Special Education English topics

First course

Special education department

Second level

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**Special Education**

Special education provides for children and adolescents with physical, mental, emotional or behavioral problems that prevent them from taking full advantage of regular classroom schooling. Instruction in such circumstances involves extra care, professional assistance, learning aids, special settings and programs to help those students cope with school courses and develop skills to be able to integrate successfully in the community.

Special education التربية الخاصة professional assistance مساعدة بخبرة

Adolescents المراهقة learning aids الوسائل التعليمة المساندة

Physical الجسمية special settings الاساسيات الخاصة

Mental العقلي

Emotional العاطفي

behavioral problems مشكلات السلوكية

In most countries legislation provides that all people, including those with special educational needs, should have the same opportunities and rights. Special education differs from general education in the methods of instruction it applies and its learning objectives

Legislation:

special educational needs ,:

Opportunities

methods of instruction

learning objectives ,

The goals in general education are set by a standard curriculum, while a student's disability may require modifications to the program for a certain course or subject to a lower level of difficulty. Support also includes adaptations of teaching materials, lesson presentations and skill assessment in order to help the disabled to access the general curriculum

standard curriculum

student's disability:

modifications to the program :

adaptations of teaching materials:

 lesson presentations :

 skill assessment:

 disabled:

general curriculum:

 **Assistive Technology in Education**

**التكنولوجيا المساعدة في التعليم**

Defining Assistive Technology

The term assistive technology service means any service that directly assists an individual with a disability in the selection, acquisition or use of an assistive technology device. The term assistive technology device means any item piece of equipment of product system, whether acquired commercially, off the shelf, modified or customized that is used to increase, maintain or improve functional capabilities of individuals with disabilities (Handinet, n.d.).

As a school leader you will be part of the decision making of the Individual Education Plan (IEP) team. Do you have the knowledge and skills to help the team make the best decisions for students like Jaime as well as for the best interest of the school?

The No Child Left Behind Act of 2001 (NCLB) and the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA) have further defined that students with disabilities, like Jamie, must have access and instruction in the general education curriculum. For many students with disabilities to be successful learners in the general education curriculum, they must receive supplemental aids and services. Assistive technology, commonly referred to as AT, fits both the definition of supplemental aids as well as related services for students with disabilities. Assistive technology services and devices allow access to the general education curriculum for academic, social, and extracurricular activities.

The purpose of this article is to provide critical knowledge regarding assistive technology and the role of school leaders in the decision making process. As an effective school leader, there are important knowledge and skills essential for your understanding of the impact of assistive technology on student learning. These include:

(a) defining assistive technology

(b) following assistive technology laws and legislation

(c) participating as a member of the IEP team

(d) recognizing assistive technology devices and services

(e) identifying assistive technology funding sources

(g) providing professional development in assistive technology

(h) following ethical guidelines

These will provide you with the knowledge and skills to be a valuable member of the IEP team while encouraging and supporting the best interests of faculty, staff, resources, and other students.

Deaf Education

Educating Deaf Students: From Research to Practice

By Marc Marschark, Harry G. Lang, John A. Albertini

**Excerpt**

The field known as deaf education has undergone considerable change over the past decades. In part, this situation reflects the evolution of understanding concerning deaf people and American Sign Language. The magnitude of this change, however, owes much to progress in pedagogy, developmental psychology, psycholinguistics (including language acquisition), and other related fields. Together with dramatic changes in technology, scientific progress has provided new options and new perspectives for parents, students, and teachers.

We also have to accept the influence of this book being written early in the new millennium. Perhaps caught up in the excitement of it all, but also with genuine commitment, we felt the need to share our optimistic, but realistic, view of what the future holds for parents and educators of deaf children, as well as for the children themselves. Given the progress of the past few decades and the sense of new beginnings, we thought that it was important to consider the education of deaf students from the perspective of what we know rather than what we want. In deciding to provide a research-based framework for educating deaf students, we sought to set aside as much as possible the politics, rhetoric, and confusion that often accompany such discussions. In the chapters that follow, we therefore consider the educational and research literature with an eye toward systematic inquiry and generality of findings. As far as the current state of the art allows, we summarize what we know about educating deaf students and draw implications for parents, teachers, and other gatekeepers.

**Inclusion in Education**

**الإدماج في التعليم**

#  Creating an Inclusive School

By Richard A. Villa, Jacqueline S. Thousand

In this comprehensive resource on inclusive schooling, administrators, general and special educators, and parents explore how inclusive education can support a diverse student body at all grade levels. They show how schools can meet standards and provide a "least restrictive environment" for students with disabilities by using cooperative learning, teaming, multi-age grouping, multicultural education, social skills training, and educational technology applications. And they explain how to facilitate change by using universal design principles and other curricular, instructional, assessment, and organizational practices. The authors examine the prevailing myths and the most frequently asked questions about inclusive education, and they provide an extensive list of resources. Woven through the book are the personal stories of people with disabilities and the educators and parents who work with them. As their voices make clear, inclusion is more than an educational buzzword; inclusion is a way of life, based on the belief that each individual is valued and belongs. Richard A. Villa, Ed. D., has worked with thousands of teachers and administrators to develop and implement instructional support systems for educating all students within general education settings. Jacqueline S. Thousand, Ph. D., is a professor in the College of Education at California State University, San Marcos, where she coordinates the College's special education credential and masters programs.

Excerpt

In 1975, Congress passed the Education for All Handicapped Children Act (Public Law 94–142) guaranteeing for the first time that all students with disabilities would receive a public education. The law's name was changed in a subsequent reauthorization in 1990 to the Individuals with Disabilities Education Act (IDEA). The law provides the foundation for inclusive schooling, requiring that every child with a disability receive a free and appropriate public education and learn in the least restrictive environment.

At the time the first edition of this book was written, discussions on inclusion provoked strong and differing opinions among educators. Since that time, research, experience, and case law have further clarified the rights and responsibilities of school personnel to include students with disabilities with nondisabled peers in general education settings to the maximum extent appropriate and have documented the benefits of inclusive education for students with and without disabilities. The percentage of students with disabilities within general education environments continues to increase, and we can expect this trend to continue.

The 1997 reauthorization of IDEA, which occurred two years after the publication of the first edition of this book, greatly strengthened the presumption that the placement of first choice for students with disabilities should be in the general education environment where they most readily would have access to the rigorous general education curriculum as well as other noncurricular activities to . . .

Individualized Education Program(IEP)

An Individualized Education Program, or IEP, is a special service provided in public schools. Children with disabilities or educational learning issues may be eligible for these services, which are provided free of charge.

In many instances, parents need to advocate for their children's educational needs, particularly when learning support and additional help is required. The Individuals with Disabilities Education Act of 2004 (IDEA) contains provisions for parents to be more involved with the educational team responsible for creating the IEP. Parents may work with teachers to create the individualized education program for their child to ensure greater success within the child's school learning experience.

The IEP comprises a specialized program for the individual child's special needs. It contains a description of the program, the specific goals and the learning support required to achieve these goals. An IEP is generally written for an entire school year.

When a child has learning difficulties that affect his or her ability educationally, as well as functional capacities, the child is considered a special needs student. An IEP is then created to accommodate the special needs and to facilitate progress. Students may receive additional support or be taught in a way that best serves their situation.

There are a range of special needs situations arising where children require individualized educational attention. This may include students with learning disabilities, developmental delay, emotional disorders or cognitive challenges. Hearing, visual, or speech and language impairment constitutes candidacy for IEPs. Children on the autism spectrum also require an IEP.

Once the IEP goals are outlined and the support needs detailed, the method for implementing the program and the appropriate venue are established. Depending on the individual child's special needs, the IEP may be carried out in a regular classroom, in the school's resource room or specialized learning centers. However, in intensive cases, programs may take place in a special needs school or environment, generally with a small ratio of children to teacher. These programs are led by staff trained in helping special needs children. Classes may be given to a few children at a time or one-to-one. Often, the school day is divided between time outside the regular class for the individualized educational assistance and time with the rest of the class for certain activities, either nonacademic classes or those in which the student does not required focused help.

An IEP is created once the child has been assessed and evaluated. This usually arises following concern expressed either by the teacher, parent or doctor regarding the child's academic or functional performance. An educational psychologist or counselor is called on to make an assessment. Information is gathered from the school, particularly in respect to attention and behavior in class, the ability to cope with the school work and test results. Where appropriate, a child may be assessed for learning disabilities or impairments. Special services are granted only when functionality at school is affected.

A variety of tests are carried out by a professional team to evaluate the child's level of learning disability and the issues arising. In addition to the educational psychologist, the professionals involved include physical, occupational, speech, vision and hearing therapists, a special educator and any other specialists the child's needs require. Eligibility for support is determined by the tests performed.

A comprehensive evaluation report (CER) is compiled from the individual tests. Results are included with an educational classification. A list of skills and support are outlined, indicating what the child will need. Parents are given the opportunity to review the CER prior to the drawing up of the IEP.

An IEP meeting among parents, the evaluation team and a teacher begins the process of developing a specialized education program to meet the requirements of the individual child. This comprises the goals, both short-term and annual, of the IEP and the specific needs to be addressed. Challenges include assuring synchronization of IEP and curriculum needs. The IEP states the type of services and the amount of times per week that the services will be offered. Support services range from special education support to medical, counseling, audiology, speech and other types of therapy.

The IEP can be altered at any time should it become apparent that changes will provide further help or comfort. It is reviewed on an annual basis to ensure that the goals are being met and the levels of support are appropriate for the child.

Parents are entitled to be involved with the setting up of the IEP and for checking progress during its duration. They can also request the timeframe, seeing that services commence as soon as possible, and may receive a copy of procedural safeguards clarifying the parent's legal rights during the IEP process. The rights of children with disabilities studying at a private school are not the same as when studying at a public school, in terms of receiving special support through individualized education programs.

# Individuals with Disabilities Education Act (IDEA)

The Individuals with Disabilities Education Act (IDEA) is a federal law in the United States that ensures services to children with disabilities throughout the country. It guarantees that states and public authorities provide early intervention, special education and related services to children with disabilities. In 2006, more than 6.5 million infants, toddlers, children and youth with disabilities were protected by the legislation.

The United States Congress created IDEA in 1975 to ensure that children with disabilities were given the opportunity to receive a free appropriate public education, just like other children. The law initially appeared under the name of the Education for All Handicapped Children Act and gave access to public education for more than one million children.

Before 1975, public schools educated only one out of five children with disabilities. These included children who were blind, deaf, labeled emotionally disturbed or mentally retarded. In many states, they were excluded from public education. The law has been revised often since 1974. Congress approved amendments in December 2004, with final regulations published in August 2006. The No Child Left Behind Act and the Family Education Rights and Privacy Act are related pieces of legislation.

IDEA 2004 is divided into four parts:

- Part A refers to general provisions, which includes the findings of Congress, the purposes of IDEA and key definitions;

- Part B provides for assistance for education of all children with disabilities, which includes what school systems and states have to do to identify children with disabilities and educate them. It includes also parent and student rights;

- Part C is about infants and toddlers with disabilities, explaining how states are obliged to intervene early and provide services to babies and toddlers with disabilities or developmental delays;

- Part D covers national activities to improve education of children with disabilities, providing for parent information, teacher training programs and training centers.

The IDEA regulations add a new authority for school personnel to consider in the case of ‘unique circumstances.' This expands on the guidelines giving the authority to remove a child under special circumstances, such as those relating to serious bodily injury. Moreover, the regulations retain authority for long-term removals for behavior that is not regarded as a manifestation of the disability.

IDEA clarifies when services are required during disciplinary removals, the provision of such services and who makes the determination regarding services and interim alternative educational settings. It retains and revises the standard for a public agency's basis of knowledge for children not determined eligible for special education, as well as addressing the child's placement pending a disciplinary hearing decision.

When a child is identified by a system known as *Child Find*, which operates in each state, as possibly having a disability and as needing special education, the permission of parents to evaluate the child is required. The initiative may start from parents themselves who can call the Child Find office and ask for evaluation of their child. A teacher can also request that a particular child be assessed to determine if there is a disability. The evaluation will have to answer to several main questions such as whether the child has a disability that needs special education and related services; what the child's specific educational needs are and what kind of special education services are appropriate for addressing those needs.

A group of qualified professionals and the parents decide if the child has a disability, as defined by IDEA. If the parents disagree with the professionals, they have the right to challenge the decision. If the child is found to be a child with a disability, he or she becomes eligible for special education. Within 30 calendar days after that, a team of education specialists and the parents will prepare an individualized education programs (IEP) for the child. Following on from this, an IEP meeting is scheduled and everyone involves meets to discuss the child.

The school is responsible for the child's IEP being carried out as it is written and each of the child's teachers has access to the program. These educators have knowledge about their specific responsibilities under the IEP. The child's progress toward annual goals is measured and the parents are informed. The IEP team will review the child's personal program at least once a year, or more often in case the parents or school demand it.

Least Restrictive Environment (LRE)

The federal act, Individuals with Disabilities Education Act (IDEA) 2004, provides that every student who has been identified as being learning disabled is entitled to a Free Appropriate Public Education (FAPE) up to age 21 that will prepare them for employment or further education and independent living. The 1975 Education for All Handicapped Children Act (Public Law 94-142), the predecessor to the IDEA, provided that the FAPE must take place in the least restrictive environment (LRE).

The 2005 United States Department of Education regulations implementing the IDEA state that children with disabilities must be educated with children who are "nondisabled." Special classes, separate schooling or other removal of children with disabilities from a regular educational environment may only occur if "the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily."

LRE promotes the highest degree of inclusion of students with disabilities in mainstream schools and minimal segregation. One of the main advantages of LRE is contact with nondisabled peers. Even if a student's educational needs are profound, they can share lunch, recess, and resource classes such as art and music. LRE creates an opportunity for all students to learn about each other and develop a caring society.

The decision about where to place a student and what provision should be available is made through a team process that includes professionals and parents. The IDEA approach is to consider one child at a time, focusing on their individual needs, rather than trying to fit them into the existing framework. The first stage involves assessing the child's needs and preparing an individualized education program (IEP).

States vary in the extent to which they operate separate classrooms, separate schools, and residential facilities. In Roncker v. Walter (1983), referring to the IDEA, the judge held:

"It is not enough for a district to simply claim that a segregated program is superior. In a case where the segregated facility is considered superior, the court should determine whether the services which make the placement superior could be feasibly provided in a nonsegregated setting (i.e., regular class). If they can, the placement in the segregated school would be inappropriate under the act."

In Daniel R. R. v. State Board of Education, (1989) the Court adopted a two-part test for determining the LRE:

1. Can an appropriate education be achieved satisfactorily in the general education classroom with the use of supplementary aids and services?

2. Is the student "integrated" to the "maximum extent appropriate," if the student is placed in a more restrictive setting?

In Board of Education, Sacramento City Unified School District v. Holland (1994), four legitimate factors were identified:

• The academic benefits of integration for the student

• Nonacademic benefits (particularly social interaction)

• The effect of the student on the teacher and his or her peers

• The cost of supplementary services

Funding constraints are a major factor in establishing integrated and separate programs. Some special education providers in non-integrated environments oppose integration in line with LRE policy, arguing that if they place children in general education settings and move away from the use of labels to identify students for particular types of services, they are in jeopardy of losing their funding. However, cost savings can be made by moving away from segregated institutions with high staff to student ratios. Integration allows students to share existing funding for general education.

Not all general education settings have the ability to serve all students with disabilities. LRE promotes the development of inclusive community schools that can provide for all students, regardless of disability. A structural obstacle to the LRE is that special education institutions are run by regional special education advisers and their superintendents, who have an interest in maintaining existing special education institutions. Special education and general teachers tend to be trained separately and follow separate career paths, which preserves a degree of segregation.

Parents and lobbying groups have generally promoted LRE as an option for students. However some find that the facilities and support in the general educational setting are inadequate, and seek less inclusive provision.

Critics of LRE sometimes argue that inclusion can harm general educational programs. Financially, spending per student amongst those with disabilities tends to be considerably higher than for a nondisabled student. The allocation of other resources, including teacher time, is unlikely to be equal, which some argue detracts from the general educational provision for nondisabled students. A counter-argument to this is that the benefits for all students of an inclusive society outweigh any additional costs or detriment.

Creating an Inclusive School

In this comprehensive resource on inclusive schooling, administrators, general and special educators, and parents explore how inclusive education can support a diverse student body at all grade levels. They show how schools can meet standards and provide a "least restrictive environment" for students with disabilities by using cooperative learning, teaming, multi-age grouping, multicultural education, social skills training, and educational technology applications. And they explain how to facilitate change by using universal design principles and other curricular, instructional, assessment, and organizational practices. The authors examine the prevailing myths and the most frequently asked questions about inclusive education, and they provide an extensive list of resources. Woven through the book are the personal stories of people with disabilities and the educators and parents who work with them. As their voices make clear, inclusion is more than an educational buzzword; inclusion is a way of life, based on the belief that each individual is valued and belongs. Richard A. Villa, Ed. D., has worked with thousands of teachers and administrators to develop and implement instructional support systems for educating all students within general education settings. Jacqueline S. Thousand, Ph. D., is a professor in the College of Education at California State University, San Marcos, where she coordinates the College's special education credential and masters programs.

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The 1997 reauthorization of IDEA, which occurred two years after the publication of the first edition of this book, greatly strengthened the presumption that the placement of first choice for students with disabilities should be in the general education environment where they most readily would have access to the rigorous general education curriculum as well as other noncurricular activities to

No Child Left Behind Act (NCLB)

On January 8, 2002, U.S. President George W. Bush signed the No Child Left Behind (NCLB) Act of 2001, which applies to the education in public schools. The act reauthorizes the Elementary and Secondary Education Act of 1965. It also modifies the reauthorization the Improving America's Schools Act from 1994, a key part of the Clinton administration's plan to reform education. NCLB's four basic principles, as listed on the website of the U.S. Department of Education, are stronger accountability for results, increased flexibility and local control, expanded options for parents, and an emphasis on methods that have been proven to work. Under the terms of the act all public schools in one state have to follow the same standards for their students. As part of the requirements 95 percent of all students in a school have to take statewide standardized tests. These tests are taken by all students in the state under the very same conditions. Of all students, 1 percent are not required to take the test. That percentage usually includes the children with most severe cognitive limitations. Students that are not native speakers with a limited proficiency in English have to pass statewide tests in English after their third year of studying the language.

According to some, standardized tests do not favor students. These tests are often said to be provoking teachers to pay more attention to subjects and topics that are most probably going to be included in tests and neglect others that may not. This process is called "teaching to the test." In addition, making all students take the same test under the same conditions has been is said to imply an inherent cultural bias as different cultures may value different skills.

The standards for the tests include grades at four levels - below basic, basic, proficient and advanced. All these requirements aim to achieve equality in the educational aims, content, teaching methods and measures of achievement. The grading standards described above should be the same in every public school within the state but not in every state within the country. Each state is allowed to have its own definition of "basic" or "proficiency". This point from the NCLB Act has also attracted a lot of criticism as it allows certain states to lower their criteria and more easily demonstrate improved results at the end of the year.

The progress that all schools and school districts are making, known as adequate yearly progress (AYP), is measured once a year. AYP checks target the performance and participation of various subgroups based on socioeconomic status, disability, race or ethnicity and English proficiency. NCLB aims to have 100 percent of students proficient by 2013 - 2014.If a school repeatedly fails to record consistent progress it is subject to a series of sanctions and may even be closed. There are two classifications for schools that do not make AYP: schools in need of improvement and schools in need of corrective action. Schools in need of improvement are those facilities that have failed to make AYP for two years in a row. In the third year they have to develop a two-year plan for improvement. Schools in need of corrective action are schools that have not recorded AYP after they have been following an improvement plan for a year.

President Barack Obama in 2007 proposed two major changes to the Act - one concerning the way assessments are made and the other focused on an enhanced accountability scheme. According to Obama's administration, there should be additional funding for states so that they can implement a broader range of assessments to evaluate skills like a student's ability to use technology, conduct research or scientific investigation, solve problems and defend his or her ideas. Schools also need an accountability system that helps them improve instead of focusing on punishments. In Obama's view, schools should make assessments corresponding to a child's needs and take into account if a student is now learning English or has special needs. The improved system should evaluate continuous progress throughout the learning process. It should also provide some support so that students remain in school through their graduation and not get thrown out so the school can reach a higher score.

Response to Intervention (RTI)

What Every School Leader Needs to Know about RTI?

What is Response to Intervention and why should we care? With this question, Margaret Searle begins her exploration of the RTI approach to classroom instruction and intervention from her perspective as a seasoned teacher, principal, and administrator.

Built on a solid foundation of best practice, RTI draws on the strengths and successes that many districts and schools already have in place. For the plan to be effective, however, proactive and consistent leadership is essential. With this in mind, Searle outlines the critical roles played by school leaders at each step and offers practical answers to the questions they will likely face.

• Where should I start implementing or improving our RTI plan?

• Where do I find high-quality research-based interventions?

• What's a pyramid of interventions and what do I put in the tiers?

• How can I help teachers set and reach student goals?

• How is RTI different from what we've tried before?

• How can we make this whole thing work without going crazy?

Searle shows how school leaders can use the RTI model to coordinate resources and foster continuous student improvement and achievement. This breakthrough approach replaces the old "wait to fail" mind-set with proactive efforts that will support all students in danger of not reaching their potential.

This is an essential guide for school leaders who want to support, focus, and sustain their RTI goals and build a culture of data-driven decision making.

Excerpt

“I am at my wits’ end. Jerry is having a tough time with geography even though he is more than capable of doing the work. In fact, I have four students who are in the same boat. I call their parents, but these kids still won’t do the work. It’s obvious they don’t get much help at home. Personally, I think it’s a bad case of laziness. Why weren’t they tested earlier? If I refer them now, they probably won’t qualify for anything. I guess there’s nothing to be done.”

Does this sound familiar? Many teachers lounges are buzzing with conversations just like this. Accepting these types of situations as status quo is not only frustrating but also unproductive. Wouldn’t it be more satisfying for this teacher to have a menu of solid instructional options from which to choose rather than rely on a referral process that she suspects will go nowhere? Wouldn’t it save a lot of work and exasperation if she could talk to colleagues about relevant current research and instructional approaches that work with students who aren’t inspired to apply the ability they already have? Wouldn’t the school system . . .

Deaf Education

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The field known as deaf education has undergone considerable change over the past decades. In part, this situation reflects the evolution of understanding concerning deaf people and American Sign Language. The magnitude of this change, however, owes much to progress in pedagogy, developmental psychology, psycholinguistics (including language acquisition), and other related fields. Together with dramatic changes in technology, scientific progress has provided new options and new perspectives for parents, students, and teachers.

We also have to accept the influence of this book being written early in the new millennium. Perhaps caught up in the excitement of it all, but also with genuine commitment, we felt the need to share our optimistic, but realistic, view of what the future holds for parents and educators of deaf children, as well as for the children themselves. Given the progress of the past few decades and the sense of new beginnings, we thought that it was important to consider the education of deaf students from the perspective of what we know rather than what we want. In deciding to provide a research-based framework for educating deaf students, we sought to set aside as much as possible the politics, rhetoric, and confusion that often accompany such discussions. In the chapters that follow, we therefore consider the educational and research literature with an eye toward systematic inquiry and generality of findings. As far as the current state of the art allows, we summarize what we know about educating deaf students and draw implications for parents, teachers, and other gatekeepers.

Teaching Hearing Impaired Students

Research shows there is a growing number of children with hearing difficulties. Hearing loss creates problems in the way individuals express and receive language, which in turn leads to social, communication, and educational problems. Therefore, while developing programs, educators need to seriously consider the impact, both short-term and long-term, of hearing loss on a person's ability to understand spoken language.

Hearing-impaired children are academically and socially vulnerable while attending school. Educators need to collaborate with children, their families and the specialists in order to adapt programming and implement alternative forms of communications, such as sign language, lip reading, visual aids and listening devices. Older children should also have input in decisions which regard adaptations of their educational program.

There is controversy over what are the most effective methods for communication to be used by deaf or hard of hearing students. The deaf community has urged schools to accept manual approaches, such a sign language, over oral approaches, such a speech and lip reading. According to those defending oral approaches, the human brain can learn language by hearing it only, therefore, treatment for children with hearing loss will maximize their auditory capabilities. Manualists, on the other hand, believe that if deaf children are forced to communicate only through speech and lip reading, they are denied full and successful communication through sign language. An alternative approach, called "Total Communication", uses sign language and auditory-oral methods simultaneously.

Teachers need to make special considerations when teaching hearing-impaired children. The consideration, which mostly involves common sense, can be sharpened through close collaboration with the student, the student's family and people that have more experience and training. The student and his or her family can also offer the teacher support through constructive criticism of what is or is not working for the child in the classroom.

When teaching hearing-impaired children, teachers should ensure that the hearing and listening environment in the classroom is optimal for the child. There should also be minimal distance between the teacher and the child so that lip reading is easier and the teacher should face the child during all oral communication. Teachers should ensure there is good lighting so that visual aids can be clearly seen. As much visual information as possible should be used to reinforce provided auditory information.

Teachers should not exaggerate pronunciation because this will deter understanding. Environmental noise should be kept to a minimum in order not to interfere with listening devices. Teachers should frequently check to ensure the listening devices are working properly. Sensitivity to the social, academic and emotional challenges faced by a child with hearing loss is also required.

Teachers should keep in mind that usually more than one visual thing is happening at one time, such as a teacher talking while expecting students to take notes of the lecture. It is not realistic, however, to expect a hearing-impaired student to read lips while also taking notes. The main notes could be provided to the student before the class so that he or she can focus on lip reading during the lecture. In the higher grades or university, where note-taking is done on a daily basis, volunteer note-takers can be assigned to help hearing-impaired children. Many hearing-impaired students will also need to take more work home to prepare for material to be covered in the next class.

Teachers are also advised to frequently check to ensure hard of hearing students understand information provided in class. When a student does not understand what is being said, the teacher can rephrase with additional words relevant to what he or she wants to say, thus providing cues to aid speech comprehension. Teachers should also use every opportunity to teach the other students about hearing loss and what can be done to support hearing-impaired children in class.

There are a number of instructional aids teachers can use when teaching deaf or hard of hearing students. A teacher can use sign, finger spelling and speech reading. Equipment, including overhead projectors, bulletin boards, computers and televisions showing captions on the screen, can also be used in teaching. Teachers can also use materials such as pictures, illustrations, artifacts, slides, computer graphics and films with captions.

Visual aids including classroom rules charts, job and choice menus, transition time cards and charts, task organizers, daily schedules and the Internet can also be used to enhance the learning process and communication. Teachers can take a sensitive approach and alleviate unnecessary information that requires too much energy for the deaf or hard of hearing students to process.

Teaching Special Education

Special education is a form of teaching or instruction specifically created to address disabled children according to their own specific needs. These can often include paying particular attention to speech, language and cognitive development, or relate to a physical or learning disability. Special education is provided at no cost to parents of a disabled child. For a student, special education can consist of a specialized curriculum that is different from that of their non-disabled peers, or they may be able to attend a mainstream school with some adaptations or modifications. Each child is catered for via an Individualized Education Program (IEP). The IEP is often referred to as the centerpiece of the special education system, which is developed in consultation with the child's parents, teachers, and if appropriate, the child themselves.

It is compulsory for the IEP to include the following components: performance assessments, goals and objectives, services and participation (which is a statement of specific educational services to be provided and the extent to which the child will be able to participate in regular educational programs), transition services (including a statement of responsibilities with regard to services to be rendered when the student leaves the school setting), a time line for services, and criteria for measuring success — used for determining whether instructional objectives are being or have been achieved. The IEP only addresses educational needs resulting from a child's disability. If a child requires special education support for all activities throughout the school day, the IEP will cover these needs. If the child doesn't need special education support in one or more areas e.g. music, science or physical education, then these subjects will not be included. The child will access these subjects through the general curriculum, with no additional special services.

This individualization of instruction is an important part of special education. Occasionally a student may require changes in their day-to-day work or routines due to their disability. Modifications or accommodations can easily be arranged when it comes to their studies. An example would be making an assignment easier so the student is not doing the same level of work as other students, or making a change that allows a student to overcome or work around their disability, like allowing them to provide oral answers if they find it difficult to write. In this scenario, the student will always be tested to the same standard as their peers regardless of their mode of answer.

Modifications or accommodations are commonly made in the following areas:

Scheduling: providing the student with extra time to complete assignments or dividing tests over several days.

Setting: working in a small group or one-on-one with the teacher.

Materials: providing audiotapes, books, copies of teacher's lecture notes, Braille, or digital text on CD.

Instruction: reducing the difficulty of assignments, the reading level, or by using a student or peer tutor to assist their studies.

Student Response: allowing answers to be provided orally, via dictation, using a word processor, sign language, Braille, or another native language.

Parents of students are provided with the opportunity to participate in the development of their child's program. They are also kept informed of any potential changes, and are kept up-to-date with procedures for resolving conflicts, including hearings involving an impartial third party. Special education can be provided within a range of environments: in the classroom, home, hospital, or institution. Unless a child's IEP requires alternative arrangements, the child must be educated in the school they would normally attend if they were free from disability. IEP also stipulates that special classes, separate schooling, or other removal of children with disabilities from a regular school environment only occurs if the nature of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved to a satisfactory degree.

A special education teacher requires a minimum of a bachelor's degree in order to become a certified teacher. Students usually enroll in a professional program at an accredited college or university in which they are pursuing a license or certificate. Volunteering is an excellent way to discover the variety of professional careers available within special education. Skills and competencies gained through working as a volunteer can prove to be valuable assets for trainee specialists hoping to further their careers in teaching special education.

Teaching Students with Attention Deficit Hyperactivity Disorder (ADHD)

Teaching may be regarded as providing opportunities for students to learn. It is an interactive process as well as an intentional activity. However, students may not always learn what their teachers intend and they may also learn notions which their teachers did not intend them to learn. The content of learning may be facts, procedures, skills, and ideas and values. A teacher's goals in teaching may be gains in knowledge and skills, the deepening of understanding, the development of problem solving or changes in perceptions, attitudes, values and behavior. Students' goals, on the other hand, may be more pragmatic, such as passing examinations. Given that teaching is an intentional activity concerned with student learning, it is sensible that teachers spend some time on thinking and articulating their intentions in teaching a particular topic to a group of students and on checking whether those intentions are realizable.

The effectiveness of teaching is best estimated in relation to a teacher's own goals of teaching. Therefore, what counts as effective in one context may not be so in another. Generally speaking, in order to be effective teaching has to be systematic, stimulating and caring. According to official statistics, a large number of elementary school students have a condition known as Attention Deficit Hyperactivity Disorder (ADHD). This disorder can create problems for the ADHD student, for other students in the classroom as well as for the child's teachers.

ADHD is a behavioral disorder characterized by inattention, an inability to concentrate, difficulties in social relationships, and a lack of self-control. Hyperactivity is defined as excessively or abnormally active. This condition has been defined as deficits in sustained attention, impulse control and the regulation of activity level to situational demands. Researchers in the United States appear to be in close agreement in estimating that the condition affects between 3 percent to 5 percent of the population, with some estimates as high as 10 percent. Although the condition has not been closely studied in many countries, it is thought that ADHD can be found in the student populations of most countries and in all ethnic groups.

To identify ADHD children, teachers must be familiar with the symptoms of the condition. The most common traits of children experiencing ADHD include hyperactivity, excessive movement, unexpected action and a short attention span. Other characteristics include a lack of social skills, insubordinate and disruptive behavior, frustration, learning difficulties, variability in behavior and coordination difficulties. More concrete examples of classroom behavior of ADHD students include the child's inability to remain in their classroom seat, to reply at appropriate times and to cease inappropriate talking. Such children frequently alternate inattentiveness with a focus on a particular task that becomes so intense they cannot switch their attention when directed to do so by the teacher. Frequently, these students have learning disabilities that range from mild to severe.

Without an awareness that this condition is present, teachers cannot take the steps to get the professional help the student needs, or teachers cannot initiate an instructional program that meets the needs of the student. In addition to the characteristics of an ADHD student as previously listed teachers should also look for the following behavioral characteristics: frequent loss of personal items, such as pencils, lunch money, or notes; failure to finish assigned tasks; failure to listen in class; and continually talking or moving.

Educators play an important role in diagnosing and treating children with ADHD. Several types of treatment are available that lessen the effect ADHD has on children including stimulants, antidepressants, behavioral therapy and cognitive therapy. The first thing teachers need to do is to develop an understanding of ADHD behavior so they can help in the diagnosis of the condition. Teacher training programs should include sufficient information to help identify possible cases of ADHD. However, taking into account that ADHD encompasses so many different behaviors and symptoms, teachers must avoid a premature conclusion that a disruptive student has ADHD and try not to form the opinion that the only behavior change needed is an increase in a student's level of effort. Although an ADHD student has greater difficulty starting and completing educational tasks, the teacher must take the actions necessary to make it easier for the ADHD student to become better organized. The teacher can make a positive start by having the ADHD child sit close to the teacher's desk and by surrounding the ADHD student with children who will serve as positive role models.

Teaching Students with Autism

According to the National Autistic Society, the leading organization in the United Kingdom for people with autism and their families, the condition "is a lifelong disability that affects the way a person communicates and relates to people around them." Children on the autistic spectrum face challenges in relating to others and they find forming friendships extremely difficult as they have problems in understanding other people's emotions. They experience problems with social interaction and communication, leading to difficulties at school for the child, other children and their teachers.

All children learn as they grow and children with autistic spectrum disorders are no different. Autism is a spectrum disorder, meaning that it manifests itself differently in each child. Like a row of dominoes, if an early aspect of development is affected in a particular case of autism, other later-emerging aspects of development will be affected too. As a result, each case of autism presents a slightly different profile of learning abilities and learning disabilities. Each learning ability and each learning disability may influence how a particular child with autism may or may not learn something the way other children without autism may learn that same thing.

According to the Autism Society, citing the Centers for Disease Control and Prevention autism report of 2009, the prevalence of autism has risen to 1 in every 110 births in the United States and almost 1 in 70 boys. This created a major debate in the media but the Autism Society said it wasn't a surprising announcement as its figures showed there were 1.5 million Americans who are classed as being on the autism spectrum disorder. The National Autistic Society, states that due to an increased awareness and understanding of autism in the UK, more children are being diagnosed at an early age.

The conceptualization of learning weaknesses and strengths is core to the whole field of learning disabilities and to compensatory educational approaches. For this reason, autism could be seen as a learning disability syndrome, with each symptom connoting a related cluster of learning weakness or an area of a so called autism-specific learning disability. Using autistic learning disabilities as the organizing construct, it is possible to reconceptualize treatment for autism. The first step is to assess a child's autistic learning disabilities. The second step is to examine existing treatment strategies and treatment programs and systematically ask what each has to offer in the way of compensation with respect to a specific autistic learning disability. The third step is to put the first two processes together, taking the list of treatments that may be relevant to a particular child's specific profile of autistic learning disabilities and then figuring out how, within this child's matrix of abilities and disabilities, to select treatment components that will address each weakness using strategies that utilize the child's relative strengths. In this way, a specific set of treatment needs can be formulated and an individualized treatment plan developed.

There has been major progress in how children with autism are treated. A number of methods for teaching children with autism have been devised, tested and used successfully. However, parents and teachers often become mired in controversy about what should be done, although there is no right answer to this question. Every child is educationally and biologically unique and will need something slightly different to meet their needs. The challenge is to understand the range of differences that make up what are called the autistic spectrum disorders and then to understand the individual differences that can be described in terms of slightly different profiles of strengths and weaknesses. The design of truly individual treatment plans that exploit strengths and compensate for weaknesses begins with a detailed understanding of how learning is different for children with autism than for those without autism and how learning is different among different children with autism.

According to Fox News (March 8, 2011), a new robot is helping to teach children on the autistic spectrum at a pre-school in Stevenage in Hertfordshire, England. The robot, called Kaspar, is showing the children at the nursery how to learn to play and teaching them about emotions during weekly sessions. Similar projects exist in the US, Canada and Japan although researchers report that the UK project is the most advanced. The project is the idea of scientists at the University of Hertfordshire, who have been taking Kaspar to the nursery for the sessions

Teaching Visually Impaired Students

The major challenge for visually impaired students in the science education environment is the widely-used visual material. Such materials include textbooks, class outlines, class schedules, chalkboard writings as well as films, videotapes, computers, laser disks and television. Unique and individual strategies based on a student's particular visual impairment and his or her skill of communication are required to help such students overcome their visual limitation.

There are numerous things a teacher can do to make a visually-impaired student feel better in class. A teacher can speak to the class upon entering and leaving the room or site and also call the visually impaired student by name to attract his or her attention. Such students should be seated away from glaring lights and preferably in the front of the class. A teacher should use descriptive words such as straight, forward or left, in relation to the student's body orientation and avoid vague terms with unusual information, including here or this.

Pertinent visual occurrences of the learning activities should be described in detail. The student should also be familiarized with the classroom, laboratory, equipment, supplies, materials and field sites. A teacher should give verbal notice of room changes, special meetings or assignments. Written information can also be read for a student with a visual impairment when appropriate, while appropriate text books in students' preferred medium can be ordered.

When there is a student with a visual impairment in class, a teacher should routinely check the instructional environment to make sure it is adequate and ready for use. The teacher should always identify himself or herself and others who are present when communicating with a visually impaired student. A teacher should use an auditory or tactile signal where a visual signal is normally used. However, it is not necessary to speak loudly to visually impaired people.

There are various strategies for teaching visually impaired students. However, their usefulness varies according to the degree of impairment and the student's background and training. A visually impaired student will most likely need assistance in all aspects of science programs.

Teachers need to provide a verbal description of every visual material they use. Handouts should be available in large print, audiotape, computer disk and Braille formats. New or technical words should be verbally spelled out, which would be helpful not only for the student with vision impairment but also for the other students.

A teacher should label all colored objects used for identification in a lesson, experiment or other direction with a Braille label or code them tacitly in another way for most students with vision impairments. Visual occurrences, visual media and directions including all pertinent aspects that involve sight should be described in detail. A sighted narrator or descriptive video should be used to describe aspects of videos or laser disks.

Teachers should supplement drawings or graphics with tactile 3D models, raised line drawings or thermoforms when needed. Whenever possible, actual objects for three dimensional representations should be used, while instructions should be modified for auditory/tactile presentations.

In laboratory classes, a teacher should consider alternate activities and exercises that can be utilized with less difficulty for visually impaired students, but have the same or similar learning objectives. Materials, supplies and equipment should be kept in the same places, while students with vision impairment should be given more time for laboratory activities. Visually impaired students can also be paired with sighted students, who can describe the activities and outcomes as they are observed.

Volunteer readers or writers can assist visually impaired students with text, materials and library readings. Students with vision impairments can also use a range of Braille devices when reading. During field experiences, a sighted guide can be used for impaired students. Objects seen in science centers, museums and field activities should be described in detail.

A teacher should review and discuss with the student the steps that are involved in a research activity. They should together devise accommodations for the student, of steps that may be difficult for his or her specific functional limitations. Appropriate lab and field strategies in accordance with the nature of the research should be used.

Teachers should make arrangements for tactile examination if touch is not normally permitted. Examinations should be presented in a form that is unbiased to visually impaired students. A teacher should ask the student for the approach he or she finds to be most accessible. Students with visual impairments should also be allowed more time during a test.

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