Have I identified my audience?

    ♦ Is the introduction interesting?

    ♦ Is my beginning interesting and exciting?

- ♦ Did I develop my ideas logically?

- ♦ Have I left out any important details?

- ♦ Did I stick to my topic?

- ♦ Have I presented my ideas clearly?

- ♦ Are the ideas in the right order?

- ♦ Have I given details and examples for each main idea?

- ♦ Have I included enough facts and details to support my subject?

- ♦ Have I given enough information to my readers?

- ♦ Did I use descriptive words to make my writing interesting?

- ♦ Do my paragraphs have a beginning, a middle and an end?

- ♦ Have I chosen the right words?

- ♦ Does my writing flow smoothly?

- ♦ Do I need to insert, move around or delete any ideas?

- ♦ Did I write an interesting and powerful conclusion?

- ♦ Did the conclusion restate the main ideas mentioned in the introduction?

- ♦ Have I achieved the purpose for my writing?

- ♦ Have I mentioned all I need to say?

As Last Words

After the students edit their work and have a final version;
- The students should be encouraged to share their work with classmates, and ask if they want to read it aloud in front of the class.
- These writings can be displayed on boards or in a classroom journal.

Strategies for Encouraging Writing with The Student Who has a Difficulty in Writing

- Don't forget that students with ADHD, compared with their peers, take more time to finish writing tasks. Therefore, reduce the length and frequency of written tasks and give reasonable amounts of homework.
- Reduce the need to copy from the board or from books.
- Teach students note-taking strategies, including abbreviations, in order to increase the speed of their note-taking. For example; positive= +, homework= hw. While students take notes, emphasize the main points and remind students to record these.
- Give project based work that does not require writing this may include oral presentations, demonstrations, constructing, building, drawing, singing, dancing and so on.
- Give both oral and written examinations and then average the two results.
- Provide note-taking assistance by assigning a buddy who will take notes, share and compare with the struggling student.
- Provide worksheets with extra space and enlarge the space for doing written work.
- Provide time, in class, to get started on assignments.
- Provide extra time to complete the written assignments and written examinations.
- Teach keyboard and typing skills.
- Teach editing tools and options on a word processing program.
- Permit and encourage "reading to yourself" or talking out loud while writing as auditory feedback often helps the student to stay focused and self-monitor.
- Permit the student to use the letter formation which is preferred by the student, either printing or cursive.
- When the quality of writing is low teachers may ask the student to rewrite it assuming that this will help the student to achieve higher standards in writing. Indeed, typically this results in worse writing in assignments for the students with ADHD, but not for all students.
- Instead of rewriting the assignment which increases the amount of written work allow typed work or oral responses. Choosing a motivating subject to write about can be more practical.
- The colour of paper typically has a positive impact on the student with ADHD to stay focused on writing. Therefore, colourful papers can be preferred for writing on instead of white ones.

Writing Activities to Motivate Students to Write and to Make Writing Desirable

Teachers can provide creative writing activities to motivate students to write more creatively. Students can write anecdotes, poems, scenarios, jokes, articles, science fiction stories, plays or graffiti. They don't need much equipment to write creatively, indeed a paper, a pencil, nature, imagination, memories, observations and so on are all they need.

✓ For example, teachers can give the following instruction when writing to create suspense, she "slows down the moment" by asking students to go slow and raise doubt.
  "She heard someone in the house."
    — Describe the sound.
    — What is she thinking?
    — Has she smelt something different? Did the smell trigger a memory?

✓ With poetry, students can learn to use imagery and paint pictures with words.
    — Students can act out poems in the class.
    — Teachers can provide prompts as inspiration to write poem. For example, the teacher can give the students a theme for their poetry. The theme can be about everything. For instance, it can be about fruit. The teacher can bring a bowl of fruit. She can pick a fruit and then talk about what it is like on the outside and on the inside. Students can look for parallels between the fruit and key events in their lives. Then the class as a group can write a poem about a fruit and the mentioned events.
    — Students can write poetry that is inspired by other famous poems.
    — Students' poetry can be published in school or in the classroom.

✓ Trips can be used to encourage writing. Interesting characteristics of nature can be talked about during these trips. Teachers can motivate students to generate absurd, nonsense or funny opinions. The funny journey can help students learn so many things to write about. After the trip, the teacher can ask students to write poems or stories about what they have seen.

✓ Museum trips can be used for creative writing activities. For example, after the trip, the teacher can ask students to write about if they were a particular item in the museum, how their life would have been in its original time and space.

✓ As a group the class can write a story.

✓ The teacher can give a key word, such as butterfly, and then ask students to list words which the key word has inspired. Then the teacher can ask students to write a story using the listed words. The teacher can determine unique rules for the activity.

✓ Students can watch a small part of a movie in the class. Then the teacher can ask the student to guess what will happen next or they can ask the students to write a new scene including a beginning, middle and final part as if they were a character in the movie.

✓ Students can write about a subject while listening to music or looking at photographs.

✓ The teacher can give students worksheets and then ask them to draw lines to separate the page into 5 parts. Then the following titles are given for each part.
  ▪ Gender
  ▪ Appearance
  ▪ Personality
  ▪ Occupation
  ▪ Hobbies
Next the students write adjectives in each part, they cut the papers to separate the written adjectives from each other. Then the adjectives under the same title are collected in five titled envelops. All students draw a piece of paper from each of the envelopes in order to make up an imaginary character and write a story about him or her.

✓ Students can write stories about their dreams.

✓ The teacher can ask students to finish an incomplete sentence about any subject and then ask them to explain it. The teacher can encourage the students to do it in unexpected, absurd or funny ways. Activities to generate statements are enjoyable because these statements can be full of surprises.

✓ Students can write interesting slogans or ideas for advertising any goods.

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DEVELOPING THE SPEAKING AND SELF EXPRESSION SKILLS OF ADHD STUDENTS

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- What Are The Difficulties ADHD Students Face In Expressing Themselves?

- What Can Be Done To Develop Speaking and Self Expression Skills of ADHD Students?

- Speaking and Self Expression Skills

- Difficulties ADHD students face in expressing themselves
    - Difficulties in Expressing Emotions and What Can Be Done To Overcome This
    - Expressing Yourself Well
    - Encouraging The Development of Speaking and Self Expression Skills
    - Creating a Confidential Atmosphere To Develop Speaking And Self Expression Skills
    - Points To Be Considered

- To Reduce The Behaviour of Interrupting and Impatience (Lack of Tolerance In Waiting For Their Turn)

- To Reduce Mistakes In Sequencing And Accuracy During Speaking

- Things That Can Be Done To Use Verbal Communication In Class And Encourage Students To Attend

- Example Activities To Make Speaking More Attractive

Speaking and Self Expression Skills

One of the most important skills that discriminate human being from other living creatures is the complex structured language that we use and our ability to use language efficiently in order to communicate. Speaking is widely thought to be synonymous with language and used in this way. Speaking is the way that is most commonly used among human beings to communicate.

Babies are adorned with language acquiring tools. With the help of these tools, which is the basis of verbal language speaking, babies acquire the ability to use their mother tongue which is common to the community they live in efficiently in a comparatively short time, roughly 4 or 5 years, however the language has complex codes and grammatical rules.

Babies' vocalizing their first words is really an exciting milestone for both the baby themselves and their parents. All the attention is focused on the baby and they are rewarded by learning to speak. It is so natural that babies are willing to speak after this because they receive lots of verbal stimulants and motivating reactions. These first words are recorded by the parents and the list gets longer during the baby's developmental process. Listening and speaking effects children's language acquisition process in a positive way. Listening and speaking also functions as an important learning tool both at school and out of school as well.

Difficulties we face in expressing ourselves to others may trouble us. As communication includes both speaking and listening, children should be aware of the importance of this issue throughout their whole life.

As language is acquired naturally, then why do children not show the same willingness to use and develop language as they grow older? Actually some children may be very shy and decide to stay silent instead of speaking in front of the class. The first step of having self confidence is to communicate well with people. This skill is not congenital, it is acquired over time. As we show respect to the children's style of expressing themselves and their personality, we should also encourage them to participate in language and express themselves.

Difficulties ADHD Students Face in Expressing Themselves

First of all, we should be aware of the strengths of ADHD students. These children have a higher ability for telling spontaneous, creative and more factual stories than their peers. This may be related to how much they are interested in the topic, but despite their ability, ADHD students still make mistakes with making long and organized speeches. When communicating socially impatience and interrupting behaviour may be evident and observed with ADHD students.

Social communication consists of social language functions and social behaviour. Social language is the highest level language and is a complex structure in many ways. Children who have trouble in social language are mostly misunderstood because they have difficulties in using proper words and proper intonation. They speak aggressively although they don't intend to be. They may speak in a disturbing and aggressive way. These children may not be able to understand that their speaking style leads to their friends rejecting them.

Talking too much is an important indicator which is commonly seen and used as a criterion for diagnosis ADHD. No matter how talkative these children are they have trouble in starting or continuing a verbal communication appropriately.

Example: ADHD children may fail to join in a game with others. They may try to join in the game using expressions like "I already know how to play this game" or "I can do a better job than you can, let me show!" in a cold and destructive way.

Social Language Functions :

1. **Expressing Emotions:** reflecting the emotion with intonation and the expressions used

2. **Choosing a Topic and Continuing With It:** ability of recognizing when, about what and how long to speak

3. **Communication Technique:** ability of discussing socially and sharing the communication

4. **Regulating Sense of Humour:** ability of using humour in the proper time and situation.

5. **Request Skill:** ability to ask something in an appropriate way.

6. **Complimenting:** ability of complimenting others and sending positive messages.

7. **Changing Code:** ability of conducting your speaking style according to the person you are speaking to.

8. **Emotional Matching:** ability of matching the mood with other people by using language. By this way people can prevent remaining serious when other people are talking abut something funny.

ADHD students have trouble in most of the language functions explained above.

Difficulties In Expressing Emotions And Things That Can Be Done To Overcome These

Man's ability to express how they feel is an important skill. ADHD students have difficulties in being aware of emotions and expressing them. They may decide to hide their feelings instead of showing them although this is necessary. They may also experience emotional upsets at inappropriate times and situations. It is important that children should be encouraged to express how they feel from early childhood. Parents and teachers should behave as models to students on this matter.

- Help students to be aware of their emotions. Ask them about their emotions. Share the emotion you sensed without judging or commenting on it. Use expressions like "You look aggressive, is there anything making you feel like this?" instead of saying "Why are you so aggressive?"
- Create an atmosphere in school where students can share their emotions. You should also behave as a model by expressing your emotions. Be sure about using "I" language in doing this.
- Help your students to be aware of their share in any problems. Tell them that the responsibility for their violent temper is theirs and not the thing they have done.

Expressing Yourself Well:

Acquiring self expression skills will help your students who have trouble in expressing themselves. This will raise their self confidence and will make them feel valuable. In order to make your students express themselves well teach them;
  o Their rights,
  o Expressing their opinions efficiently,
  o Praising and receiving compliments,
  o Criticising in a positive way,
  o Being tolerant to criticisms.

Encouraging Your Students To Improve Their Self Expression And Speaking Skills

Students should be supported during the time they are in class with speaking activities. The activities should be entertaining and the students should get support in attempting these activities. Verbal language is very important in class. Our primary target should be to make everyone express themselves and enjoy doing it. Today's classes should be created as environments in which communication is continued, lively discussions are held, entertaining conversations are shared instead of keeping students inactive attendants and just listeners. Students may be helped to express themselves by some entertaining activities in class.

Creating A Secure Environment In Order To Develop Speaking And Self Expressing Skills

Teachers should be sensitive to anxiety and annoyance that many people may feel when speaking in public. The teacher should also provide a classroom environment in which students feel secure. If the classroom environment is secure then students can trust their classmates and teachers.

Opportunities should be provided from the very first day of school to make students feel relaxed about public speaking. Activities that are explained below may be considered as short and effective examples for making students experience speaking from the very first day of school.

- Divide the class into two groups, A and B. each student has to get answers to the questions they hold. For example: "What kind of music do you like?" What do you like doing in your spare time?", "What is the thing you like most at school?" Each student answers these questions and listens to the answers given by their partners. When one of the partners gives an answer the other must take short notes. Students introduce their partners to the class using the notes they have taken during the day. This situation may cause anxiety for some students. To prevent anxiety, before starting to speak we should explain to the class that things said by students are important for us and should be listened to carefully.

- The teacher should provide an environment in which every student gets respect and feels secure. The teacher may create a game on the first day of school like this: "I think I'm really good at......., but I need to develop myself in ...."

At first when the teacher speaks about themselves using the expressions above students understand that their teacher has strengths but they also have some weaknesses. Later students may be encouraged to express themselves with similar expressions. Students may be encouraged to speak about their strengths and weaknesses in two sentences.

Points To Be Considered

✓ Share student's work and encourage them to speak about what they are working on.

✓ Give positive feed back to the child's attempts at speaking and encourage them. Never interrupt or be unwilling to listen.

✓ Do not assume that students who keep silent and do anything the teacher asks them quietly are your best students. Encourage these students to speak and participate in discussion activities.

✓ Consider the students level of understanding when speaking and adapt your speech to their level. In order to teach complex structures use the sentences you get from students and extend them.

✓ Do not forget that their speaking ability cannot be developed by only listening. Students can develop speaking rules and their vocal discrimination ability with both speaking and listening activities.

✓ Make efforts to get the students' attention for a conversation. Talk about topics that interest the student and they like. Do not forget that if you do not create a common interest with the child the conversation would turn into a monologue.

✓ Correct mistakes that children make during speaking in a way that does not to embarrass the child. Repeat their wrong or incomplete words or sentences correctly.

✓ Always remember that the most effective way of making students successful is making them feel they are successful. In order to provide this do not hesitate using expressions like "well done", ""fine", "good job".

✓ To keep conversation functional always use language in its real context.

✓ Talk to students about things they do, games they play or their experiences.

In Order To Reduce Mistakes ADHD Students Make In Taking Turn and Interrupting :

✓ Stress that it is not possible to listen and speak at the same time. Develop students' turn taking habit.
✓ Teach them how to behave and what to say when interrupting a speech. Teach them expressions like "Excuse me….I'm sorry for interrupting but……"
✓ Give more opportunities for talkative students to talk, answer and explain their opinions. Give opportunities to ask questions to the speaker or to make comments.

✳ **To reduce mistakes in sequencing and accuracy of speech:**

- ✓ Ask students what the topic is that they are going to speak about and what it is about.
- ✓ Tell students to list the words they are going to use chronologically or in importance sequence.
- ✓ Encourage students to organize activities like a picnic, party or excursion. Guide students about the preparations in planning the activity. For example; what is needed, scheduling, planning what to do, choosing and cooperating with people or organizations who can provide support or sponsorship, getting a map and budgeting. Then make your students present their preparations to small groups or the class.
- ✓ Teach your students to prepare an outline of their speech or how to plan it. Students may organize their ideas by spatial intelligence. For instance they may divide a piece of paper into three columns before the speech with the main points in the first column, supporting ideas to the next one and questions about the topic in the last one.
- ✓ Encourage your students to provide feedback on the speech and situation by using visual reminders. E.g. gestures, mimics, touching their shoulder when it is their turn.

Using Verbal Language in The Classroom and Things That Can Be Done to Encourage Students' Attendance

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Using the following verbal language skill activities may be helpful
- Videotape presentations,
- Record students so they can listen and evaluate themselves,
- Matching verbal language applications,
- Mutual verbal language applications of younger and older people,
- Spontaneous and informal role plays,
- Small discussion groups on speaking and writing,
- One to one reading and writing activities between adults and children,
- One to one reading and writing activities between student and student,
- Radio theatre activities,
- Puppet games,
- Presenting a memorized poem or presenting it through drama,
- Interviews,
- Cooperation groups,
- Speeches structured for different purposes,
- Talking about books,

As students grow older, teachers feel anxious whether the student listens to them or not. This is a reality that students may become less attentive to the things their teachers tell them as they grow older. The following suggestions may be helpful for teachers who feel their students loose interest and want them to pay attention.

- More opportunities may be provided for paired work. It should be ensured that every day each student has the opportunity to use verbal communication.

- When a student answers a question it may be marked on a class seating plan and the contributions of students may be monitored in this way.

- A deck of cards on which students' names are written can be used to make each student contribute to the course. Choosing a new card from the deck each time during the day so every student may be required to communicate.

- Younger students may be rewarded with a pencil or something like that for their responses.

- Each student may be nominated to present a popular song or a poem. Before the presentation, students may be allowed to work in pairs and help may be provided to those who have trouble with reading.

- Make each student take turns during the day. A permanent seating plan may be helpful. The answers of the students sitting on the third row, for example, are then recorded.

- The teacher may ask each student questions before leaving class.

- Students may be helped to use visual signs like pictures or verbal signs at the beginning and at the end or to draw a frame to help them like drawing a series of pictures.

- Students need many opportunities to make a public speech. It's a great fear for many adults to make a public speech. The simplest way to over come this fear is to provide opportunities for making public speeches to children in their childhood. Children's' speaking skills may be developed by providing them a secure and entertaining environment.

- Speaking is the main part of teaching literacy. An environment should be provided in which students can participate in speaking experiences. Students should be sure that they are going to be listened to by others when they are expressing their opinions. This can be learnt and internalized by the teacher and the children model this behaviour. If students take part in the same group as professional readers in book discussions, those who have trouble especially in reading and expressing will have the opportunity to see different points of view and opinions during the dialogues they share with others.

Some Examples of Activities to Make Speaking Attractive

Keeping The Parking Place
The teacher asks students their opinions about the topic being discussed in class. They draw car parking lines on the board at that time. When a student presents an idea about the discussion topic, it is not ignored and a parking place is reserved for them. In order to make students keep their parking places for the following discussions students should be taught about research authenticity. As students want to keep parking places they own they may become willing to participate in discussions.

TV Talk Show Game:
In this game, one student plays the "narrator" and the other student or anyone who is their partner plays "the guest". They perform a three minute interview. The narrator's mission is to ask about the guest's interests, emotions, ideas and relax them. The performance continues for three minutes and is recorded. Then the video is watched together with an evaluation according to the list below:
- Asking questions,
- Sharing personal information,
- Praising and complimenting
- Showing interest to the words told, accepting and confirming them.

Hot Chair:
In this activity, a student volunteers to become one of the characters of the story being read and sits in the "hot chair". Students prepare questions to ask that character and these questions are answered by the student who represents the character from the story.

Readers Theatre:
A piece of literary work is rewritten as a dialogue and read aloud or performed in front of the class.

Presentation Activities Of The Read Text:
- An original song may be presented about the read story
- A telephone conversation between two or more people may be presented.
- A readers theatre based on the book may be prepared and performed

Writing A Group Poem:
On any topic or about an object which is brought to the class. A group poem may be created with the involvement of all students.

Open Microphone:
An opportunity may be created to perform on a certain day and at a certain time on any topic the students may show an interest in. This activity is totally left to the student's decision. This may be anything, such as, singing, reading a poem, making a speech on any topic, dancing or playing an instrument.

Undertaking An Interview:
Students may be tasked to undertake an interview with anyone they want during the year as project work.

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ADHD & MATHS
Helping The Student with ADHD to Succeed in Maths

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???

- What are the common mathematical difficulties faced by students with ADHD?

- How can the teacher help students with ADHD become more successful in maths?

2. Which Factors Contribute to Difficulties in Maths and How These Factors Affect School Performance

6. Having Positive Attitudes Towards Maths

7. Improving Computation Skills of the Student with ADHD

8. Improving the Skills of the Student with ADHD in Solving Word Problems In Maths

Common Maths Difficulties Faced By Students With ADHD

Maths skills are needed for daily functioning in today's society. Health, transportation, money and food preparation are some examples of math skills being intrinsic to our daily routines. However, the development of maths skills is not easy for all children. Studies indicate that between 4% and 7% of the school population experiences some form of maths difficulty (Fuchs et al, 2005), and one study indicates that 26% of children with ADHD have a specific maths disability (Mayes & Calhoun, 2006). Some explanation of the relationship between ADHD and maths disabilities have been discussed recently in the research. The following are some of those factors discussed their role on math difficulties:

a. **deficit in attention** (Martinussen &Tannock, 2006) can cause problems with
   i. *noticing and processing operational signs in maths problems*
   ii. *paying attention to details such as decimal points and other symbols. Being able to sustain the focus and mental effort necessary to complete the problems with accuracy.*

b. **deficit in working memory** can cause problems with
   i. *holding information in their mind whilst performing maths functions* (Swanson & Beebe-Frankenberger, 2004),

c. **slow processing speed and deficits in long-term memory** can cause problems with
   i. *learning and acquisition of basic maths facts,*
   ii. *slow retrieval of stored maths information such as math facts, rules, procedures and algorithms*
   iii. *calculating multi-step problems*

d. **sequencing weakness** can cause problems with
   i. *recognizing and using patterns*
   ii. *being able to do algebra and other step by step equations*
   iii. *executing multi-step procedures*

e. **poor fine motor skills**; can cause problems with *handwriting*,

f. **weak visual perceptual skills**; can cause problems with *judging the placement of sums on the paper, aligning columns, carrying numbers from one column to the next* (Zeigler Dendy, 2000).

The impact of those factors can be seen on the school performance of students with ADHD in different aspects. Typically, most students with ADHD usually work out maths problems more slowly than their peers and they may not finish assignments or tests during the time allotted in class. Most students with ADHD do not apply basic math facts automatically. They are unable to quickly retrieve addition, subtraction,

multiplication, and division facts. Unfortunately, this gaping hole in their underpinning maths knowledge interferes with their ability to complete math problems quickly.

In spite of this serious deficit these students may learn complex math concepts as easily as other students. It is critically important for teachers to allow the students to move on to more advanced math concepts and make allowances to compensate for their learning deficits.

Having Positive Attitudes Towards Maths

Being successful in maths is strongly related to the students' positive attitudes toward it. Therefore it is essential to build a maths friendly community in the class. In order to have this:

g. Let students know how important maths is to you.
   i. Examples: Model your thinking about how maths influences your life. Tell about the good times and the bad times that you have had in your maths history. Let students know that you love maths.

h. Talk about your learning styles and how you learn maths yourself. What do you do when something mathematical doesn't make sense to you?

i. Let students appreciate their learning styles and how they learn maths themselves.

j. Let students realize how maths is everywhere and related to our daily lives.
   i. Example: Ask students to look around their environment and find examples of how maths is used. In small groups, students brainstorm a list of at least twenty items that would need maths. Examples from the students' lists could include music, clocks, playing games, shoe sizes, cooking, tools, the microwave, sports, coupons, bus and train schedules, medicines and mileage for travelling.

k. Promote the self-esteem of mathematically challenged students.
   i. Example: Call mathematically challenged students when you know that they have learnt a concept and can verbalize it to others.
   ii. Have the students show what they know through their strongest approach: visual, auditory or manipulative. This might include drawing, graphing, writing, acting-out demonstrations and singing. Be open to all aspects of the students' personality. Let them show you what they know.

l. Provide interesting, engaging, creative and enjoying maths lessons. This helps students with ADHD to develop a positive attitude towards maths. There are also numerous instructional practices which can help the students to improve their success in maths. The following are just a few suggestions to help improve basic computation and maths problem solving skills.

Improving the Skills of a Student With ADHD in Computation & Solving Word Problems in Maths

The following is a list of tips to help children with ADHD improve their skills in mathematics. Not all these strategies will work with every student or every teacher. Don't hesitate to try something and then admit it doesn't work therefore, there is a list of different activities. Go ahead and try different things until you find what works for both you and the student.

☆ Teach concepts at the concrete level before requiring abstract memory.

☆ Provide many kinds of aids such as cubes, tiles, counters, beans, base-ten blocks and number lines to help students to visualize and work out maths problems.

☆ Introduce maths concepts with demonstrations using real life examples and motivating situations.
   🔔 Examples: Cut a sandwich into 4 equal parts to share in a small group (1/4 per student);
   🔔 First count the total and then equally divide a bag of candy among a number of students (23 pieces divided by 5 kids = 4 each with 3 left over)

☆ Give as many opportunities as possible at home and at school for using maths in the context of real-life situations.
   🔔 Examples: Provide the child with real-life opportunities to practice targeted money skills. For example, ask the child to calculate their change when paying for lunch in the school cafeteria, or set up a class store where children can practice calculating change. Have students determine mileage on an imaginary road trip.
   🔔 Allow students to help plan and organize events such as parties, field trips, cafeteria menus and parent and expert visits. This helps students organize and work with numbers, dates and data in a mathematical sense.

☆ Be sure that students understand maths symbols. If children do not understand the symbols used in maths they will not be able to do the work.
   🔔 Example: Do they understand that the "plus" in 2 + 3 means to add and that the "minus" in 6 – 3 means to take away?

☆ Teach many different strategies for learning facts such as building on known facts.
   🔔 Example: If 5 + 5 = 10, then 5 + 6 = 11

☆ Teach the student different "finger tricks" available for learning X6, X7, X8 and X9 tables.

🔔 <u>Example:</u> "For remembering the nines multiplication table, try this finger counting technique. Hold your hands out in front of you and spread your fingers. For 9 x 6, count from left to right until you reach the sixth finger. Hold that finger down and then count the remaining fingers on either side to obtain the correct answer. There are 5 fingers to the left and 4 fingers to the right. The correct answer is 54.

☆ Teach the student how to use cognitive cues to enhance their memory.
🔔 <u>Example:</u> "Put the big number in your head and the small number on your fingers. Say the number in your head and continue on your fingers until you use them up." Have the student count forward for addition and backward for subtraction. (Dornbush & Pruitt, 1995)

☆ Input information by combining as many different sensory means as possible e.g. verbal, visual, motor or tactile.

☆ Use designs for helping students to visualize the patterns and sequences when adding, subtracting, multiplying, or dividing whole numbers.
🔔 <u>Examples:</u> Teach multiplication by relating things that come in sets of a certain number. (4's legs on a dog; 5's fingers on a hand; 6's legs on an ant)
🔔 Have a vertical number line for addition and subtraction.
🔔 Use a number chart or matrix of numbers 1 to 100 and have students count and colour each box that is a multiple of a numeral. Seeing the visual pattern that is formed on the matrix helps many students who learn visually and spatially.
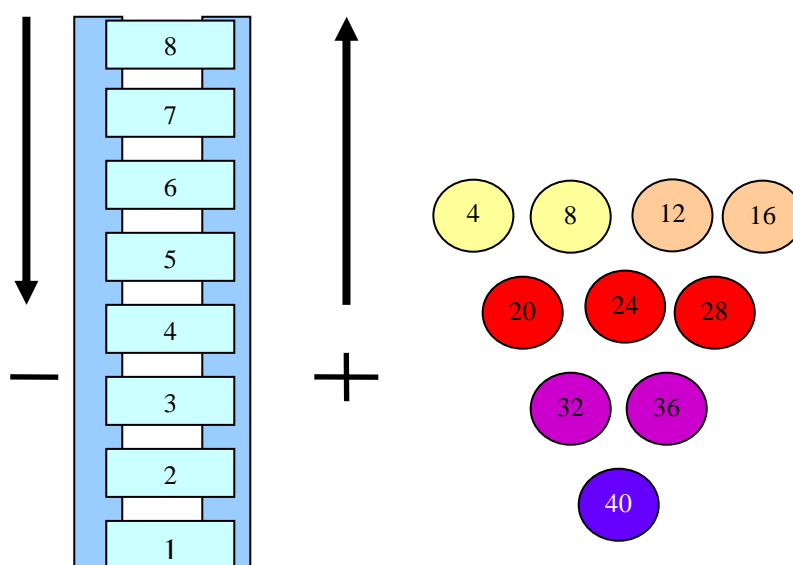
Vertical Number Line   Bowling Pins for the Multiples of Four

🔔 Have a poster of the pattern of "bowling pins" for the multiples of numbers. Above is an example for the multiples of four: Colour the first two single-digit numbers in yellow. The next two numerals, which have a 1 in the tens place are coloured in orange. The second row of "pins", with numbers in twenties is

coloured red. The next row of pins with numbers in the thirties is coloured purple. The numeral 40 is coloured blue. (Rief, 2005)

☆ Have students make and colour their own charts or small posters.

☆ Have students use flash cards that students make and colour. Encourage keeping a card file for specific maths skills, concepts, rules, formulas, acronyms and algorithms taught along with specific examples of each on the card for reference. These cards will help trigger their memory of important maths facts.
  🔔 Examples: Shrink multiplication tables to a size that will fit in a student's wallet and allow them to use it when a calculator is not permitted or is unavailable.
  🔔 Print divisibility rules on a small wallet size card and laminate it. Understanding divisibility is important. It helps the student reduce fractions or factor problems more quickly.(Zeigler Dendy, 2000)

Divisibility Rules: _You'll know if a number is divisible by_	
2	If the number is even (ends in 0,2,4,6,8)
3	If the sum of the digits is divisible by 3
4	If the number in the last two digits is divisible by 4
5	If the number ends in 0 or 5
6	If the number meets the rules for 2's and 3's
7	No rule
8	If the number in the last three digits is divisible by 8
9	If the sum of the digits is divisible by 9
10	If the number ends in 0

☆ Have students play board games and card games to practice adding, subtracting, multiplying and dividing whole numbers.
  🔔 Examples: Make large laminated coloured "pins for multiples" and lay them out on the floor for playing games such as asking a student to hop on the correct circle. (Jump to circle that is 4 x 7)

  🔔 Tables Games: Make a board as a playing surface, as shown in the figure below, and some "counters". The total numbers of counters needs to be the same as the number of squares on the grid.

  This game will work with 2, 3, or 4 players. Each player also needs a piece of paper, or an exercise book, to write down their scores after each turn.

The game can be used to practice adding, subtracting and multiplying. Rules and the purpose of the game can be changed. The winner can be the person with the lowest score or the person with highest score.

5	0	1	3	4	5	The teacher selects one of the "Times Table" for the game and it can be played with a copy of selected times table on view. Let's say, the teacher choose 7 times table and define the aim is to get the highest score.
3	9	8	6	1	5	
7	2	4	2	4	8	
0	7	8	6	3	7	
3	6	0	5	8	1	
9	2	4	2	9	1	

Players take it in turn to place a counter on the board. First player can place their counter on the board anywhere they like. Let's say they place a counter on number 3. They say out load "3x7=21". Their score for the first turn is 21.

After the first player has put out a counter, the rule of the game is that a counter must be placed next to another counter: to the left, to the right, above or below. Placing a counter diagonally is not allowed. So the second player has 4 choices for their first turn. They can place their first counter on one of them and say out load their score.

After the first and second goes, players can place their counters next to any counter on the board as long as it is above, below, to the left, or the right. The counter does not need to be placed next to the most recent counter played. After every turn players write down their own new score under their previous score and perform an addition to obtain their current total score.

The game carries on with players taking turns, until all the squares are covered with counters. The winner of the game is the player with the highest score. It is stressed that, after every turn, players should add up their cumulative totals.

The aim of the game can be changed so that the winner can be the person with the lowest score. As another variation, players can start with a score: such as 101 or 501. Each turn will produce a score that should be subtracted from this number. The first player to reduce their total to zero or a negative number is the winner. (MoNE,2006)

- ◔ Triangular flash cards can be used to practice both multiplication and the division facts. For example; there will be a set of triangular flash cards for each of the multiples of 4. The number four will be written on one point of the triangle and for each of the flash cards 0 to 9 is written on the other point. The product for each is written on the third point. Students practice by covering

with their hand each of the points of the triangle while reciting, for example 4x3=12; 3x4=1212 divided by 3=4; 12 divided 4=3. (Rief, 2005)

☆ Schedule computer time for students to drill and practice basic computations, using appropriate games.

☆ Teach students how to use cognitive cues such as mnemonics and visual cues which describe basic steps in computing whole numbers to remember a calculation sequence.
    🔔 Example:

The Sequence of Long Division	
Visual Cue ÷ x - ↓	**Cognitive Cues** **D**on't **M**iss **S**usie's **B**oat **D**umb **M**onkey **S**ell **B**ananas **D**irty **M**arvin **S**mells **B**ad (**D**ivide **M**ultiply **S**ubtract **B**ring Down)

☆ Use a variety of songs, poems, rhymes to help students to remember facts, sequential steps, procedures and abstract concepts or vocabulary.

☆ Practice and review facts in frequent, brief sessions a few times every day. Usually 5 minutes per session.

☆ Have students use maths journals. These are where students record what they are unsure of and learning. Students might write and draw reflective or summarizing entries about their learning, thinking, reasoning, questions, understanding or misunderstanding of the maths lesson or unit of work. Writing and representation should be encouraged so that students can explain their thinking. This will give an idea of what the students know and what needs to be taught.
    🔔 Example: At the and of the day, the teacher may have the students write how to change a ratio into a percentage using their math test score, how to figure out sales tax without a calculator or how to determine if a number is a prime or composite number.
    🔔 In order to motivate students to write in their maths journals, teachers may start the writing with a few basic prompts. (Rief, 2005)

- Today I learned about (or how to) ……………………………

- The most important ideas I learned today are ……………………
- I am still confused by …………………………………………..
- I discovered that ……………………………………….……
- The mathematical rule for this problem is ………………………
- The way I remember (how to) …………. In my head is ………..
- The trick part of this problem is …………………………….…
- The thing you have to remember with this kind of problem is…
- The steps I used to solve this problem were ……………………..
- I could use this type of problem solving when ………………….
- I was frustrated with this problem because ………………………

☆ Have a maths words on the class wall. The words wall acts as a reminder of the most recent lessons and is a scaffold for students who need them. Words that are being discussed such as denominator, numerator, factors, and multiples can be placed on the wall when they are introduced. Many of these words might be familiar to the students but some students still need to have a visible reminder of their meaning. Some words may stay up for a long period of time and others will be used briefly and taken down quickly. A short, "child friendly" definition can be attached to the word in upper-grade classrooms. These words would also be written in the student's maths journals or on flash cards but the more the student sees and uses the word the more the word will become part of their vocabulary. (Rief, 2006)

☆ Provide lots of interactive work with partners, triads, and quads. Children are less likely to feel intimidated by small groups in a cooperative learning environment.
   🔔 Examples: Have students work in *pairs*, one student works out a problem while the other coaches. Roles are then reversed. After a couple of problems are completed the partners pair up with another set of pairs and compare answers and check one another. The teacher might say, "Turn to the person next to you. Choose who will be partner A and who will be partner B. Partner A will be the doer. You will do the division problem on the whiteboard first. Partner B will be the coach or overseer. You will be responsible for seeing that your partner is doing the problem correctly. Let your partner do the problem by themselves first. Then look it over and make suggestions or talk them through the problem where thinking have gone wrong"
   🔔 Have the students in teams of four to work out a problem together and check each other's understanding on one or more problems. Then the team breaks

into two pairs and continues to work together to solve the next couple of problems. Students then continue independently working out similar problems.(Rief, 2006)

☆ Use active group response techniques such as choral responses, response cards or dry-erase boards in instruction.

☆ Allow the student to use a calculator to check addition, subtraction, multiplication or division sums. Do not allow poor mastery of facts to delay or hamper success with math concepts and applications. Encourage and allow the use of calculators (Dornbush, & Pruitt, 1995, p.94). Although students may use calculators for figuring basic maths facts it is critical that they also know how to undertake the calculation without a calculator. For instance, "how" to multiply fractions. A periodic review of these basic procedures may be necessary as students move through to more advanced math topics (Zeigler Dendy, 2000).

☆ Have students use graph paper to help organize columns when adding, subtracting, multiplying or dividing whole numbers.

☆ Keep examples of maths problems on the board. Have a step by step model of the problem on the board to help the student refer to it while the concept is being taught. Student's who have working memory problems look back and forth at the board, ask them to copy the problem on a coloured card and put it by their paper as they work. If they are unable to remember this, ask another student to write the problem down and give them a copy.

☆ Write a list of steps for completion of the maths problem, especially for multi-step math problems, on the board. Suggest listing the steps taken for solving the problem on the board. Put the problem in the same spot on the board and leave it there throughout the lesson. Number the steps in the order that they are to be completed.

☆ Teach and model for students a number of strategies for solving word problems.
  🔔 Examples:

  🔔 Read the problem out loud.
  🔔 Read it at least twice before beginning.
  🔔 Restate the problem in your own words.
  🔔 Look for and colour or highlight significant clue words.
  🔔 Draw pictures, diagrams and sketches representing the problem.
  🔔 Cross out irrelevant information.
  🔔 Circle, underline, colour or highlight the numbers which are important.
  🔔 Write the kind of answer needed e.g. miles, per hour, degrees, dollar.

- ♤ Use objects and aids.
- ♤ Construct a chart or table.
- ♤ Make an organization list.
- ♤ Act it out.
- ♤ Look for a pattern.
- ♤ Make a model.
- ♤ Work backwards.
- ♤ Eliminate possibilities.
- ♤ Guess and check.

☆ Have students label parts of the problem to make it easier to solve.

CIRCLE (needed) facts in the problem.
MARK OUT any unnecessary facts.
UNDERLINE the strategy word or phrase.
FOR A 2-STEP PROBLEM, place 1 LINE under the first step   and 2 LINES under the second step.

☆ Teach students clue words that identify which operation to use when solving word problems.

+ Addition	- Subtraction	x Multiplication	÷ Division
+ how many? + altogether + **total*** + sum + combined + **in all*** + perimeter + **total cost*** + **surface area***	- the difference - how much less? - how many more? - more than - less than - subtracted from - less - increase - decrease - fewer - minus - how much change? - have enough?	x product x times x times as much x multiple of x twice x (a number) of times x multiplied by x times as much x times as many x area x volume x **surface area*** x squared x **total*** x **in all*** x **total cost***	÷ quotient ÷ how many groups? ÷ divided into ÷ divided by ÷ one-half of ÷ one-third of ÷ one-fourth of ÷ what part? ÷ make equal parts ÷ factor ÷ per unit ÷ unit cost

**These words may mean to either add or multiply, so read problems carefully.*
(Zeigler Dendy, 2000)

☆ Teach students to ask questions which guide them in solving word problems. For example: What is the question asked in the problem? What information do you need to figure out the answer? What operation should you use to compute the answer?

☆ Ask the student to use a calculator to check computations made in answering a given word problems.

☆ Make up and use mnemonics (acronyms) to help students to remember the order of operations that need to be followed to solve the problem.
  🔔 Example: Students may mix addition, subtraction, multiplication or division into a problem. PEMDAS is one of the most frequently used mnemonics in maths. However, many maths problems involve only MDAS (My Dear Aunt Sally), and may not include exponents or parenthesis. (Zeigler Dendy, 2000)

Please **E**xcuse **M**y **D**ear **A**unt **S**ally (PEMDAS)	
Parenthesis: Do the operations in parenthesis first.	$100 \div (2-7)^2$.
Exponents: Do numbers with exponents next.	$4 + 3$
Multiply or **D**ivide: Do whichever comes first, left to right.	$100 \div (-5)^2$.
	$4 + 3$
Add or **S**ubtract: Do whichever comes first, left to right.	$100 \div 25$.
	$4 + 3$
	4 .
	$4 + 3$
	$16 + 3$
	19

☆ Encourage students to make up their own mnemonics for a problem concept.

☆ Have fun with personalizing maths story problems. Add the students' names and special interests to the story problems.

    🔔 Examples: If you have students who love football, swimming, extreme sports, shopping or special kinds of books incorporate these interests and topics into maths problems that need to be solved.

☆ Ask students to create and solve word problems that provide practice with specific target operations, such as addition, subtraction, multiplication or division. These problems can be based on recent, real-life events in the children's life.

☆ Provide opportunities for students to share how they solved a problem

☆ Colour code basic arithmetic symbols, such as +, −, and =, to provide visual cues for children when they are computing whole numbers.

☆ Create a checklist with visual cues for the student to follow.

☆ Divide oral directions into manageable chunks.

☆ Reduce the amount of copying necessary by photocopying the page or writing out the problems for certain students.

☆ Reduce the number of problems on a page. Fold the paper into sections and place each problem in a separate section or block part of the page out while working on problems.

☆ Encourage students to stop after completing a few problems and check for accuracy either independently, with a partner or with the teacher.

☆ Provide immediate feedback whenever it is possible.

☆ Enlarge worksheets and tests so as to provide adequate space for the working out of problems.

☆ Have students use graph paper or have them write their problems sideways with the lines running vertically. This ensures that the students line up the numbers correctly and avoid careless errors.

☆ Do not drill math facts for speed.

☆ Allow extra time on maths tests so the students are not rushed, leading to careless errors.

☆ Let students choose which problems to do first, or to cross out or eliminate any two or three problems they wish in the assignment.

☆ Allow the student to stand up and stretch or take a break of some kind after a certain number of problems are completed and checked for accuracy.

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ADHD & HOMEWORK

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- What are the common problems with homework faced by students with ADHD?

- What are the parent's, student's and teacher's responsibilities for homework?

- What are the regulations suggested for the homework of students with ADHD?

- What does appropriate homework for students with ADHD look like?

What are the Common Problems with Homework Faced by Students with ADHD ?

Homework is an integral part of every child's education but for children with ADHD and their parents it often becomes an area of family stress. Teachers must give homework that can be completed efficiently and with a minimal amount of stress. They must take into consideration the physical and emotional consequences of having ADHD and their impact on the ability of the student to focus and complete homework (Boss et al 1999, Urban 1999). Students with ADHD face many problems like being unable to start the homework or unable to finish it even though sitting at the table for many hours (Barkley 1998, Dornbush & Pruit 1995).

Homework problems of children with ADHD:

- They copy down the homework task incompletely or not at all

- They forget the related equipment and books and leave them at school

- They can not start doing homework always postponing making a start

- They do the homework in a hurry and carelessly

- When doing homework they dawdle and day dream

- Frequently takes a break and moves about constantly

- They want somebody near them when they are doing their homework

- Conceals the homework or says they have done it at school

- Gets angry when talking about homework and sulks

- Forgets the content and deadlines for the homework and projects or does them at the last minute and carelessly

- Forgets to take their finished homework to school or forgets to give it to the teacher.

What are the Parent's, Student's and Teacher's Responsibilities for Homework?

HOMEWORK SYSTEM: the system is a triple system composed of parents, teacher and children. Problems will be encountered if any of these three components does not perform their role. For this reason every component of this system should be reviewed separately (Surucu 2003).

Responsibilities of the teacher	Responsibilities of the child	Responsibilities of the parents
Giving target oriented homework	Completely understanding the homework	Setting the right time to start the homework
Use homework as practice for material that has been covered in class	Get the right equipment for the homework	Provide a suitable place to undertake the homework
Supplying the necessary material	Starting the homework at an appropriate time	Getting the right equipment for the homework
Making sure that the homework is completely understood	Finish the homework at the estimated time	Taking the child's learning style into consideration
Motivating the child	Hand the homework in at the right time	Motivating the child
Correcting and returning homework as soon as possible with positive comments	Examine the corrections of the homework	Find explanations about the errors and follow-up with the child
Keep homework assignments separate from unfinished class work	Take responsibility for the homework and the mark received	Providing short breaks to help them focus
Modifying the assignments (e.g., reduce the amount of written homework)		Alert the teacher if the child consistently receives homework that is too difficult

Inappropriate attitude by teachers:

☆ Refusing to make modifications to work and having an unsympathetic attitude towards children with ADHD

☆ Giving inappropriate, tiresome homework which is beyond child's capability

☆ Instead of motivating the child, humiliating and criticizing the child about their homework

☆ Not controlling the homework

☆ Not giving feedback on completed homework and not clearly defining what is expected from the child when completing the homework.

What are the Suggested Regulations for Homework with Students with ADHD?

Adjustments to the homework for children with a diagnosis of ADHD will help with solving homework problems (Flick 1998, Surucu 2003, U.S. Department of Education 2006, Ziegler Dendy 2000).

1. Insist that the student maintain an assignment book: Require that a daily assignment notebook is kept and make sure that each student correctly writes down all assignments. If a student is not capable of this the teacher should help the student.

2. Use the assignment sheets as a communication log with parents: The teacher should initial the notebook daily to signify the assignment has been copied correctly. Parents should also sign that they have read the notebook. This prevents unfair accusations if the homework is misplaced between home and school

3. Lightening the homework load: Students with ADHD work slowly and are easily frustrated. Assigning just the odd-numbered maths problems lets a child demonstrate what they have learned in class without pushing them too hard.

4. Duration of time spent on homework should not be longer than for other children**: Due to their inability to start, having too many breaks and loosing interest children with ADHD may spend more time on homework compared to other children. It is not recommended that ADHD children spend much time on homework. For this reason the teacher should get feedback from the family and should limit the homework according to the estimated duration that will be spent for that homework.**

<u>What's the Right Amount of Homework? :</u> Many educators believe that homework is most effective for the majority of children in the first three grades if undertaken for less than 20 minutes each school day. From fourth grade through to sixth grade, many educators recommend from 20 to 40 minutes of homework a school day for most students. For students in seventh grade through to ninth grade, generally up to 2 hours a school day is thought to be suitable.

5. The content should be appropriate: The content of the homework should not cause resistance because it is very difficult or extensive. It should not be boring, too easy, too short or repetitive.

6. Reduce the amount of written homework: Children with ADHD may experience difficulty with written homework and expressing their ideas in text. For this reason it is very important not to give to much written homework. Ways to reduce the amount of written homework:

☆ Just write the answers: The maths problems and questions should not be rewritten from the books.

☆ Writing just the right answers: Instead of writing out each question or item, only the right answer needs to be written. The aim is not to copy the questions but to observe if the student can work out the right answer.

☆ Blank filling: History questions, scientific order arrangements, maths problems should be allowed to be photocopied instead of writing the whole of the question. Filling in the blanks can be used.

☆ Instead of written homework, creative activities can be planned: A book description on a sound recorder, making a drawing of a poem or the production of a model can be organized.

7. Long term projects and semester homework can be subdivided: Children with ADHD experience problems with long term projects and semester homework due to their inability to make and practice plans and the efficient use of time. Long term projects can be subdivided like research, data acquisition, draft preparation and each division can be graded separately with separate deadlines.

8. Giving a clue card for difficult tasks: Another reason why ADHD children are slow is that they are bored by long, multi-step projects. They don't have the ability to subdivide the homework. Sometimes they can't decide where to start. A guideline chart indicating a path to follow will help them very much. For example the teacher will discuss the necessary steps to complete the homework, write the steps on the blackboard and request the students to copy the steps in their notebooks. If the teacher observes that the child has difficult to start they will discuss the necessary steps and write them on a flow chart.

9. Giving homework with questions that teach thinking: Instead of giving questions that are reviewed in the class or that can be easily answered from the books, questions that will force the children to think will help the children to improve their thinking ability and also make the ADHD children keener to complete their homework.

10. Preferring quality to quantity: "A few high quality answers should be preferred to many low quality answers." Most teachers have three aims in their homework: Speed, completion of the whole and correctness. Let's say a teacher wants the children to solve 30 problems for the next day. Children with ADHD work slowly and complete fewer problems. If the difficulty of the problems and duration of the homework are reasonably changed more correct results can be achieved. For example: "Write down three interesting and complete sentences containing less than 2 spelling mistakes in each."

11. Expectations should be kept low until the child attains a certain degree success. As success increases the difficulty and amount of homework can be increased.

12. Checklist of frequently made mistakes: Provide the ADHD child with a checklist of mistakes that they frequently make in written school assignments, e.g., punctuation or capital letter errors, mathematics, e.g., addition or subtraction errors, or other academic subjects. Teach the child how to use this list when proof-reading their work at home and school.

13. Schedule the timing of the last medication dose: If the student is taking medicine suggest to the parents that the last dose be taken at an appropriate time so that the student can focus on their homework.

What Does Appropriate Homework for Students with ADHD Look Like?

It is found that, typically, most teachers assign two types of homework: Questions or problems from textbooks and worksheets. Students say that these types of assignments are boring. Boredom may lead to:
1. Decreased attention to assignments,
2. Reduced accuracy on the completed work,
3. Reduced student motivation,
4. Negative attitude to school by students,
5. Disinterest in school

Good homework can help reduce boredom. It should (Zeigler Dendy 2000):
1. Be meaningful, not too hard, not too long or repetitive:
2. Be brief: completed in a reasonable time.
3. Review material taught in class, not introducing new material.
4. Give maths and reading homework on alternate days.
5. Give students some choice such as a choice of two or three topics for writing an essay.
6. Use a variety of ways to demonstrate competency rather than just writing, e.g. dictate the learned information on audiotape.

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CHAPTER 11

INDIVIDUALIZED EDUCATION PROGRAMS

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The Individual Educational Program (IEP) is a document known by all who work in special education. In fact, in most countries, student's eligible for special education must have an IEP.

In a simply way, we can define an IEP as a document where the educational history of an individual student is described and an educational program is organised. This is a clear and simple definition of an IEP, and thus, one that can be assumed by all. Within this definition we can develop different kinds of IEP, because there are different ways to understand what is important in an "educational history" and, therefore, what must be considered in an "educational program". For that, the first thing to do is to answer the question "what are the most important things to put in the educational history that best describes the student?" The answer to this question requires, at least, two other questions: "what is *my* framework, *my* model to understand the impairment and the disabilities process?" and "What is the weight that I attribute to the biological and the contextual factors?"

Until some decades ago the educational history of a student was described, basically, by what they couldn't do and what they didn't have, and in function of this, the focus of the educational program was centred on the student itself. It was the diagnostic-prescriptive model that guided the intervention. This perspective was referred by some authors as "blame the victim".

The failure of this model of thinking and action and the introduction in the field of education of more dynamic and systemic models allowed a more holistic view about the process of development and the process of disablement (e.g. Lewin, Sameroff, Bronfenbrenner, Simeonsson). We can say, therefore, that disablement and development are a parallel processes (Sanches-Ferreira, 2007).

In fact, there is today a great consensus about the necessity to consider simultaneously the biological, psychological and social components and their inter-actional relationship in the educational history of the children.

The IEP must reflect the inter-relationship between a certain child – with their biological and psychological characteristics - and a particular social context. This perspective is very important because development is not a fixed process and the educational program is fundamental in it. In fact, even the IEP is an *individualized*

program, i.e., it is in agreement with the child's needs, the intervention is implemented in a determinate context, influenced by context variables and this is what really individualizes the program. The main goal of all educational acts is to contribute for a higher self-determination and independent functioning in society for the child.

With this preliminary understanding we can now consider the basic steps to write an IEP.

In other chapters of this book you read about evaluation and monitoring of ADHD. For this reason, in this chapter we begin with the meeting where the eligibility of the child for specific services is decided. In fact before the meeting, a set of information must be gathered, including what strategies have been used to understand the students' functioning in their context. In this chapter we will analyse two main issues: Meeting to decide eligibility and the IEP meeting.

1- Meeting to decide eligibility
Different professionals, the parents and, when possible, the student, are present at this meeting. The main goal of this meeting is to decide, in view of the previous evaluation, if the child meets the criteria for eligibility and if that is best for them and their family. In this meeting the parents can ask for another evaluation if they don't agree with the previous assessment. If all agree, then the child is considered eligible. In the end of this meeting the team should have a common understanding of the student and agree about what is to be considered really important to the success of the student (strengths, needs, personality, and so on.)

2- IEP meeting
(Depending on the EU country there is a deadline to accomplish the IEP program, in Portugal it is 60 days).

In this meeting the team analyzes the child's needs and gathers the information about the most important objectives to the child and the way to achieve them. It is very important that the parents agree with the proposal. If they don't, they can ask for mediation or another evaluation. Included in the IEP are, of course, the goals, the accommodations, modifications, and the support that the child will have in order to implement the educational plan (see figure "The content of the document").

3- IEP reviewed
The IEP is not a static document, so it can de modified when there is a need for it. It should be reviewed at least in the end of the school year. The meeting to review the IEP is identical to the previous, where the IEP was generated. The goal of this meeting is to evaluate in what way the IEP still reflects the educational needs of the student and to evaluate if the appropriate strategies are being followed according to the student's development.

4- Re-evaluate the child
When necessary, if the IEP review shows that the child's development is significantly different from the previous IEP, then a new evaluation must be done, and the process for this is similar to the first meeting.

The content of the document
This is the formal phase of the process of writing an IEP and now we are going to describe more thoroughly the content of the IEP. There are several pieces of information that the IEP team must have:

The actual performance of the student – in this element of the IEP the team describes the actual functioning of the child in school. In general, what is intended is to understand what are the child's knowledge concerning the curriculum, and what is the child's functioning. We can define this actual performance according to two important areas: 1) attention and executive functioning and 2) social skills and behaviour.

1. **Attention and executive functioning**: describes the child's level of energy, attention, memory function, level of activity and control);
2. **Social skills and behaviour**: relations with teachers, asking for help, speaking with others.

To know what the student knows, is able to learn and what they may be able to perform in the future, we need to answer some questions:

a. How much time does the child need to acquire the intended knowledge or skill?
b. How is their behaviour in and out of the classroom?
c. How long is their attention span?
d. How much self-control does the student have?
e. How persistent are they in the face of failure?
f. How proactive is the student when in need of help?

Answers to these questions should provide a descriptive synthesis that explains the student's needs, their strengths and weaknesses, and difficulties in facilitating their progress in the curriculum.

This synthesis must have some criteria because it is the bases of the plan. It must be written in a positive, specific, clear and concise language, ie, a substantive description resulting from different instruments and a gathering process of data and emphasizing what the student can do, ie, what strong areas of functioning are present.

When we describe the actual performance of the student we must relate this information with the response to the question "What is the best context for the student and the worst?"

2- Goals to achieve
In face of the actual level of the children the team writes the goals for the school year and organises the objectives. The goals must be time limited, the condition, the

desired behaviour and success criteria. But in many cases there are a lot of goals to achieve and we need to establish the priority goals.

When the team writes the curriculum in a specific and measurable objective, at least three questions must be present:
- Is this achievement (academic / behavioural) able to be transferred or generalised to other situations or settings. I.E., will they be able to successfully participate in more settings / environments?
- Is it easily achieved? I.E., will the student be successful? will they be reinforced by this achievement?
- Will this achievement allow them to gain access to other skills?

3- Accommodations and adaptations

This is another important area of the IEP. In fact, this point describes what the student needs to achieve the IEP goals. But if the goals are well designed this topic isn't difficult because it is a natural consequence of them.

Accommodations and adaptations are all the things that are necessary to improve the student's participation with success in the classroom, in the school and in life.

For that we must accurately evaluate what the student does without support and what type of support they need, intermittent, limited, extensive or invasive, because the main objective of the IEP is to promote success in all contexts. In fact, to design the accommodations and adaptations some aspects must be present:
1- The best accommodation for the functioning of the student in order to promote the physical, academic, social and emotional inclusion of the student.
2- To be sure that the accommodations and adaptations are the least invasive for the student.
3- Which adaptations and accommodations have been tried with success and which have failed;

The formal step in the process of eligibility and writing the IEP
1- Meeting to decide eligibility
Different professionals, the parents, and when possible, the student, are present in this meeting. The main goal of this meeting is to decide, in face of the previous evaluation, if the child meets the criteria of eligibility and if that is better for her and her family. In this meeting the parents can ask for another evaluation if they don't agree with the previous assessment. If all agree, then the child is considered eligible. At the end of this meeting the team should have a common understanding of the student, and agree about what is to be considered really important to the success of the student (strengths, needs, personality, and so on.)

2- IEP meeting
In this meeting the team analyses the child's needs and gathers the information about the most important objectives to the child and the way to achieve them. It is very important that the parents agree with the proposal. If they don't, they can ask for mediation or another evaluation. (see the IEP example).

3- IEP reviewed

The IEP is not a static document, so it can de modified when there is a need for it. It should be reviewed at least in the end of the school year. The meeting to review the IEP is identical to the previous, where the IEP was elaborated. The goal of this meeting is to evaluate in what way the IEP reflects the educational needs and to evaluate if the appropriate strategies are being followed according to the student evolution.

4- Re-evaluate child

When necessary, if the IEP review shows that the child development is so different than it was in the IEP, then a new evaluation must be done, the procedure is similar to the first meeting.

Individual Educational Program (IEP)
School Year _____ / _____

Educational Center:

Name: _____ Date of Birth: _____
Address: _____ Telephone: _____
Education level: _____

Regular teacher: _____
Special Education teacher: _____

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1. Synthesis of educational historical
Relevant aspect of the educational history of the student:
 - if he has benefited from early intervention or other previous support;
 - If he has support for Special Education.
 Other relevant antecedents:
 Other special aspects of the life of the student (socio-economic context, family composition, etc.).

---

2. Functional profile of the student (in Portugal this is done with reference to the ICF):
This is a synthesis about the actual level of the actual performance of the student, in this topic the team describes the actual functioning of the child in school. In general, what is intended is to understand what is the child's knowledge concerning the curriculum and how the child is functioning. It is important to consider the role of context and environment in the participation. What is the better context and support to the children (to assume a Vigotsky perspective about proximal zones of development?

3. Adequations in the learning process
<u>Educational measures to be implemented</u>
a) Personal pedagogical support
Strategies developed in different curriculum areas. These strategies can be:
- To anticipate and reinforce the learning process;
- To develop and reinforce general or specific skills;
- To adequate the place and activities.
b) Individual curricular adequacy
- Introduction of objectives, contents or specific contents.
- Introduction of activities that the student can not do.
c) Adequations on the registration process
d) Accommodations on the assessment process
Indicate the assessment accommodation, such as:
- Test type;
- Communication methods to be used;
- Local, time and schedule for the assessment.
e) Individual specific curriculum
The curriculum contains what, how and where will the student learn and other important information.
f) Assistive devices
g) Other relevant information

---

4. Transition Plan
This plan should be initiated three years before the student leaves school. The aim of this plan is to define skills and activities to be develop by the student in order to build a successful transition from school to work. Teachers, student, family and other professionals (important to the process) are involved on this construction

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5. Professionals responsible for the educative answers

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6. IEP implementation and assessment

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7. IEP elaboration and affirmation

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CHAPTER 12
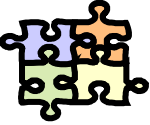
TEACHER'S CORNER –
CASE STUDIES, QUESTION AND ANSWER

Case Studies from Romania
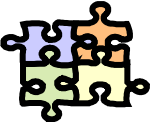
Objective
- To learn from other teachers experiences
- To learn how other teachers deal with the challenges of ADHD
- To learn how other teachers improve their knowledge and skills about teaching with ADHD

1.

	Case Study 1 "A.H."
General Information	• Student boy, grade 1, with the normal physically development for his age. He has a lot of energy and learning difficulties. He is funny and likes to make his peers laugh. • Also frequently manifests specific symptoms, but not diagnosis by the specialist.
Objectives	• To improve his academic performance • To increase his learning motivation • To improve his concentration and attention • To develop communication between colleagues, teachers and parents • To develop self confidence and self esteem • To have a positive attitude • To be aware regarding ADHD
Duration	4 months

Counselling Sessions
 	
  1. Number
  2. Strategies
  3. Results
	1. Number of the individual sessions: 10 and 2 sessions with the whole class (group counselling).
	2. Personal map, metaphors: "The wall", "The life line", exercises for techniques for engaging and maintaining attention, time management, behaviour management, strategies for homework, a short questionnaire about hyperactive behaviour, observations the behaviour of this student in the classroom, cognitive behaviour techniques (behaviour agreement with positive and negative consequences).
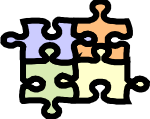
	3. Positive discipline, concrete action plans for prevention and intervention, improving the attention concentration in the classroom, increasing the academic performances, accepting "the weakness points" of his child, good communication with the colleagues in the group. *"I get my clothes ready, homework done, and school bag packed the night before school."* *"There are lots of things my teacher does to help me concentrate."* *"I manage my attention and the focus for the school task."*
Team working: parents, teachers, colleagues, psychiatrists	• Providing differentiated learning and a sample of an individualized learning program • Strategies to have good communication with parents, colleagues and teachers • Strategies for reading comprehension and problem solving in maths • Suggestion to collaborate with a specialist psychiatrist
Evaluation	• The objectives of the counselling are achieved. • We recommend collaborating with the specialist psychiatrist for a professional diagnosis. • Also, to provide support for the teachers and parents who are important for solving this problem.

	Case study 2 "D.B."
General information	• Student boy, grade 1. Oppositional, impulsive and hyperactivity behaviour, lot of energy without self control, learning difficulties, bad relationships with his peers and the teachers, "talks all day", to do exciting things. He is clever, but doesn't focus on school tasks. • Also frequently manifests specific symptoms, but not diagnosed by a specialist.
Objectives	• To display self confidence and develop self esteem • To improve their academic performance • To increase motivation towards learning • To improve their concentration and attention • To develop communication between colleagues, teachers and parents • To have an awareness of ADHD • To have a positive attitude

Duration	6 months

Counselling sessions
 	
  1. **number**
  2. **strategies**
  3. **results**
	• Number of individual sessions: 7 and 1 session with the whole class (group counselling) for information regarding ADHD.
	• Self knowing exercises ("Who I am?"), SWOT analysis, a short questionnaire about hyperactivity behaviour metaphors: „"The garden", exercises for techniques for engaging and maintaining attention, time management, behaviour management, strategies for homework, observations of the behaviour of this student in the classroom, cognitive behaviour techniques (behaviour agreements with positive and negative consequences).
	• Concrete action plans for the interventions, conflict resolution, healthy life style (sleep, food, sport, relationships, self-esteem) to improve his concentration, positive discipline, improving attention and concentration in the classroom, increasing his academic performance, accepting "the weaknesses points" of his child, good communication with their peers in the group.

Team working: parents, teachers, colleagues, psychiatrists	• Individual learning with "clear" tasks and team working • Strategies for reading comprehension and problem solving in maths • Strategies to solve problems at school • Strategies for the parents: good communication, rules for time management, to keep clean and organise their bedroom ("I get my clothes ready.") • Suggestion to collaborate with a specialist psychiatrist
Evaluation	• We recommend collaborating with the specialist psychiatrist to have a professional diagnostic. • The objectives of the counselling are achieved. • To provide support for the teachers and parents in solving this problem.

Case Studies from U.K.

	Two case studies of learners with ADHD studying at Northumberland College
Case Study 1	'D is a 17 year old male learner who has been diagnosed with ADHD and also has anger management problems. He is working at Entry 3/Level 1 in Literacy and also at Level 1 in Numeracy. He is able to mix well with other learners, at times he can be quite intolerant of their behaviour and becomes annoyed at them and verbalises his annoyance by raising his voice and is rude to them'. D has been a learner in our department for 2 years and last year his behaviour in class was initially disruptive (shouting out, pacing around the class, walking out of class), challenging to staff and disrespectful to other learners.
Strategies	**The strategies we put in place to work with D are as follows:** - We have worked hard to build a good relationship with him by recognising and pointing out his strengths in conversations with him. Showing him that you value him as a person and the contributions he makes to class. - We are firm, fair and consistent with him but also use humour as appropriate when dealing with D. Staff, have at times, introduced humour into a situation to make light of something and D responds by laughing too, this alleviates any tension that is building up in the classroom. - We have allowed and encouraged D to take 'time out' of class where he can discuss what is 'bothering him' and what he can do to solve the problem. It is best to address things immediately with D and to reward any effort he has made in recognising and responding in an appropriate manner in the situation. - D generally responds best to staff he has built a trusting relationship with and it is better if they can deal with the situation with him and any other staff that might be involved. This maintains a positive atmosphere and the 'familiar member' of staff can act as negotiator between D and the new member of staff. - Since a reward system has been introduced to the learners D has been competitive in wanting to be recognised for his effort and work and receive a reward. The first term he was not very actively engaged

	however, in the second term he has made a huge effort and was thrilled to receive a reward. • D works best when he is given clear and concise instructions to follow 'in small chunks' which are repeated to him. He also prefers short tasks to be set which are varied. • D likes to receive verbal feedback as well as visual confirmation of his progress it makes it clear to him what he has achieved and what he is required to achieve in the future. • Lastly, the teaching and learner support staff have established good contact with D's family informing them of any achievements and/or difficulties experienced by D. This has made D aware that his behaviour in class has an impact on his home life. • D is now a pleasant well respected member of the class who likes to help staff. He has matured in the time he has been in college and now recognises the consequences of his actions. He occasionally can still be 'moody' but he generally is able to shake off these moods by talking to a member of staff.
Case Study 2:	**Scenario:** For the purpose of this study I am going to call the learner Phillip and his parents will be known as Mr and Mrs Jones. Phillip is aged 17, diagnosed with ADHD when he was 9 years of age and has been prescribed Ritalin as his medication. The scenario will show how Phillip's Support Plan is created, interaction between his tutor, support assistant and parents and how different methods for dealing with Phillip's ADHD change over a period of time until those that are most effective are put into place. Phillip would like to study a Level 1 Small Animal Care Course. The case Study will show 1. The interview and decision on the type of support 2. The first few weeks in School / College 3. Phillip's changing moods and attitude towards his peers 4. How different support techniques work, or in some cases does not
The Interview	▪ Introduce yourself to Phillip and his parents prior to the interview. Explain to Phillip exactly what's going to happen. This is the first step to building a working relationship. ▪ Ensure the interview starts on time to avoid Phillip becoming anxious. ▪ Phillip has a 'Statement of Educational Needs' provided

	by an external agency, this is a very good source of information for the teaching and learner support staff and gives an insight into his behaviour, Literacy and Numeracy needs and his interaction with peers ▪ How does Phillip respond to direct questioning? ▪ What has Phillips attendance been like over the past year ▪ Explain to Phillip how he will be supported i.e. on a one to one or in a group, this would depend greatly on the severity of the ADHD ▪ Try and ensure that Phillip is going to have the same member of staff working with him through out the year. ▪ If possible try and find out what makes Phillip most anxious, what causes him to become easily distracted and most importantly how does he react to change. ▪ If possible show the family around the areas Phillip will be working in and if you get the chance introduce him to some of the teachers. This will help him understand what to expect on his arrival at College.
The First few weeks into the Term	▪ Phillip did try and 'push the boundaries' by shouting out answers, constantly moving around the classroom, banging his fists on the table and walking out as and when he wishes. ▪ It is important to make sure that the other learners understand why Phillip is like this as it can make them quite distressed and anxious about what to expect from Phillip. ▪ Phillip asked a lot of questions mainly about who his teachers were, what he will be doing in class, what time is the next break, these types of questions will usually be constant and repeated time and time again. ▪ Support staff are constantly at Phillip's side during class and he also chooses to spend his breaks with them as well. ▪ During Phillip's outbursts he has been asked if he would like to take a 'five minute' time out. This is happening on a regular basis, the question is asked "Is Phillip using this as a means of avoiding doing tasks that he does not like or understand too well?" ▪ Meetings every two to three weeks with Phillip's parents allows for the opportunity to find out if Phillip is discussing his school / college work at home and find out if there is any change in his behaviourPhillip did try and 'push the boundaries' by shouting out answers, constantly moving around the classroom, banging his fists on the table and walking out as and when he wishes. ▪ It is important to make sure that the other learners understand why Phillip is like this as it can make them

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Six Months into the Course	▪ . Phillip's occasional outbursts are now being ignored; he understands that he is not going to get the response that he wants. ▪ Constant good behaviour and work is rewarded with a visit to see his favourite animal. ▪ Phillip now knows that he cannot push the boundaries, being assertive with Phillip has produced good classroom results. ▪ Giving Phillip plenty of notice that his timetable is changing and the reason for this has stopped the constant questioning. ▪ Individual teacher / learner sessions are finished usually with some humour and always on a positive note. ▪ A close working relationship has built up between Phillip and his Learner Support Assistant. ▪ Completed work is commented upon in a positive way. ▪ Phillip is using his free time to socialise with his peers. ▪ A diary informs Phillips parents of his achievements and behaviour in College. Phillip will be completing his course to Merit standard, however there is still a lot of work to be done on his Literacy and Numeracy skills so rather than an upward progression the possibility of Phillip moving sideways to another Level 1 course is a possibility.
Case Study 3	**A boy with a diagnosis of ADHD, who we will call John. He is 11 years of age and is currently attending a mainstream school, for 9 – 13 year olds based in Alnwick, Northumberland.**
Background.	ADHD ("extreme") was diagnosed at the age of 6. Concomitant

	autistic disorder is being looked into. John joined the middle school (9-13 years of age) at the age of 9. It had been suggested that he went into a special school but because we are classed as an inclusive school he came to us. He has a 'Statement of Special Needs'. This means there is funding in the school budget to provide a teaching assistant (TA) to support him in all lessons and at lunchtime. His reading age is below 6 years. He can only read individual words or phrases. He is better in maths but still below his peers. He did not write before he came to us. Communication and language skill assessments show that he is below the age of 5 in his ability to follow verbal instructions. Visually he can solve pattern problems that most adults can't! There are 500 people in school, 30 in a class, 20 in Maths and English lessons. He participates in all subjects. He is small and under weight for his age. This is not the family trait. His parents are separated, there is a younger sister who presents with no problems and VERY supportive maternal grandparents.
Medication	John is on methylphenidate to keep his behaviour under control: 25mg 3x a day + night time 6mg of Melatonin to help him sleep.
Outline of support to encourage desired behaviour and learning.	Before school John is given medication. He comes to school on a bus with 48 other learners. **9.00** He is met at the door and taken to put his coat away, always in the same place and always the same person. This Learning Support Assistant then takes John to registration and is with him till lesson 1 which starts at 9.20. Lessons: John and his Learning Support Assistant (LSA) work in the class with differentiated material. The teacher and his LSA will plan and provide this work. Independence is encouraged but work has to be accessible to him. Tasks are shortened. If he has problems concentrating, he is taken to work in a quiet area. He can ask to leave the classroom if he feels he needs to. He has 3 different LSA's who support the same subject over the week. Lessons last 1 hour and this is usually too long for him. 'Time-out' just to have a walk to another room can calm him. He has a special relationship with the SENco (Special Needs co-ordinator) and is free to go to her classroom. There is a quiet area in her classroom where he likes to work. He will 'call

	in' to this room at least every hour, at playtime, lunchtime and at the end of the day. **10.30 - 10.45**. Morning playtime. John is often hungry by now and if Mum hasn't given him a snack he goes to the SENco room. He has juice there and is encouraged to drink more since dehydration effects his behaviour. **12.30** Medication is given PROMPTLY. If there is a delay, his behaviour can be a huge problem and it will take very careful handling for the next hour to bring him under control. Lunchtime: The kitchen staff allow him to have what he wants and do not imposes the same rules as for the other learners. He eats a limited range and amount of foods and is therefore given anything to encourage eating. This is also necessary because of his medication. His lunchtime LSA then supports whatever activity he chooses. He likes to play football, go to the library, draw (always cars) and play on the computers. He will sometimes do one activity for half an hour or all the activities in half an hour! No two days are the same! Through bitter experience we know it is best to go with his plan. At lunchtimes 'damage limitation' is the rule and this makes for a productive afternoon. Last year, John would only eat carrots if they were cut in circles rather than the sticks that were served. The cook changed her method of cutting until he went onto his next 'concern'. At the moment we are all eating homemade tomato soup everyday. The plus side is he eats healthily and nothing lasts more than 2 weeks! He sits in the same seat for his lunch every day; his back to the open door, in a draft since he feels the heat more than other learners. At home time he does not get the bus. Mum collects him, she has restructured her working day to do this. John can be very distressed by the end of the day and his behaviour can be unsafe. Medication timing makes this an added problem. He could not safely go home on the school bus. He would show signs of stress from 2.30 - 3.30 on days when he thought he had to go home on the bus.
Rewards / behaviour modification strategies	We quickly found that the usual methods of rewards did not work with John. A huge range of the usual stickers / report cards / points and choice of activities were all tried but with no success. Backed up by the clinical psychologist we have 'adapted' our systems. **Consistent** approaches and calm handling work. The **safe place** (Senco room), is also a must.

	John needs **immediate verbal** feedback reinforced by his current obsession ie a leaflet (on anything!), anything that he can take out of the bin (empty boxes given to him aren't as attractive as the same box he can 'find' in the bin). Sanctions do not work. He does not accept that he has done something wrong because in his world there *has* been a reason why. If he hasn't coped with a lesson it is usually **because we have got it wrong.** Predicting how he will react to a situation is something we have had to become experts in. At the start of the year there had been a problem with his medication. We were coping (only just) with an out of control young person who had no control over his actions or speech. He would scream or yell and repeat any word he had overheard and liked the sound of. This could be swearing or the name of a cartoon character. He was a danger to himself, other people and objects. He would 'bounce' off walls and doors, fling himself on the floor or down stairs or at his peers. He would grab or cling onto furniture so he couldn't be moved. He would kick anything or anybody in his reach. As soon as the medication took effect, he was the total opposite. He would see the outcome of his behaviour and would be deeply distressed. He would stand and cry uncontrollably and say how sorry he was. He would always ask "What did I do? Did I hurt anyone? Did I break anything?" Since his medication has been change from one slow release to 3 x daily, we have a learner who, when he feel safe and understands what is going on around him, loves school. He is currently helping his LSA to produce his resources for speech and language work. He operates the photocopier and laminator with great skill and faster than any of us! John has only one 'friend' at anytime. The other learners are sensitive to his needs and are willing to help when he is distressed. At Christmas lunch some of the oldest boys went round and 'collected' all the toys from the inside of crackers to give to John. He was astonished that they had done this and was settled for the rest of a very hectic week.
Message we have learned through teaching John,	"Keep one step ahead, but don't beat yourself up when you get it wrong - learn for next time."

Case Study from Palermo

Questions	Answers
The case of G.	G. is a child of 7 years of age who attends the second grade. This year he has received a diagnosis of ADHD, in co-morbidity with a reading and writing disorder. The case of G. causes considerable problems and challenges for teachers who don't know how to manage the behaviour of the child given their behavioural problems and the poor education of his parents. Even the parents of other pupils continually complain about the aggressive behaviour by G. towards their children, they threaten to change their child's class; they also attribute the cause of the poor behaviour to poor educational skills of the parents. This opinion remains even after G. is diagnosed with ADHD. This inability to think that the child can behave in a problematic way that is against his will makes teachers hostile towards G.
G: Strengths of G.	He is a great dreamer and he has a lot of imagination, he loves to build planes, rockets and spacecraft, it is certain that he is very creative and he has i intelligent above the average.
Behaviour of G. in the Classroom	G. is tired immediately after the beginning of a task and he needs to change activity, he doesn't listen to the requests of his teachers, doesn't perform any task that is requested but he does the activities he wants. G. reads very badly, he doesn't mix with his peers, he continuously seeks attention from teachers. G. doesn't recognize the Italian teacher and her role. When she asks something, G. pretends to listen, turning his back. Although G. continually ignores teachers he seeks to attract their attention and of his classmates with whom he continuously has problems. He is often aggressive with them: he spits, beats, ruins their things and he is very vindictive. Even with teachers he is often aggressive, responds in an inappropriate way, he raises his hands and tries to hit teachers. He lacks social and problem solving skills. Teachers become quickly tired of the situation and aren't very motivated to teach G and in particular the Italian teacher shows feelings of anger and frustration. The mathematics teacher tells us how the previous year at school she followed the same method as used at home with rules, routines and posters, achieving some success. This year G. seems not to respond to these approaches. Teachers also realize that the problem involves all the class and all children. I propose observation in the classroom and the support of a psychologist. Teachers will reluctantly accept this approach because they prefer the provision of additional, in-class

	support. In the first classroom observation with the Italian teacher, she appears tired, seems to be unable to maintain silence and pupil attention. The teacher has many years of teaching experience (next year she will retire) and her frustration would appear linked to her inability to adopt new strategies and flexibility rather persisting in using strategies that she has used for years even though this has not been successful, they are applied with greater rigour and intransigence. I explain my role and present the observational card I had prepared. She appears disinterested, as if she already knows what she will find written on it. "Everything is to not avail!" In class the position of groups is questionable. Children considered "difficult" and disturbing are alone in a group. G. is sitting alone at a single desk (smaller in relation to the others) next to the chair and often the teacher explains to the class whilst standing just in front of the chair, turning their back to G.! When the teacher realizes that G. has failed to comply with their requests, e.g. to take the book, she tells him just once and with a low voice. They have mutual respect. This course of action occurs several times and appears to represent a typical interaction between G. and the teacher.
Conclusion	After an entire school year teaching the teachers and classmate classroom strategies, the situation at the end of the year doesn't seem to have improved. Many teachers have tried every way to boycott the meetings and training when the psychologist has come into the classroom, during the Italian lessons, to activate technical psycho-educational approaches with G. The teacher went out of the class under various pretexts saying that they had no time to spare and all they needed was someone to keep G. under control during the lessons. The teachers were informed of all the strategies for working with G. but they haven't applied them, although they could assess its validity when the psychologist was in class with G. "Miracle" G. completed all the work required. The attitude of the Italian teacher during the year is even worse often coming into direct conflict with the child. Lately G. has turned against her punching and biting her. Only the mathematics teacher has put the advice into practice, which was to be consistent, clear and decisive in their requests. Have empathy with the child and support him with a secure and stable approach, create positive relationships and contracts with G., so that the completion of a part of a piece of work or even the entire work would be rewarded with an opportunity to choose a favourite activity. These strategies have been successful and G., despite continuing to create problems in the classroom, has significantly reduced his inappropriate behaviour.

Question and Answer Corner, Romania

Objective. To apply theoretical knowledge to daily practice

Questions	Answers
1. Having a student in class that has been diagnosed with ADHD can be very frustrating, but there are a few things you, as a teacher, can do to make both of your lives a little easier.	• Consult the experts: parents, previous teachers, specialists, guidance counsellors, and psychologist. • Have a sense of humour! • Promote high self-esteem: be friendly, respect opinions, provide immediate feedback and give reinforcement for any improvement. • Establish control: be consistent, follow definite rules, discipline offences immediately, offer explanations for what rule was violated and be willing to listen to their side of the story. • Maximize academic improvement: allow for flexibility in the amount of time needed to complete a project, offer alternatives to writing, e.g. typing, establish small tasks leading up to the completed project and break it down. • Schedule activities to allow for the student's fluctuating energy levels: intermix high and low energy activities throughout the day, send the student on errands if he or she has energy to burn, encourage active ways of answering questions during discussions. • Provide organisational tools: create checklists in order of priority, develop routines and label anything that is to go home. • Open up communication lines with parents: engage in frequent correspondence, encourage parental monitoring of homework, provide parents with a schedule of the student' assignments. • Reward success: use stickers, post points on a chart, shake hands, smile, use verbal praise. • Utilize group work: encourage problem solving, teamwork and cooperation. • Grab the student's attention: eye contact, give short, easy-to-understand instructions, insist that students repeat back information, use non-verbal cues to quite the students such as raising a hand or flashing the lights, give private cues that the student is off-task such as a hand on their shoulder. • In general: provide variety with learning centres and group projects, test material learned and not attention span,

	respect the students' input. *Hogan, Dawn. ADHD: A Travel Guide to Success. Childhood Education, Spring 1997, Vol. 73, No. 3*
2. What are the strategies for teaching children with ADHD?	ADHD stands for Attention Deficit Hyperactivity Disorder and is a problem teachers are facing on a regular basis in their classrooms. Dawn Hogan, a 2nd grade teacher from Connecticut, has assembled ideas for teachers to use to make teaching students with ADHD more productive and less stressful. • Teachers must be energetic and enthusiastic in regards to the task at hand. • Offer activities in which the child excels. This builds self-esteem. • Provide a calm, structured, and positive environment. Be firm, patient and consistent. • Modify assignments and activities to match their learning styles and abilities. • Offer opportunities for rest and relaxation for both teacher and student. • Organise tasks clearly and number them in order of priority. • Develop daily routines. • Construct positive relationships with the parents. • Reward the students for positive and desired behaviour. • Encourage a cooperative environment, not competitive. When teachers have accomplished these objectives, they have arrived at the goal of having children motivated to learn. *Childhood Education, Spring 1997, ADHD: A Travel Guide to Success, Submitted by: J.J. Stout*
3. How to develop the study skills needed to grow socially and emotionally?	Consult the experts: meet with the child's parents, the child's previous teachers and appropriate education specialists. Engage in personal, friendly conversation with the students. Show that you value their opinions and include them in the decision-making process when possible. Validate their strengths; offer activities in which they can excel. Respond to improvement. Provide a calm, structured, positive environment. Establish clear standards of behaviour and post realistic, predictable consequences for infractions. Immediate and consistent feedback is important, as well as modelling positive behaviour instead of focusing on the negative. Children with ADHD often act without thinking, so help them develop an awareness of their behaviour. For example, using "I messages" to explain a feeling to children after they are disruptive. This helps the child become more aware. Then, discuss the incident and brainstorm possible solutions together.

Make sure that assigned work is within or just beyond the child's capabilities; material may need modification. At times it may be necessary to put work aside temporarily; try to mix high and low interest tasks. Dividing long assignments into parts make them more manageable.

When ADHD children become upset, "time-out" may be helpful to allow them time to think quietly about the conflict and resolve it on their own. Children can rejoin the group when they feel calm and in control.

Fatigue, stress, and pressure can test children's self-control and lead to inappropriate behaviour so provide opportunities for rest and relaxation throughout the day. Examples include stretching or quiet times. Overactive children who need movement can run errands; sharpen pencils or water plants. Children can stand up, sit down, or raise hands to answer questions. Engage children in interactive learning.

Select a peer partner to model organisational skills and offer assistance. Children do not always know how to initiate and complete a task on their own. To help them, organise written assignments by utilizing checklists the children can refer to as they work, numbering items in order of priority. Develop daily routines and prepare students for any change in the procedure to avoid disorientation. Ensure homework gets home by labelling folders as homework, corrected assignments, and teacher / parent correspondence.

Develop positive relationships with parents. Frequent communication is helpful, even daily parent-school reports. Help parents be involved in the homework by writing the assignment in clear terms, including a homework schedule with due dates and places for parents to sign after the work is done. Suggest parents provide a quiet study space at home away from the distractions of T.V., video games, and busy family activities. A set time for homework benefits ADHD children's need for structure and predictable routine.

Positive reinforcers can be tangible "prizes" such as stickers or points earned on a displayed chart. Other rewards include a smile, nod, pat on the back, or word of praise which may be better long-term. Encourage self talk, where students talk about how good behaviour is self-gratifying. As a teacher praising the children, use their name and a description of what they did right.

Hogan, Dawn. "ADHD: A Travel Guide to Success." Childhood Education, Spring 1997, Vol. 73, No. 3.

	- Seat the student away from distractions. - Keep the classroom uncluttered and well organised. - Give only one direction at a time. - Use visual aids to assist *(Kristi Viehl)* - Minimize distractions by putting the child's desk close to yours and in a quiet place. - Provide a strict routine and have small segments of work followed by breaks. - Keep a chart that tracks the student's tasks to keep him or her focused. - Frequently ask the child to repeat oral instructions. - Adjust your expectations and the student's workload; realize that sometimes students with ADHD cannot do the same amount of work as other students. - Coach the student on how to make friends and how to play appropriately with others. - Concentrate on only dealing with the serious behavioural problems so that the student does not become overwhelmed. - Keep a behavioural chart and reward the student for good behaviour. *(Betsy Posekany, Learning. January 1992. P. 49)*
4. What are the strengths and weaknesses of children with ADHD?	The strengths of children with ADHD - Creativity - High Energy - Intuitiveness - Resourcefulness - Tenacity - Warm-heartedness - Trusting Attitude (sometimes too much so) - Forgiving attitude (sometimes too much so) - Sensitivity - Ability to take risks (sometimes too risky) - Flexibility - Loyalty - Good sense of humour Not all people with ADHD have all these traits, but to the extent that there is such a thing as the ADHD personality this list of positive qualities describes the advantageous side of the ADHD personality. It should be noted that the problems ADHD causes can be so severe that these positive qualities never gain full expression or recognition. The weaknesses of children with ADHD

	• Distractible • Impatient • Daydreamer • Acts without considering the consequences • Lacking in social skills • Difficulty following instructions • Disorganised and impulsive • Lack of time management • Inconstantly • Inflexible attitude
5. What is ADHD?	Attention Deficit Hyperactivity Disorder (ADHD) is a biological, brain based condition that is characterized by poor attention and distractibility and / or hyperactive and impulsive behaviours. It is one of the most common mental disorders that develops in children. If left untreated, ADHD can lead to poor school work performance, poor social relationships and a general feeling of low self esteem. • Attention Deficit Hyperactivity Disorder (ADHD) is a behavioural and developmental disorder. • ADHD usually becomes apparent during the preschool and early school years. • Children with ADHD have difficulty paying attention and controlling their behaviour. • Some estimates show that between 3 and 5 percent of children have ADHD, or approximately 2 million children in the United States. • Based on these estimates, at least one child in a classroom of 25 to 30 children is likely to have ADHD.
6. History of ADHD?	Dr. Heinrich Hoffman, in 1845, first described ADHD in a children's book, "The Story of Fidgety Philip," which contained an accurate description of a child with attention deficit hyperactivity disorder. In 1902, Sir George F. Still provided the first clinical description of the disorder in a series of papers about a group of children who displayed impulsivity and behaviour problems. According to Still, these symptoms were caused by a genetic dysfunction and not by poor parenting. Since that time, a wealth of research on the symptoms, causes and treatments for ADHD has been published. *(Attention Deficit Hyperactivity Disorder National Institute of Mental Health, 1996)*
7. What are the causes of ADHD?	The exact cause of ADD / ADHD has not been determined; however ADHD is thought to have a genetic component as it tends to occur among family members. The <u>American Academy</u>

	of Paediatrics (AAP) states that close relatives of people with ADHD have about a 5 times greater than random chance of having ADHD themselves, as well as a higher risk for such common accompanying disorders as anxiety, depression, learning disabilities and conduct disorder. The AAP also reports that an identical twin is at high risk of sharing their twin's ADHD and a sibling of a child with ADHD has about a 30% chance of having similar problems. There is ongoing research focusing on identifying genes that may cause a person to be more susceptible to ADHD. Research continues to study the link between ADHD and the structure of the brain, brain chemistry especially related to dopamine and norepinephrine (which regulate attention and activity), and differences in the function of parts of the brain that affect attention and impulse control. There is more clarity on what does not cause ADHD. It is not the result of poor parenting, poor teaching, laziness or lack of motivation and discipline. *(Keath Low, 2008)* Attention Deficit Hyperactivity Disorder (ADHD) is a behavioural disorder in which a child displays an excessive degree of distractibility, hyperactivity and impulsiveness. Children who have the distractibility without the hyperactivity may get a diagnosis of Attention Deficit Disorder (ADD). Research indicates that individuals with ADHD may have a problem with the neurotransmitters that allow brain cells to communicate with one another. Stimulant medications such as Ritalin are often used to manage ADHD, and are thought to work by making the neurotransmitters function more efficiently. Behaviour modification and appropriate parenting techniques, whether alone or in conjunction with medication, can also be effective. Although ADHD is most commonly associated with children, it is also possible for adults to have ADHD. *(Also Known As: Attention Deficit Disorder, Attention Deficit Hyperactivity Disorder, ADD, ADHD)*
8. What Are The Symptoms of ADHD?	There are three primary characteristics of ADHD: 1. **Inattention** 2. **Hyperactivity** 3. **Impulsivity** The symptoms of ADHD usually appear in early childhood but symptoms are often confused with other disorders or mistaken

for normal childhood behaviours. In order for a child to receive appropriate intervention and treatment. It is important that a diagnosis is made by a well-qualified mental health professional.

Recognizing the Symptoms of ADHD

ADHD symptoms such as hyperactivity and impulsiveness tend to appear before inattentiveness. In many cases, symptoms only become apparent in specific situations. For example, a parent might not notice inattentive behaviour because it does not cause major problems at home. However, inattentiveness will become more apparent when the child enters school and experiences academic difficulties due to inattentive behaviour.

Hyperactivity and impulsivity draw greater notice because these symptoms lead to obvious behavioural problems and more disruptive behaviour in school.

Most children display these behaviours at some point, but this behaviour could be a sign of ADHD when hyperactivity, distractibility, poor concentration, or impulsivity negatively impact school performance, social functioning or family life.

According to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR), there are three patterns of behaviour that indicate ADHD:

1. **Predominantly hyperactive-impulsive type**, who do not exhibit significant inattention.
2. **Predominantly inattentive type**, who do not show significant hyperactive-impulsive behaviour, occasionally referred to as ADD.
3. **Combined type**, who display both inattentive and hyperactive-impulsive symptoms.

Source: (1996) *Attention Deficit Hyperactivity Disorder* National Institute of Mental Health

9. How to help the teacher? How to help the students?	Helping the Student
	These suggestions go beyond the smiley faces and point strategies teachers often use and help teachers to reflect on the students' true nature. Both the home and school can benefit from these ideas!!

- Cognitive. Add different skills such as, self-talk, biofeedback training, meditation and visualization to the learning process.
- Ecological. Provide learning spaces which use music and art to calm or stimulate. Each child has time where he or she is more alert - find those times and accomplish harder tasks then. Provide a balanced breakfast. Limit television and video games.
- Physical. Develop and / or work with the physical education instructor to include martial arts training, physical touch and appropriate movement, physical relaxation techniques, as well as, outdoor activities, non-competitive sports and games.
- Emotional. Build self-esteem by being a positive role model, providing positive images of the future, offering individual psychotherapy and identifying talents, strengths and abilities.
- Behavioural. Use personal contracts to help develop each child's learning, consistent rules, routines, and transitions, involve the child in selecting strategies and provide immediate feedback.
- Social. Use stress effective communication skills, class meetings, peer and cross-age tutoring and cooperative learning.
- Educational. Use hands-on learning, computers, high stimulating learning resources, creative development, interesting language and attention-grabbing activities.

(Armstrong, Thomas. A Holistic Approach to Attention Deficit Disorder. *Educational Leadership*, February 1996. P. 34-36. *Melissa Gutshall)*

Helping the Teacher

1. Become informed about Attention Deficit Hyperactivity Disorder.
2. Allow students to use different methods for demonstrating what they have learned. For example, they could give an oral presentation or do an art project.
3. Offer choices to the students to keep them interested.
4. Give students tools such as word processors and spell-checkers to make up for shortcomings.
5. Make directions easy to follow.

	6. Monitor the progress of all students. 7. Use methods other than standardised testing to measure learning. 8. Ask for help. An ADHD student may be entitled to a classroom aide or other special services. *(Weaver, C. Eight Tips for Teachers with ADHD Students, Instructor, 1994)*
10. How to reward a student diagnosed with ADHD?	Teaching and Rewarding System for a Student Diagnosed with ADHD 1. Offer an activities based curriculum that will tap into the child's energy and creativity. 2. Teach abstract ideas concretely and contextually. Allow a type of hands on instruction when possible. 3. Use and adapt behaviour modification techniques and relaxation exercises that fit the child's interests and personality. 4. Get the support of the class in dealing with the child through peer tutoring groups and co-operative learning groups. 5. If necessary, and in extreme cases, get the child on medication for ADHD. *(Phi Delta Kappan*, Volume 77, Number 6, February 1996. *Jason Dagel)*
11. Do you know some famous people with ADHD or learning disabilities?	**Famous People Who May Have ADHD or Learning Disabilities** | Albert Einstein	Thomas Edison	John F. Kennedy
Mozart	Beethoven	Winston Churchill
Galileo	Alexander Graham	Prince Charles
Leonardo De Vinci	Bell	Robin Williams
Jules Verne	Louis Pasteur	Tom Cruise
Stephen Hawking	Agatha Christie	Sylvester Stallone
John Lennon	Whoopi Goldberg	"Magic" Johnson
Walt Disney	Carl Lewis	Henry Ford	

12. Some of the objectives for children with ADHD are…	• Development planning and organizing abilities • Minimize external stimuli • Cognitive reorganisation • Anger management • Social and emotional development
13. The behaviour interventions strategies are…	1. Daily schedule 2. Easy task after a hard task 3. Complex exercises divided into small parts 4. Operational objectives 5. Time management 6. Monitoring of stimulus 7. Learning style / life style (sleep, relaxation, nutrition,) 8. Support teacher
14. One excellent technique for appreciating behaviour at school or at home…	• **Draw a happy face for good behaviour or a sad face for inappropriate behaviour.** *(table below)* • **Give awards and response/cost for the behaviour of the students with ADHD.**
15. What educational changes can be made when working with children with ADHD?	• To create the appropriate classroom environment: stable, calm, predictable and structured • To organise the transition between activities • To decorate the classroom • To arrange the students in the first desk of classes • To give positive feedback • To adapt the educational tasks for students with ADHD • To change the curriculum and teaching strategies

Table for item 14:

Number	Monday	Tuesday	Wed	Thursday	Friday	Saturday	Sunday

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