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PREFACE

Education is a vast discipline and teacher's training is a vital part of it. The responsibilities of the educationists and educators are focused on the task of providing better training to the future teachers for their better learning and proper development.

In India special education is an emerging discipline and an essential part of the modern education system. It includes all aspects of education which are necessary to successfully run the courses and training programs for the persons with disabilities. The stream of Special Education requires specially designed courses and a particular type of instructions to be used for teaching the students, who are uncommon. In fact, Special Education demands special techniques, tacts and strategies to be adopted for a successful exercise.

Special Education needs those teachers, who love to take up challenging tasks and common people cannot be able t o deliver goods in this area. In fact Special Education is not a separate system; it is an integral part of the total programme of Education only.

This Special Issue is a platform to share our views about persons with disabilities. I whole heartedly thank all the researchers for having participating in the seminar and contributed their articles for publication of this journal.

Chief-editor

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SPECIAL EDUCATION IN THE SCHOOLS

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Abstract

Special education is an integral part of the total educational enterprise, not a separate order. In any school system, special education is a means of enlarging the capacity of the system to serve the educational needs of all children. The particular function of special education within the schools (and the education departments of other institutions) is to identify children with unusual needs and to aid in the effective fulfillment of those needs. Both regular and special school programs play a role in meeting the educational needs of children with exceptionalities. The major purpose of the special education administrative organization is to provide and maintain those environmental conditions in schools that are most conducive to the growth and learning of children with special needs under suitable conditions, education within the regular school environment can provide the optimal opportunity for most children with exceptionalities.

Introduction

A primary goal of educators should be to help build accommodative learning opportunities for children with exceptionalities in regular educational programs. In the implementation of this goal, special education can serve as a support system, and special educators can assist regular school personnel in managing the education of children with exceptionalities. When the special placement of a child is required, the aim of the placement should be to maximize the development and freedom of the child rather than to accommodate the regular classroom. Special education should function within and as a part of the regular, public school framework. Within this framework, the function of special education should be to participate in the creation and maintenance of a total educational environment suitable for all children. From their base in the regular school system, special educators can foster the development of specialized resources by coordinating their specialized contributions with the contributions of the regular school system. One of the primary goals of special educators should be the enhancement of regular school programs as a resource for all children.

Administrative Organization

The system of organization and administration developed for special education should be linked with regular education (a) to increase the capability of the total system to make more flexible responses to changes in the behavior of individual pupils and to changing conditions in schools and society, and (b) to permit all elements of the system to influence the policies and programs of the others. Special education must provide an administrative organization to facilitate achievement for children with exceptionalities of the same educational goals as those pursued by other children.

Consequently, the system for the delivery of special education must enable the incorporation of special help and opportunities in regular educational settings. Children

should spend only as much time outside regular class settings as is necessary to control learning variables that are critical to the achievement of specified learning goals.

Scope of Program

Education for children and youth with exceptionalities requires the well planned and purposeful coordination of many disciplines. Special education is a cross-disciplinary, problem-oriented field of services which is directed toward mobilizing and improving a variety of resources to meet the educational needs of children and youth with exceptionalities.

The Goal and Commitment of Special Education

The fundamental purposes of special education are the same as those of regular education: the optimal development of the student as a skillful, free, and purposeful person, able to plan and manage his or her own life and to reach his or her highest potential as an individual and as a member of society.

Perhaps the most important concept that has been developed in special education as the result of experiences with children with exceptionalities is that of the fundamental individualism of every child. The aspiration of special educators is to see every child as a unique composite of potentials, abilities, and learning needs for whom an educational program must be designed to meet his or her particular needs.

The special competencies of special educators are more than a collection of techniques and skills. They comprise a body of knowledge, methods, and philosophical tenets that are the hallmark of the profession.

The focus of all education should be the unique learning needs of the individual child as a total functioning organism.

Educational Environments for Exceptional Students

Special education takes many forms and can be provided with a broad spectrum of administrative arrangements. Children with special educational needs should be served in regular classes and neighborhood schools insofar as these arrangements are conducive to good educational progress. The Council believes that the goal of educating exceptional children with non-exceptional children is desirable if the individual program is such that it will enhance the exceptional child's educational, social, emotional, and vocational development. The Council believes that careful study and compelling reasons are necessary to justify such removal.

The Council charges each public agency to ensure that a continuum of alternative placements, ranging from regular class programs to residential settings, is available to meet the needs of children with exceptionalities. Children with exceptionalities enrolled in special school programs should be given every appropriate opportunity to participate in educational, nonacademic, and extracurricular programs and services with children who are not disabled or whose disabilities are less severe.

The Council condemns as educationally and morally indefensible the practice of categorical isolation by exceptionality without full consideration of the unique needs of each student, and the rejection of children who are difficult to teach from regular school situations.

Inclusive Schools and Community Settings

The Council for Exceptional Children believes all children, youth, and young adults with disabilities are entitled to a free and appropriate education and/or services that lead to an adult life characterized by satisfying relations with others, independent living, productive engagement in the community, and participation in society at large. To achieve such outcomes, there must exist for all children, youth, and young adults a rich variety of early intervention, educational and vocational program options and experiences.

CEC believes that a continuum of services must be available for all children, youth, and young adults. CEC also believes that the concept of inclusion is a meaningful goal to be pursued in our schools and communities. In addition, CEC believes children, youth, and young adults with disabilities should be served whenever possible in general education classrooms in inclusive neighborhood schools and community settings.

Policy Implications - Schools

In inclusive schools, the building administrator and staff with assistance from the special education administration should be primarily responsible for the education of children, youth, and young adults with disabilities. The administrator(s) and other school personnel must have available to them appropriate support and technical assistance to enable them to fulfill their responsibilities. Leaders in state/provincial and local governments must redefine rules and regulations as necessary, and grant school personnel greater authority to make decisions regarding curriculum, materials, instructional practice, and staffing patterns

Communities

Inclusive schools must be located in inclusive communities; therefore, CEC invites all educators, other professionals, and family members to work together to create early intervention, educational, and vocational programs and experiences that are collegial, inclusive, and responsive to the diversity of children, youth, and young adults. Policy makers at the highest levels of state/provincial and local government, as well as school administration, also must support inclusion in the educational reforms they espouse.

Further, the policy makers should fund programs in nutrition, early intervention, health care, parent education, and other social support programs that prepare all children, youth, and young adults to do well in school. There can be no meaningful school reform, nor inclusive schools, without funding of these key prerequisites. As

important, there must be interagency agreements and collaboration with local governments and business to help prepare students to assume a constructive role in an inclusive community.

Staff Preparation for Placement

Essential to the appropriate placement of the child with exceptionality is the preparation of the environment for that child through preservice and/or inservice training of staff and any other necessary accommodations. Teacher training institutions are challenged to instruct all teacher candidates about current trends in the education of exceptional children.

State and provincial departments of education are charged with the responsibility to promote in service activities that will update all professional educators and provide ongoing, meaningful staff development programs.

Administrators can have a significant positive influence upon the professional lives of teaching staff and, therefore, upon the educational lives of children. Administrative personnel of school districts are, therefore, charged with the responsibility to promote in service education and inter professional exchanges which openly confront contemporary issues in the education of all children.

Individualized Education Programs

The creation and operation of a series of alternative settings for exceptional persons to live their lives and to develop to the greatest degree possible requires that service providers continuously strive to deliver the highest quality services possible. The Council believes that the central element for the delivery of all the services required by a person with exceptionality must be an individually designed program. Such a program must contain the objectives to be attained, resources to be allocated, evaluation procedures and time schedule to be employed, and a termination date for ending the program and procedure for developing a new one. The process for developing an individualized program must adhere to all the procedural safeguards of due process of law and must involve the individual person and his or her family, surrogate, advocate, or legal representative.

Labeling and Categorizing of Children

The field of special education is concerned with children who have unique needs and with school programs that employ specialized techniques. As the result of early attitudes and programs that stressed assistance for children with severe disabilities, the field developed a vocabulary and practices based on the labeling and categorizing of children. In recent decades, labeling and categorizing were extended to children with milder degrees of exceptionality.

Words such as "defective," "disabled," "retarded," "impaired," "disturbed," and "disordered," when attached to children with special needs, are stigmatic labels that

produce unfortunate results in both the children and in the community's attitudes toward the children. These problems are magnified when the field organizes and regulates its programs on the basis of classification systems that define categories of children according to such terms.

Special education's most valuable contribution to education is its specialized knowledge, competencies, values, and procedures for individualizing educational programs for individual children, whatever their special needs. Indeed, special educators at their most creative are the advocates of children who are not well served by schools except through special arrangements.

No one can deny the importance of some of the variables of traditional significance in special education such as intelligence, hearing, and vision. However, these variables in all their complex forms and degrees must be assessed in terms of educational relevance for a particular child.

Special educators should enhance the accommodative capacity of schools and other educational agencies to serve children with special needs more effectively.

Behavior of Human Beings

The Council condemns the inappropriate use of surgical and chemical interventions to control the behavior of human beings. Although these procedures often simplify care and maintenance, the integrity of the individual must transcend any institution's desire for administrative convenience. The Council recognizes that in certain circumstances such interventions may be appropriate; however, they should never be used without the approval of the individual to be treated, or the individual's parents or guardians, or, in circumstances where the individual is a ward of the state, the approval of an appropriate review body before which the individual or his or her representatives are guaranteed all legal due-process rights.

Child Abuse and Neglect

The Council recognizes abused and neglected children as children with exceptionalities. As professionals concerned with the physical, emotional, and mental well-being of children, educators must take an active role in the protection of children from abuse and neglect. The Council reminds its members and citizens in general, of the availability of assault and battery statutes and calls upon its members to utilize such statutes when applicable in cases of child abuse. When child abuse occurs, swift action must be taken to report the incident and protect the child. Delays caused by not knowing what to do or failure to take action, contribute to the child's injury. Educators and related personnel are urged to learn how to recognize and report child abuse and neglect and to know the community resources for treating suspected cases.

Managing Communicable and Contagious Diseases

Controlling the spread of communicable and contagious diseases within the schools has always been a problem faced by educators, the medical profession, and the public. Effective policies and procedures for managing such diseases in the schools have historically been developed by health agencies and implemented by the schools. These policies and procedures were primarily designed to manage acute, temporary conditions rather than chronic conditions which require continuous monitoring and remove children from interaction with other children while the condition is contagious or communicable.

Recent public awareness of chronic infectious diseases such as those with hepatitis B-virus, cytomegalovirus, herpes simplex virus, and HIV has raised concerns necessitating the reassessment or at least clarification of school policies and procedures. The Council believes that having a chronic infection does not in itself result in a need for special education. Further, The Council believes that schools and public health agencies should assure that any such infectious and communicable disease policies and procedures:

- Do not excludes the affected child from the receipt of an appropriate education even when circumstances require the temporary removal of the child from contact with other children.
- Provide that determination of a non-temporary alteration of a child's educational placement should be done on an individual basis, utilizing an interdisciplinary/interagency approach including the child's physician, public health personnel, the child's parents, and appropriate educational personnel
- Provide that decisions involving exceptional children's non temporary alterations of educational placements or services constitute a change in the child's Individualized Education Program and should thus follow the procedures and protections required.
- Recognize that children vary in the degree and manner in which they come into contact with other children and school staff.
- Provide education staff with the necessary information, training, and hygienic resources to provide for a safe environment for students and educational staff.
- Provide students with appropriate education about infectious diseases and hygienic measures to prevent the spread of such diseases.
- Provide, where appropriate, infected children with education about the additional control measures that they can practice to prevent the transmission of the disease agent.
- Enable educational personnel who are medically at high risk to work in environments which minimize such risk.
- Provide educational personnel with adequate protections for such personnel and their families if they are exposed to such diseases through their employment.

Special education personnel preparation programs

- Educate students about infectious diseases and appropriate methods for their management.
- Counsel students as to how to determine their level of medical risk in relation to certain diseases and the implications of such risk to career choice. The Council believes that the manner in which policies for managing infectious diseases are developed and disseminated is important to their effective implementation. Therefore the following must be considered integral to any such process:
- That they be developed through the collaborative efforts of health and education agencies at both the state, provincial and local levels, reflecting state, provincial and local educational, health and legal requirements.
- That provision is made for frequent review and revision to reflect the ever-increasing knowledge being produced through research, case reports, and experience.
- That policies developed be based on reliable identified sources of information and scientific principles endorsed by the medical and educational professions.
- That such policies be understandable to students, professionals, and the public.
- That policy development and dissemination be a continual process and disassociated from pressures associated with precipitating events.

Career Education

Career education is the totality of experience through which one learns to live a meaningful, satisfying work life. Within the career education framework, work is conceptualized as conscious effort aimed at producing benefits for oneself and/or others.

Provision for these educational experiences must be reflected in an individualized education program for each exceptional child which must include the following:

- Nondiscriminatory, ongoing assessment of career interests, needs, and potentials which assures recognition of the strengths of the individual which can lead to a meaningful, satisfying career in a work oriented society. Assessment materials and procedures must not be discriminatory on the basis of race, sex, national origin, or exceptionality.
- Career awareness, exploration, preparation, and placement experiences in the least restrictive school, living, and community environments that focus on the needs of the exceptional individual from early childhood through adulthood.
- Specification and utilization of community and other services related to the career development of exceptional individuals (e.g., rehabilitation, transportation, industrial and business, psychological).
- Involvement of parents or guardians and the exceptional student in career education planning.

Treatment of Exceptional Persons in Textbooks

The Council proposes the following points as guidelines for early childhood, elementary, secondary, and higher education instructional materials so they more accurately and adequately reflect persons with exceptionalities as full and contributing members of society.

- In print and non-print educational materials, 10% of the contents should include or represent children or adults with exceptionality.
- Representation of persons with exceptionalities should be included in materials at all levels (early childhood through adult) and in all areas of study.
- The representation of persons with exceptionalities should be accurate and free from stereotypes.
- Persons with exceptionalities should be shown in the least restrictive environment. They should be shown participating in activities in a manner that will include them as part of society.
- In describing persons with exceptionalities, the language used should be nondiscriminatory and free from value judgments.
- Persons with exceptionalities and persons without exceptionalities should be shown interacting in ways that are mutually beneficial.
- Materials should provide a variety of appropriate role models of persons with exceptionalities.
- Emphasis should be on uniqueness and worth of all persons, rather than on the differences between persons with and without exceptionalities.
- Tokenism should be avoided in the representation of persons with exceptionalities.

Technology

The Council for Exceptional Children recognizes that the appropriate application and modification of present and future technologies can improve the education of exceptional persons. CEC believes in equal access to technology and supports equal educational opportunities for technology utilization by all individuals. Present technologies include electronic tools, devices, media, and techniques such as (a) computers and microprocessors; (b) radio, television, and videodisc systems; (c) information and communication systems; (d) robotics; and (e) assistive and prosthetic equipment and techniques. The Council believes in exploring and stimulating the utilization of these technologies in school, at home, at work, and in the community.

CEC encourages the development of product standards and consumer education that will lead to the appropriate and efficient matching of technological applications to individual and local conditions. CEC recognizes the need to communicate market needs and market expectations to decision makers in business, industry, and government.CEC supports the continuous education of professionals who serve exceptional individuals, through (a) collection and dissemination of state-of-the-art information, (b)

professional development, and (c) professional preparation of personnel to perform educational and other services for the benefit of exceptional individuals.

The Council for Exceptional Children believes that special education personnel preparation and continuing education programs should provide knowledge and skills related to:

- The nature and management of students with special health care needs; Exemplary approaches and models for the delivery of services to students with special health care needs; and the importance and necessity for establishing support systems for students, parents/families, and personnel.

Recognizing that this population of students is unique and relatively small, The Council for Exceptional Children still believes that the manner in which policies are developed and disseminated related to students with special health care needs is critically important to effective implementation. In development of policy and procedure for this low-incidence population, the following must be considered integral to any such process:

- that it be developed through collaborative efforts of health and education agencies at state, provincial, and local levels;
- that it reflects federal, state, provincial, and local educational, health, and legal requirements;
- that it provides for frequent review and revision of intervention techniques and programs as a result of new knowledge identified through research, program evaluation and monitoring, and other review mechanisms;
- that policies are supported by data obtained from medical and educational professions
- that policy development is easily understandable by students, professionals, and the public at large; and
- that policy development and dissemination should be a continual process and disassociated from pressures associated with precipitating events. The Council for Exceptional Children.

Conclusion

From their base in the regular school system, special educators can foster the development of specialized resources by coordinating their specialized contributions with the contributions of the regular school system. One of the primary goals of special educators should be the enhancement of regular school programs as a resource for all children. Children should spend only as much time outside regular class settings as is necessary to control learning variables that is critical to the achievement of specified learning goals. The focus of all education should be the unique learning needs of the individual child as a total functioning organism.

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LEARNING DISABILITY CHILDREN: ANOVERVIEW

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Abstract

Learning disabilities are neurologically-based processing problems. These processing problems can interfere with learning basic skills such as reading, writing and math. They can also interfere with higher level skills such as organization, time planning, abstract reasoning, long or short term memory and attention. It is important to realize that learning disabilities can affect an individual's life beyond academics and can impact relationships with family, friends and in the workplace. This paper explains learning disabilities and its types.

Key Words: *learning disability, types, identification, teaching strategies, etc.,*

Introduction

Disability is defined as an existing difficulty in performing one or more activities, which are generally accepted as essential components of daily living. Medically disability is physical impairment and inability to perform physical functions normally. Disability can be divided in to three periods.

Temporary disability: It is the period in which the affected person is totally unable to work. During this time he may receive orthopaedic, ophthalmologic, auditory or speech or any other medical treatment.

Temporary partial disability: It is that period when recovery has reached the stage of improvement so that the person may begin some kind of gainful occupation

Permanent disability: It refers to permanent damage to or loss of some parts of the body even after medical treatment.

Learning disabilities

Learning disabilities (LD) are hidden disabilities that affect many individuals who usually have average or above average intelligence, but are unable to achieve at their potential. People from all economic and social levels may have unique learning differences. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage.

Learning disability (LD) is a general term that describes specific kinds of learning problems. A learning disability can cause a person to have trouble learning and using certain skills. The skills most often affected are reading, writing, listening, speaking, reasoning, and doing math. Learning disabilities vary from person to person.

Generally speaking, people with learning disabilities are of average or above average intelligence. There often appears to be a gap between the individual's potential

and actual achievement. This is why learning disabilities are referred to as "hidden disabilities": the person looks perfectly "normal" and seems to be a very bright and intelligent person, yet may be unable to demonstrate the skill level expected from someone of a similar age.

Types of Learning Disabilities

Auditory Processing Disorder (APD)

Also known as Central Auditory Processing Disorder, this is a condition that adversely affects how sound that travels unimpeded through the ear is processed or interpreted by the brain. Individuals with APD do not recognize subtle differences between sounds in words, even when the sounds are loud and clear enough to be heard. They can also find it difficult to tell where sounds are coming from, to make sense of the order of sounds, or to block out competing background noises.

Hyperactivity

Psychiatrists refer to hyperactivity as 'Attention Deficit Hyperactive Disorder (ADHD). A disorder that includes difficulty staying focused and paying attention, difficulty controlling behavior and hyperactivity. Although ADHD is not considered a learning disability, research indicates that from 30-50 percent of children with ADHD also have a specific learning disability, and that the two conditions can interact to make learning extremely challenging.

Dyscalculia

A specific learning disability that affects a person's ability to understand numbers and learn math facts. Individuals with this type of LD may also have poor comprehension of math symbols, may struggle with memorizing and organizing numbers, have difficulty telling time, or have trouble with counting.

Dysgraphia

A specific learning disability that affects a person's handwriting ability and fine motor skills. Problems may include illegible handwriting, inconsistent spacing, poor spatial planning on paper, poor spelling, and difficulty composing writing as well as thinking and writing at the same time.

Dyslexia

A specific learning disability that affects reading and related language-based processing skills. The severity can differ in each individual but can affect reading fluency, decoding, reading comprehension, recall, writing, spelling, and sometimes speech and can exist along with other related disorders. Dyslexia is sometimes referred to as a Language-Based Learning Disability.

Dyspraxia

A disorder that is characterized by difficulty in muscle control, which causes problems with movement and coordination, language and speech, and can affect learning. Although not a learning disability, dyspraxia often exists along with dyslexia, dyscalculia or ADHD.

Language Processing Disorder

A specific type of Auditory Processing Disorder (APD) in which there is difficulty attaching meaning to sound groups that form words, sentences and stories. While an APD affects the interpretation of all sounds coming into the brain, a Language Processing Disorder (LPD) relates only to the processing of language. LPD can affect expressive language and/or receptive language.

Non-Verbal Learning Disabilities

A disorder which is usually characterized by a significant discrepancy between higher verbal skills and weaker motor, visual-spatial and social skills. Typically, an individual with NVLD has trouble interpreting nonverbal cues like facial expressions or body language, and may have poor coordination.

Visual Perceptual/Visual Motor Deficit

A disorder that affects the understanding of information that a person sees, or the ability to draw or copy. A characteristic seen in people with learning disabilities such as Dysgraphia or Non-verbal LD, it can result in missing subtle differences in shapes or printed letters, losing place frequently, struggles with cutting, holding pencil too tightly, or poor eye/hand coordination.

Memory

Three types of memory are important to learning. Working memory, short-term memory and long-term memory are used in the processing of both verbal and non-verbal information. If there are deficits in any or all of these types of memory, the ability to store and retrieve information required to carry out tasks can be impaired.

Symptoms of Learning Disabilities

Learning disabilities are often referred to as "hidden handicaps" as they are difficult to identify. The kinds and severity of problems vary from individual to individual. Each individual with a learning disability shows a unique combination of problems. Individuals with learning disabilities may do well in some areas, but very poorly in others. They may learn what is seen, but not what is heard; they may remember by writing, but not by reciting orally; or vice versa. Below are listed some signs that may indicate learning disabilities:

- inconsistent school performance
- difficulty remembering today what was learned yesterday, but may know it tomorrow
- short attention span (restless, easily distracted)
- letter and number reversals (sees "b" for "d" or "p", "6" for "9", "pots" for "stop")
- poor reading (below age and grade level)
- frequent confusion about directions and time (right-left, up-down, yesterday-tomorrow)

- personal disorganization
- failure on written tests but high scores on oral exams
- speech problems (immature language development, trouble expressing ideas)
- difficulty interpreting body language, facial expression, or tone of voice
- difficulty with development of sound/symbol correspondence

Needs of learning disabled children

- to be identified as early as possible;
- to have a comprehensive assessment;
- to have an education individualized to their needs;
- to have qualified and knowledgeable educators who teach to the unique needs of students with learning disabilities;
- to have modified curriculum and accommodations;
- to pursue activities in areas where they have strengths or interests;
- to advocate for themselves at any age;
- to have vocational education and career training;
- to develop abilities and skills for the transition to independent living; and
- to have an employer who will provide appropriate accommodations.

Teaching Strategies

Task analysis: the teacher can choose an appropriate learning task for the child to master and the final objective should be stated clearly. The final goal is broken down into smaller steps arranged in order of difficulty with each item being a prerequisite for the subsequent one until the ultimate goal is reached.

Structured lesson presentations: Students with learning disabilities achieve more when lesson are clearly presented, well sequenced and well organized. Content and way of presentation should vary according to each child's unique abilities and weaknesses.

Organized equipment and materials: The teacher must organize the equipment and materials needed before starting a lesson. The teacher should ensure that the equipment and materials are relevant, easy to comprehend and also related to the material that is being taught.

Peer teaching: this strategy is also known as child-to-child approach. In this strategy, one student who has proficiency in a skill teaches another student who has problem in learning a concept on a one-to-one basis.

Multi sensory approach: the multi sensory method is based on the premise that some children learn best when content is presented in more than one modality. In this approach, the child sees, feels, says and hears the content. It includes tracing, hearing, writing and seeing are often referred to as visual auditory kinesthetic tactile.

Cooperative learning: it is method of effectively using student groups in a classroom. Cooperative learning is an instructional arrangement in which small groups or teams of students work together to achieve team success in a manner that promotes student

responsibility for their own learning as well as the learning of others. Cooperative learning has been suggested as a technique for aiding in the mainstreaming of mild to severely learning disabled students.

Conclusion

A learning disability can't be cured or fixed; it is a lifelong issue. With the right support and intervention, however, children with learning disabilities can succeed in school and go on to successful, often distinguished careers later in life. Parents can help children with learning disabilities achieve such success by encouraging their strengths, knowing their weaknesses, understanding the educational system, working with professionals and learning about strategies for dealing with specific difficulties.

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TECHNIQUES FOR SPECIAL EDUCATION TEACHERS TO TRAIN PWDS'

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Abstract

Educational opportunities are related in complex way to people formative and future relations with peers, family and community as well as work prospects. Education is therefore a fundamental right, and every child must be given the opportunity to achieve and maintain an acceptable level of learning. While training the special education students, the teachers must handle some techniques. Some of the famous achievers list may stimulate the special student to overcome their problem. This paper highlights that concept and to enlighten the special education students and special education teachers.

Introduction

If you are training special education students, you likely have to teach some amount of content. You might team-teach with a content teacher, or you might provide remedial instruction for a subject in a resource room. In some schools, you might be the special education content teacher, providing content instruction to groups of students with IEPs. Each of these cases requires a special education teacher to know detailed knowledge of subject area content. You might not have signed up for this. Before You Start States have enacted protections against having special education teachers teach out of certification areas. Many special education teachers must hold certifications in content areas before teaching in them. Provisional certifications based on existing college credits suffice in some states. In others, no additional certification is needed if the special education teacher team-teaches with a certified instructor. None of this stops potentially inappropriate assignments from happening in schools. Often, principals need to assign warm bodies regardless of credentials. Special education certification might protect you from being cut, but not from being shuffled and reassigned. Should you find yourself suddenly teaching an unfamiliar subject, you aren't without recourse? Some options are strategies more than resources. Before beginning your new assignment, you should find out if your assignment is legal. It might not be. Assuming you have a contract, review it to determine whether or not your assignment gels with it. If you have union representation, inquire about whether or not the principal has placed you legally. If You Will Be Team-Teaching start to get to know your new subject area. How you go about this depends on your assignment. If you will be team-teaching, establishing a relationship with your partner teacher as soon as possible is

vital. While you don't want to appear to lack confidence, you should be transparent about your lack of knowledge. Ask to see previous or current syllabi as well as any texts or notes used. Study these. You might also want to see tests and quizzes and try taking them yourself to determine what you need to study. Discuss with your partner what the most important information to know will be, tips for presenting it, and suggestions for remedial resources (you know, for your students). Frequent and clear communication is necessary for team teaching. Start it early and maintain it. If Teaching Content in a Resource Room or a Dedicated Special Education Class Approach department personal. If you share mutual students with a content teacher, make contact as you would with a partner teacher. This person will rely on you for accommodations and strategies for the special education students in his or her class. The relationship is symbiotic. Don't merely ask for assistance. Ask how you can assist and offer your expertise. You can do this with several members of a department. You might find someone eager to help you. Though tricky, you might need to be involved subject area department planning as much as in special education team planning. If you are teaching in a dedicated content class, you should ask to take part in subject area professional development. This can conflict with special education planning, but you can request notes, handouts, or slides from the meetings you miss. Connecting with the staff in your new subject area and being part of their team should be a priority. Other Places to Look for Help and Timing Of course you can seek resources outside your building. Your school might be able to send you to subject area workshops. If not, you can go privately, cost permitting. Online resources abound, from message boards to wikis to YouTube channels. Entire units and specific lesson plans are available on dozens of sites. Simplified guides such as one-page crib sheets and GED texts might streamline your studies. Web or software resources recommended for your students could help. For verification, check with your own children, nieces, nephews, or neighbors about what they've studied. Start in the summer if you can. Learn throughout the year, regardless. If you know the progression of material, try to keep one or two months ahead of the class rather than learning it all at once. You might be able to have your students teach you. Depending on their abilities, using inquiry learning can make you a facilitator rather than an expert. This isn't a copout. It's a worthwhile strategy. Final Thoughts don't fake it. If you don't know something, admit this to students, but follow with how you (and they) can find out. With parents, don't emphasize your lack of expertise, but don't deny it either. Explain that you're in your position because of your expertise in providing specially designed instruction. You're partnering with your department for support. Avoid publically blaming your administrator for your placement. You don't need that rift. Your situation could be overwhelming, but you owe it to your students to know the material. You might be their only gateway to the subject. Some of your students might advance to post-secondary education. They're expecting you to prepare them. So are their parents. Just know that even if the opposite seems true, you're not alone in this endeavor.

A list of some famous and well known people with various disabilities and conditions including actors, politicians and writers who contributed to society

Well Known People with Disabilities have a disability or medical condition? You are not alone. Many people with disabilities have contributed to society. These include actors, actresses, celebrities, singers, world leaders, and many other famous people. Of course there are also millions of people worldwide who may not be famous in the sense society deems famous, but still live with, battle, and overcome their disabilities every single day of their lives. A disability is often used to refer to individual functioning, **including physical impairment, sensory impairment, cognitive impairment, intellectual impairment, mental illness, and various types of chronic diseases.** These lists are a constant work in progress and were created to prove that it is indeed possible to overcome the so called disability barrier. Below you will find in our various categories of disabilities men and women who have made a difference to the world including pictures and the names of many famous and well known people who have, or had these disabilities (often referred to as being crippled, handicapped, or having a handicap in past times.) **List of Famous People with Disabilities Famous People on the Autism Spectrum** - Autism is a general term used to describe a group of complex developmental brain disorders (autism spectrum disorders) caused by a combination of genes and environmental influences.

Famous People with Mood Disorders - A mood disorder is a condition whereby the prevailing emotional mood is distorted or inappropriate to the circumstances. Types of mood disorders include depression, unipolar and bipolar disorder.

Famous People with Tourettes Syndrome - The exact cause of Tourette's is unknown, but it is well established that both genetic and environmental factors are involved. The majority of cases of Tourette's are inherited.

Famous People with Spina Bifida - Spina bifida falls into three categories: spina bifida occulta, spina bifida cystica, and meningocele. The most common location of malformations is the lumbar and sacral areas of the spinal cord.

Famous People with Cerebral Palsy - Cerebral palsy (CP) is a term encompassing a group of non-progressive, non-contagious diseases that cause physical disability in human development. There is no known cure for CP.

Famous People With Epilepsy - Epilepsy is a chronic neurological disorder characterized by recurrent unprovoked seizures. These seizures are signs of abnormal, excessive or synchronous neuronal activity in the brain.

Famous People with Dyslexia - Dyslexia is a specific learning disability that effects many people, it manifests primarily as a difficulty with written language, particularly with reading and spelling. Dyslexia occurs at all levels of intelligence.

Famous People with Obsessive Compulsive Disorder - OCD is a psychiatric disorder manifested in a variety of forms, most commonly characterized by a persons obsession to perform a particular task or set of tasks.

Famous People who Have and Had Dementia - Dementia is the steady progressive decline in cognitive functions due to damage or disease in the brain beyond what might be expected from the normal human aging process.

Famous People with Hearing Impairments - A hearing loss is a full or partial decrease in the ability to detect or understand sounds. Hearing loss can be inherited If a family has a dominant gene for deafness.

Famous People with ALS or Lou Gehrigs Disease - Amyotrophic lateral sclerosis (ALS), and sometimes called Lou Gehrig's Disease, or Maladie de Charcot) is one of the most common neuromuscular diseases occurring worldwide today.

Famous People with Club Feet or Foot - A clubfoot, or talipes equinovarus (TEV), is a birth defect. The foot is twisted in (inverted) and down. It is a common birth defect, occurring in about one in every 1,000 births.

Famous People with Schizophrenia - Schizophrenia is a psychiatric diagnosis that describes a mental illness. A person with schizophrenia may show symptoms like disorganized thinking, hallucinations, and delusions.

Famous People - Speech Differences and Stutter - Stuttering is generally not a problem with the physical production of speech sounds or putting thoughts into words. Stuttering has no bearing on intelligence.

Famous People who had and have Polio - Poliomyelitis, polio or infantile paralysis is an acute viral disease spread primarily via the fecal-oral route. Spinal polio is the most common resulting from viral invasion of the motor neurons of the anterior horn cells.

Famous People with Parkinsons Disease - Parkinson's disease is a degenerative disorder of the central nervous system that impairs motor skills and speech. Early signs and symptoms may sometimes be dismissed as the effects of normal aging.

Famous People that use Wheelchairs - Well known people who use wheelchairs since birth and later in life. Wheelchairs are used by people for whom walking is difficult or impossible due to illness, injury, or disability.

Famous People who have and had Vision Impairments - Sight Impaired is vision loss that constitutes a significant limitation of visual capability resulting from disease, trauma, or a congenital or degenerative condition that cannot be corrected.

Famous People with Multiple Sclerosis - MS is a debilitating disease affecting the brain and spinal cord. No one knows what causes MS. It may be an autoimmune disease when your body attacks itself.

Famous People with Asthma - Asthma is a chronic condition involving the respiratory system in which the airway occasionally constricts, becomes inflamed, and is lined with excessive amounts of mucus, often in response to one or more triggers.

Famous people with Aspergers Syndrome - People with Asperger's Syndrome are often described, as having social skills deficits, reluctance to listen, difficulty understanding social give and take, and other core characteristics.

Famous and well known Amputees - Amputation is the removal of a body extremity by trauma or surgery. A prosthesis is an artificial extension that replaces a missing body

part. **Famous People with a Cleft -** A cleft is a congenital deformity caused by a failure in facial development during pregnancy. The term hare lip is sometimes used colloquially to describe the condition.

Famous People with Meniere's Disease - Meniere's Disease usually affects only one ear and is a common cause of hearing loss. Named after French physician Prosper Meniere who first described the syndrome in 1861.

Famous People with Psoriasis - Psoriasis is a disease which affects the skin and joints. It commonly causes red scaly patches to appear on the skin. The scaly patches caused by psoriasis are called psoriatic plaques.

List of Physically Disabled World Leaders & Politicians

A list of politicians and world leaders who currently hold or held office while having a significant physical disability. Interesting Pictures of Famous Women and Men when they were Younger Female Celebrities Pictures when they were Younger - See what some of the famous female celebrities such as Britney Spears, Paris Hilton, and Drew Barrymore looked like when they were much younger. Pictures of Famous Male Celebrities when Younger - See what some of the famous male celebrities like Tom Hanks, Jean Claude Van Damme, Elton John, and Eminem looked like when they were a lot younger. Other Famous Disability Quotes - Collection of Famous Quotes Regarding Disabilities from Well Known People. Famous People who Died Young - Hank Williams died at the age of 29 (Sep17, 1923 - Jan 1, 1953) was a famous American singer, songwriter and musician, and has become an icon of country music and one of the most influential musicians and songwriters of the 20th century. Comments and Discussion Have Your Say: Do you agree, disagree, want to discuss or add an opinion on this topic? We welcome relevant discussions, advice, criticism and/or your unique insights. Please Note: All are moderated and will not appear on this page until approved. Disabled World does not verify any information, or given advice, posted by others in the comments section below. Awareness Ribbons & Dates: The use of various colored ribbons is designed to draw awareness to disability, health, medical and other issues. Awareness Ribbon Colors & Meaning Awareness Days, Weeks & Months List 500+ Amazing Body Facts Fascinating list of unusual facts and trivia regarding the amazing human body. Fruit & Vegetable Color Chart Each colored fruits & vegetables contain unique nutrients & benefits essential to good health. Blood Pressure Charts Information, tables and graphs showing ideal blood pressure reading according to your age. Famous People with Disabilities Video - Video clip set to music of some famous and well known people with various disabilities and conditions including actors, politicians and writers who have contributed to society. Famous People with Autism - Information and facts regarding autistism. Autism is a brain development disorder characterized by impaired social interaction and communication, and restricted and repetitive behavior, all starting before a child is three years old. Famous People With a Disability List - A list of famous people with a disability, who haven't let anything get in their way. There are

millions of people worldwide who may not be famous in the sense society deems famous, but still live with, battle, and overcome a disability every day of their lives. Weight Loss Plan Calculator Set a target weight and time to calculate a realistic healthy timeline to lose weight fast. Famous People with Disability List of some famous and well known people with various disabilities and conditions. Disability Video Clips Video information on assistive technology, disability sports, general health topics & lots more. Disability Products & Aids Our online store offers a huge range of new disability products for disabled, seniors and carers. Kids Height to Weight Chart Easy to read height to weight ratio charts from newborn babies to teenage girls and boys. Adults Height to Weight Chart Calculate what your ideal weight to height ratio should be with this handy chart. Disability Questions - Answers Your queries answered by disability lawyers, veterans, and members of the community. Lets Get Social: Twitter Google+ LinkedIn Pinterest Facebook Resources: RSS Feed Contributors Accessibility Submit News & Events Reference Desk & Information Disabled World Information: About Us Contact Us Privacy Policy Terms of Service Home Videos Products Community © 2004 - 2016 Disabled World™.

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ROLE OF NATIONAL AGENCIES IN POLICY MAKING

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Abstract

The Constitution of India ensures equality, freedom, justice and dignity of all individuals and implicitly mandates an inclusive society for all including persons with disabilities. In the recent years, there have been vast and positive changes in the perception of the society towards persons with disabilities.. The Government of India has enacted three legislations for persons with disabilities viz. Persons with Disability (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, which provides for education, employment, creation of barrier free environment, social security, etc. National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disability Act, 1999 has provisions for legal guardianship of the four categories and creation of enabling environment for as much independent living as possible. Rehabilitation Council of India Act, 1992 deals with the development of manpower for providing Rehabilitation services. NGOs will be provided opportunities for orientation and training of their human resource. Training in Management skill which is already being provided, will be strengthened. Transparency, accountability, Procedural simplification etc. will be guiding factors for improvement in the NGO Government Partnership.

Introduction

The Constitution of India ensures equality, freedom, justice and dignity of all individuals and implicitly mandates an inclusive society for all including persons with disabilities. In the recent years, there have been vast and positive changes in the perception of the society towards persons with disabilities. It has been realized that a majority of persons with disabilities can lead a better quality of life if they have equal opportunities and effective access to rehabilitation measures.

According to the Census 2001, there are 2.19 crore persons with disabilities in India who constitute 2.13percent of the total population. This includes persons with visual, hearing, speech, loco motor and mental disabilities. Seventy five per cent of persons with disabilities live in rural areas, 49 per cent of disabled population is literate and only 34 per cent are employed. The earlier emphasis on medical rehabilitation has now been replaced by an emphasis on social rehabilitation. There has been an increasing recognition of abilities of persons with disabilities and emphasis on mainstreaming them in the society based on their capabilities. The Government of India has enacted three legislations for persons with disabilities viz.

- Persons with Disability (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, which provides for education, employment, and creation of barrier free environment, social security, etc.
- National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disability Act, 1999 has provisions for legal

guardianship of the four categories and creation of enabling environment for as much independent living as possible.

- Rehabilitation Council of India Act, 1992 deals with the development of manpower for providing Rehabilitation services.

In addition to the legal framework, extensive infrastructure has been developed. The following seven national Institutes are working for development of manpower in different areas, namely,

- Institute for the Physically Handicapped, New Delhi.
- National Institute of Visually Handicapped, Dehradun
- National Institute for Orthopedically Handicapped, Kolkata
- National Institute for Mentally Handicapped, Secunderabad.
- National Institute for Hearing Handicapped, Mumbai
- National Institute of Rehabilitation Training & Research, Cuttack.
- National Institute for Empowerment of Persons with Multiple Disabilities, Chennai.

There are five Composite Rehabilitation Centres, four Regional Rehabilitation Centres and 120 District Disability Rehabilitation Centres (DDRCs) providing various kinds of rehabilitation services to persons With disabilities. There are also several national institutions under the Ministry of Health & Family Welfare working in the field of rehabilitation, like National Institute of Mental Health and Neuro Sciences, Bangalore; All India Institute of Physical Medicine and Rehabilitation, Mumbai; All India Institute of Speech and Hearing, Mysore; Central Institute of Psychiatry, Ranchi, etc. In addition, certain State Government institutions also provide rehabilitation services. Besides, 250 private institutions conduct training courses for rehabilitation professionals. National Handicapped and Finance Development Corporation (NHFDC) has been providing loans on concessional terms for undertaking selfemployment ventures by the persons with disabilities through State Channelizing Agencies. Panchayati Raj Institutions at Village level, Intermediary level and District level have been entrusted with the welfare of persons with disabilities. India is a signatory to the Declaration on the Full Participation and Equality of People with Disabilities in the Asia Pacific Region. India is also a signatory to the Biwako Millennium Framework for action towards an inclusive, barrier free and rights based society. India is currently participating in the negotiations on the UN Convention on Protection and Promotion of the Rights and Dignity of Persons with Disabilities.

Education for Persons with Disabilities

Education is the most effective vehicle of social and economic empowerment. In keeping with the spirit of the Article 21A of the Constitution guaranteeing education as a fundamental right and Section 26 of the Persons with Disabilities Act, 1995, free and

compulsory education has to be provided to all children with disabilities up to the minimum age of 18 years.

According to the Census, 2001, fifty-one percent persons with disabilities are illiterate. This is a very large percentage. There is a need for mainstreaming of the persons with disabilities in the general education system through Inclusive education.

Sarva Shiksha Abhiyan (SSA) launched by the Government has the goal of eight years of elementary schooling for all children including children with disabilities in the age group of 6-14 years by 2010. Children with disabilities in the age group of 15-18years are provided free education under Integrated Education for Disabled Children (IEDC) Scheme.

Under SSA, a continuum of educational options, learning aids and tools, mobility assistance, support services etc. Are being made available to students with disabilities. This includes education through an open learning system and open schools, alternative schooling, distance education, special schools, wherever necessary home based education, itinerant teacher model, remedial teaching, part time classes, Community Based Rehabilitation(CBR) and vocational education.

IEDC Scheme implemented through the State Governments, Autonomous Bodies and Voluntary Organizations provides hundred percent financial assistance for various facilities like special teachers, books and stationery, uniform, transport, readers allowance for the visually handicapped, hostel allowance, equipment cost, removal/ modification of architectural barriers, financial assistance for purchase/ production of instructional material, training of general teachers and equipment for resource rooms.

Promotion of Non Governmental Organizations (NGOs)

The National Policy recognizes the NGO sector as a very important institutional mechanism to provide affordable services to complement the endeavors of the Government. The NGO sector is a vibrant and growing one. It has played a significant role in the provisions of services for persons with disabilities. Some of the NGOs are also undertaking human resource development and research activities.

Government has also been actively involving them in policy formulation, planning, implementation, monitoring and has been seeking their advice on various issues relating to persons with disabilities. Interaction with NGOs will be enhanced on various disability issues regarding planning, policy formulation and implementation.

Networking, exchange of information and sharing of good practices amongst NGOs will be encouraged and facilitated. The following programmes will be undertaken. A Directory of NGOs working in the field of disability will be prepared properly mapping them by geographic regions along with their major activities. For NGOs supported by the Central / State Governments, their resource position, both financial and manpower will also be reported.

Disabled persons organizations, family associations and advocacy groups of parents of disabled persons shall also be covered in the directory identifying them

separately. There are regional / State imbalances in the development of the NGO movement. Steps will be taken to encourage and accord preference to NGOs working in the underserved and inaccessible areas. Reputed NGOs shall also be encouraged to take up projects in such areas.

NGOs will be encouraged to develop and adopt minimum standards, codes of conduct and ethics.

NGOs will be provided opportunities for orientation and training of their human resource. Training in Management skill which is already being provided will be strengthened. Transparency, accountability,

Procedural simplification etc. will be guiding factors for improvement in the NGO Government Partnership.

The NGOs shall be encouraged to mobilize their own resources to reduce the dependence on grants in aid from the Government and also to improve the availability of funds in the sector. Tapering of assistance in a schematic manner will also be considered so that the number of NGOs to be helped within the available resources could be maximized. Towards this end, NGOs will be trained in resource Mobilization.

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THE STRATEGIES OF TEACHING MATHEMATICS TO VISUALLY IMPAIRED STUDENTS

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Abstract

In this paper we present overview of actual situation of teaching mathematics to visually impaired students at each level of education (primary, secondary, university). Problem of accessibility of mathematics to visually impaired students has the solution in linear notation. Team members working with students who are visually impaired need to carefully consider each student's unique needs and learning style, as well as the demands of the task. Strategies are offered to provide a starting point for thinking about possible adaptations. It is important to remember that all team members should have input into decisions regarding instructional strategies. This paper looks into understanding the need for new strategies that can benefit the differently abled people not only in assisting themselves, but also in accessing everything possible. This paper illustrates the significance of giving consideration to differently abled people while developing new strategies that would allow them to ultimately live a better life.

Introduction

Teaching Mathematics-concepts to children with disabilities pose a great challenge to special teachers in all parts of India and it causes lack of Mathematics skills in these children to a great extent. This hampers their education and rehabilitation in many ways. The time is very ripe to think and implement innovative practices for teaching Mathematics to these children. Developing the concept of number sense for math success and understanding is comparable to phonemic awareness for reading. To provide many opportunities for students to explore groups of **concrete & real objects** and to compare the relative size of groups of things. As students explore materials related to the unit, talk about similarities and differences in materials. In addition to providing many opportunities to count, encourage students to explore numbers within the environment. To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access on equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and other facilities and services open or provided to the public, both in urban and rural areas.

1. Overview of the actual situation

1.1. Primary schools

Most of the visually impaired children (blind and partially sighted) attend special primary schools. At the lessons of mathematics they are using Braille books with tactile pictures; to make notes they use electronic notebooks and for calculations mechanical typewriter. The disadvantage of typewriter is in the first place that the way to get result of calculus takes too long, so pupils try to calculate in their minds and secondly: notation of the calculations is too verbiage, so after a while the pupil is lost.

Teaching mathematics on the elementary level means first of all helping children to use and organize their experiences, which they gain from actions and interactions with the world around them. In opinion of some authors (Csocsan et al., 2002) the main goal of mathematical education is to develop an awareness of numbers and coping with different relations and dimensions. The most frequent mathematical problems of blind pupils are as follows:

- generalizing – finding the similarities in different activities in everyday life,
- translating activities and actions into mathematical language,
- lacking flexibility in problem solving and in calculations,
- translating and transferring three-dimensional objects into two-dimensional iconic forms. [Example: The blind pupil cannot understand a geometrical drawing of a cube from a perspective view because of his/her lack of visual experiences. S/he also has difficulties in enlarging and minimizing two dimensional forms.]

1.2. Secondary schools

There are special high schools for visually impaired students in India, but mostly oriented on music, some handicrafts, etc. If a student wants to come into contact with mathematics then s/he needs to attend "normal" high school. As we know, mathematics is a subject which is important for studying not only natural sciences as physics, chemistry, informatics or biology; but it also begins to be popular at humane sciences as psychology, philology, sociology, etc. The direct consequence of this mathematical requirement almost everywhere causes that also more and more blind students today start their education in mainstream schools, which is place, where they can study maths.

Because teachers of these schools are not special educated in this field they often have to use the ”trial and error” method to find out the best way of teaching their blind students who are only integrated among sighted students. Visually impaired students encounter also with lack of textbooks and study material and limited Braille notation for maths.

On the other side, visually impaired students of this level of education mostly do not have problems with calculations; they already know all basic mathematical operations. However, scale of mathematical knowledge increases here very sharp in all fields: algebra, analysis, and geometry. Hence, they will have to overcome a lot of other

new challenges, especially with Braille notation of all new symbols. The major part of visually impaired students creates their own particular mathematical language that is adapted to their conditions and requirements. But this forms new problems, because these languages do not have to be comprehensible for people with whom the visually impaired students are communicating with.

Collaborative/Inclusive Strategies

1. Adapted educational aids are a necessary component of any mathematics class. They are especially needed to supplement textbooks that have omitted tactile graphics or contain poor quality ones. However, they are also needed to help in interpreting mathematical concepts - just as their sighted peers benefit from various manipulative. It is very beneficial to the entire class when the Braille student's aid is a fun and useful tool for the sighted students and teacher as well.
2. Math teachers need to verbalize everything they write on an overhead or blackboard and be precise with their language. If the Braille learner still has difficulty keeping up, the math teacher should be encouraged to give the student, **a copy of their overhead transparencies prior to class if pre-prepared or immediately after**. Another alternative might be for a classmate to make a copy of their notes to share.
3. Math teachers need to give worksheets, tests, etc. to transcribe into Nemeth far enough in advance, so that the Braille student can participate with their fellow students in class - not later alone.
4. Relate various mathematical applications to student activities enjoyed by blind students as well as the sighted students -
    a. Put various mathematical concepts to song or at least teach similar to an athletic cheer.
        i. The FOIL method for multiplying binomials F - O - I - L: First, Outside, Inside, Last!!!!
        ii. Quadratic formula sung to the tune of Pop Goes the Weasel
    b. Be sure to include athletic experiences that a blind student can relate to; include the parabolic curve of a diver, as well as the football quarterback's pass.
5. Math teachers need to realize that it is their job to teach the mathematical concepts to their students. The teacher can be very helpful by insuring that all materials are in proper Nemeth code and all graphics are of good quality if the math teacher is able to supply these in print in a timely manner. It is the responsibility of the teacher to expose the math teacher to the various tools and aids available to him/her. Math teachers can be quite creative, as many teachers have discovered.
6. Blind students should not be excused from learning a math concept because they are blind: "Blind students can't graph." "Blind students can't do geometric

constructions." Not only can they graph and draw geometric constructions, with the right tools, they can often do so better than their sighted peers.

7. It is very important for all students to use as many senses as possible when learning a new math concept. They need to read a new math problem, write it, listen to it, tactually explore it through manipulative, and when possible move their body and/or manipulative through space.
8. There is an ongoing need for four-way communication among the math teacher, the family, and the student. Braille textbooks, materials, and aids need to be ordered early. The source of a problem needs to be discerned as quickly as possible. Fractions have numerators and denominators in print and Braille; however, they have "tops" and "bottoms" in print and "lefts" and "rights" in Braille.

Suggestions on Materials for Teaching Mathematics

Picture of EZ count abacus

The EZeeCOUNT Abacus consists of a 10x10 grid of flat beads. The beads can be flipped and distinguished by color and/or texture. The red beads are wavy/rough and the yellow beads are smooth. Each row of beads slides along an elastic band from left to right. The reverse side is a dry-erase board. EZeeCOUNT abacus can be used for: addition, subtraction, multiplication, patterns, place value, addition, number combinations, fractions, graphs, and games.

The expanded **Beginner's Abacus kit**, a new device from APH, introduces visually impaired students to early math concepts and number operations, as well as abacus terminology. According to their product description, it "supports concepts and skills such as one-to-one correspondence, number meaning, addition, and subtraction. It also prepares students for the Cranmer Abacus."

Picture of Cranmer Abacus

The abacus is a calculation tool but it should not be confused with a calculator. A better comparison is that it is used like paper and pencil for students with vision. The Cranmer Abacus was designed specifically for individuals who are blind. What makes it unique is the piece of soft fabric or rubber that is placed behind the beads so that they will not inadvertently move while the person performs calculations.

Picture of Braille magnets

Braille magnets are available from Playskool in both numbers and letters. These magnets can be a fun learning tool for students with low vision as well as dual print/braille learners. Care should be taken if using them with students who are braille only learners as the print letters/numbers will need to be properly oriented in order to read the braille.

Picture of base ten blocks

Base ten blocks are a mathematical manipulative used by teachers to instruct students on basic mathematical concepts including addition, subtraction, number sense,

place value and counting. The student can manipulate the blocks in different ways to express numbers and patterns. This hands-on tool is ideal for students who are visually impaired and blind.

Picture of bold line paper

Bold line paper is a tool that can be used in mathematics for students with low vision. The paper can be turned sideways to form columns that can assist students in performing paper/pencil activities that require keeping numbers lined up.

Picture of Math Flash

Math Flash Software from APH helps elementary students sharpen math skills with talking electronic flash cards. It's a self-voicing program that uses the computer's sound card to communicate instructions, drills, practice sessions, and games.

Picture of tactile dice

Tactile Dice, like these dice available from APH, can make games and other math activities accessible to students with low vision or who are blind.

Talking Calculator app

Talking Calculator app speaks button names, numbers, and answers aloud through a customizable built-in directory that lets users record their own voice. The company also offers a Talking Scientific Calculator .

Picture of a stack of number Braille blocks

Braille number and alphabet blocks provide children an early play and interaction with Braille. The numbers on the block are in Nemeth Braille.

Picture of Jelly Bean Jungle

Counting books are a wonderful way to practice counting with students. Commercially available counting books can be adapted, or homemade books can be created. Jellybean Jungle is one of several Twin Vision books available through APH that introduce students to counting.

Picture of Digi-Blocks

Digi-Blocks are small rectangular-shaped blocks and empty holders. These materials help children discover the important relationship between ones and tens – a concept crucial to understanding how arithmetic operations work.

Graph Paper

Some students will have significant difficulty lining up math problems. Provide students with strategies such as using graph paper or turn lined paper sideways to create columns.

Picture of the APH hundreds board

The APH hundreds board and manipulatives includes manipulatives that can be used to help teach basic math concepts. It includes two 10x10 boards made of heavy duty plastic.

Picture of Math Builders Unit 7

MathBuilders Unit 7: Fractions, Mixed Numbers, and Decimals from APH is a supplementary math program that consists of materials that are accessible to students who are blind or who have low vision.

Picture of Number Line Device

The Number Line Device from APH is a basic tool for teaching number concepts, number sequence, counting, addition, subtraction, multiplication, division, rounding, estimating whole numbers, common fractions, and decimals. The number line teach mathematical concepts including representing whole number sums at the elementary level, to representing fractions at the intermediate level, to locating irrational numbers at the middle school level.

Picture of Slide-A-Round number line

This Number Line to 10,000,000, available from Slide-A-Round Math Manipulatives, was developed by Jim Franklin who is a special education teacher. This number line is accessible to students with low vision as well as those who are blind.

Picture of numbered peg boards

These Numbered peg boards can be easily adapted with a Braille label to make them accessible for a possible Braille learner. They are excellent for students with low vision as well as they are in high contrast.

Picture of quick pick math

Quick Pick Math is a math game from APH. It consists of a plastic packet with large print/Braille cards. The front and back of each card contains a math question and four possible answers. To play, the student inserts the included tool in one of four holes in the front of the plastic packet.

Picture of TackTiles

The Nemeth Tactile System from TackTiles is ideal for students who may not be able to read Braille tactually from loss of finger sensitivity. It provides these students with the opportunity to access math.

Picture of Twist & Shout

The Twist and Shout game by Leapfrog provides a fun way to practice and learn math facts. Different Twist and Shout games are available including addition, subtraction, multiplication, and division.

Conclusion

In the last years the solution of problem of accessibility to mathematics for visually impaired students seems to have an electronic form. There exist softwares that are blind friendly and so the visually impaired students can do (calculate, read, write) mathematics the way that is also accessible for their sighted schoolmates and teachers. Disability is a phase in everyone's life which can be a parent with a pram, a person with an injured leg, a child in his infant age, the elderly people or any disability by birth. Treating the problems of all and giving solutions to it in the form of innovations, it

would tend to provide a platform for the disabled to feel normal. This particular aspect has to be ensured to make anything Universal. These different strategies can help the people with disabilities which mean giving them a new life or a better life which they once yearned to live.

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NEW TECHNOLOGIES FOR TEACHING LEARNING TO PWDs

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Abstract

The Persons with Disabilities are valuable human resources for the country and seeks to create an environment that provides them equal opportunities, protection of their rights and full participation in society. It is in consonance with the basic principles of equality, freedom, justice and dignity of all individuals that are enshrined in the Constitution of India and implicitly mandate an inclusive society for all, including persons with disabilities. There are a lot of practices that are being followed to make everything possible, to be Universal. Providing a Barrier free built environment is taken as a major consideration these days. However, technology should act as an advantage for differently abled people by helping them mobilize things on their own. Technological advancements have made lives easier and it would be a never ending process. One would even totally rely on technology in the near future. In this case it can benefit the differently abled user group in a much better way. Technology can help all kinds of user group irrespective of their ambulatory conditions or any other impairment.

Introduction

Education is the most effective vehicle of social and economic empowerment. In keeping with the spirit of the Persons with Disabilities, free and compulsory education has to be provided to all children with disabilities up to the minimum age of 18 years. According to the Census, 2001, fifty one percent persons with disabilities are illiterate. This is a very large percentage. There is a need for mainstreaming of the persons with disabilities in the general education system through Inclusive education. Sarva Shiksha Abhiyan (SSA) launched by the Government has the goal of eight years of elementary schooling for all children including children with disabilities in the age group of 6-14years by 2010. Children with disabilities in the age group of 15-18years are provided free education under Integrated Education for Disabled Children (IEDC) Scheme. Under SSA, a continuum of educational options, learning aids and tools, mobility assistance, support services etc. are being made available to students with disabilities. This includes education through an open learning system and open schools, alternative schooling, distance education, special schools, wherever necessary home.

Physical Rehabilitation Strategies

- Early detection of disability and intervention through drug or nondrug therapies helps in minimization of impact of disability. Therefore, there will be emphasis on early detection and early intervention, and necessary facilities will be created towards this end. Government will take measures to disseminate information regarding availability of such facilities to the people especially in rural areas.
- Physical rehabilitation measures including counseling, strengthening capacities of persons with disabilities and their families, physiotherapy, occupational

therapy, psychotherapy, surgical correction and intervention, vision assessment, vision stimulation, speech therapy, audiological rehabilitation and special education shall be extended to cover all the districts in the country by active involvement and participation of State Governments, local level institutions, NGOs including associations of parents and persons with disabilities.

- Currently, rehabilitation services are largely available in and around urban areas. Since seventy five percent persons with disabilities live in rural areas, the services run by professionals will be extended to cover uncovered and unserved areas. Privately owned rehabilitation service centers shall be regulated for maintenance of minimum standards which shall be laid down.
- To expand coverage in rural and unserved areas, new District Disability Rehabilitation Centers (DDRCs) will be set up with support from the State Government. The National Rural Health Mission through Accredited Social Health Activist (ASHA) addresses the health needs of rural population, especially the vulnerable sections of society.

Assistive Devices

- Psychological independence by reducing the effect of disabilities. Every year through National Institutes, State Governments, DDRCs and NGOs, persons with disabilities are provided with devices such as prostheses and or thoses, tricycles, wheel chair, surgical footwear and devices for activities of daily living, learning equipment's (Braille writing equipment's, Dictaphone, CD player/ tape recorder),low vision aids, special mobility aids like canes for blind, hearing aids, educational kits, communication aids, assistive & alerting devices and devices suitable for the persons with mental disabilities.
- The availability of devices will be expanded to cover uncovered and under serviced areas. Private, public and joint sector enterprises involved in the manufacture of high tech assistive devices for persons with disabilities will be provided financial support by the public sector banks.
- Development of Rehabilitation Professionals, Human resource requirements for rehabilitation of persons with disabilities will be assessed and development plan will be prepared, so that the rehabilitation strategies do not suffer from lack of manpower based education, itinerant teacher model, remedial teaching, part time classes, Community Based Rehabilitation(CBR) and vocational education.
- IEDC Scheme implemented through the State Governments, Autonomous Bodies and Voluntary Organizations provides hundred percent financial assistance for various facilities like special teachers, books and stationery, uniform, transport, readers allowance for the visually handicapped, hostel allowance, equipment cost, removal/ modification of architectural barriers, financial assistance for purchase/ production of instructional material, training of general teachers and equipment for resource rooms.

- There will be concerted effort on the part of the Government to improve identification of children with disabilities through regular surveys, their enrollment in appropriate schools and their continuation till they successfully complete their education.
- The Government will endeavor to provide right kind of learning material and books to the children with disabilities, suitably trained and sensitized teachers and schools which are accessible and disabled friendly. Government of India is providing scholarships to students with disabilities for pursuing studies at post school level. Government will continue to support the scholarships and expand its coverage.
- Facilities for technical and vocational education designed to inculcate and bolster skill development suited to various types of productive activities by adaptation of the existing institutes or accelerated setting up of institutes in unserved/ underserved areas will be encouraged. NGOs will also be encouraged to provide vocational training. Persons with disabilities will be provided access to the Universities, technical institutions and other institutions of higher learning to pursue higher and professional courses.

Teaching Learning of Persons with Disabilities

- It will be ensured that every child with disability has access to appropriate preschool, primary and secondary level education by 2020. Special care will be taken to
- Make schools (building, approaches, toilets, playgrounds, laboratories, libraries etc.) barrier free and accessible for all types of disability.
- Medium and method of teaching will be suitably adapted to the requirements of most disability conditions.
- Technical / supplementary / specialized system of teaching / learning will be made available within the school or at a common center easily accessible to a cluster of schools.
- Teaching / learning tools and aids such as educational toys, Braille / talking books, appropriate software etc. will be made available. Incentives will be given to expand facilities for setting up of general libraries, e-libraries, Braille libraries and talking books libraries, resource rooms etc.
- National Open School and distance learning programmes will be popularized and extended to other parts in the country.
- Sign language, Alternative and Augmentative Communications (AAC) and other modes as a viable medium in inter personal communication will be recognized, standardized and popularized.
- Schools will be located within easy traveling distance. Alternatively, viable travel arrangements will be made with the assistance of the community, State and NGOs.

- Parent Teacher counseling and grievance redressal system will be set up in the schools.
- There will be separate mechanism to review annually the intake and retention of the girl child with disability at primary, secondary and higher levels of education.
- Many children with disabilities, who cannot join inclusive education system, would continue to get educational services from special schools. Special schools shall be appropriately remodeled and reoriented based on technological development. These schools will also help prepare children with disabilities to join mainstream inclusive education.
- In some cases due to the nature of disability (its type and degree), personal circumstances and preferences, home based education will be provided.
- Course curriculum and evaluation system for children with various disabilities shall be developed keeping in view their capabilities. Examination system will be modified to make it disabled friendly by exemptions such as learning mathematics, learning only one language, etc. Further, facilities like extra time, use of calculators, use of Clarke's tables, scribes etc. would be provided based on the requirement.
- Model Schools of Inclusive Education will be set up in each State / U.T to promote education of persons with disabilities.
- In the era of knowledge society, computers play very important role. Efforts will be made so that every child with disability gets suitably exposed to the use of computers.
- Children with disabilities up to the age of 6 years will be identified and necessary interventions made so that they are capable of joining inclusive education.
- Educational facilities will be provided in psychosocial rehabilitation centers for mentally ill persons.
- Many schools discourage enrollment of students on account of their disability due to lack of awareness about the capabilities of disabled persons. Programmes will be taken for sensitization of teachers, principals and other staff members in all schools.
- Special Schools presently being supported by the Ministry of Social Justice & Empowerment will incrementally become resource centers for inclusive education. Ministry of Human Resource Development Sports, Recreation and Cultural activities.

Co-Curricular Activities of Persons with Disabilities

- Make places for recreation, cultural activities and sports, hotels, beaches, sports arenas, auditoriums, gym halls, etc. accessible.
- Travel agencies, hotels, voluntary organizations and others involved in organizing recreational activities or travel opportunities should offer their services to all, taking into account the special needs of persons with disabilities.

- Identification of talent amongst persons with disabilities in different sports shall be made with the assistance of local NGOs. Formation of Sports organizations and Cultural societies for persons with disabilities will be encouraged.
- There will be mechanism to support the participation of persons with disabilities in national and international events.
- A national award for excellence in sports for persons with disabilities shall be instituted. Socio cultural aspects of disability, include study of social attitude and behavioral patterns towards persons with disabilities.
- Develop social indicators relating to the education of persons with disabilities so as to analyze the problems involved and take up programmes to improve access and opportunities,
- Generate statistics about the employment status of persons by type of disability especially for those who become disabled due to accidents and other disasters.
- Study causes of different types and level of incidence of disabilities, Genetic research to minimize incidence of disability under the aegis of Indian Council of Medical Research.
- Adaptive technology research focusing on enhanced personal mobility, verbal / nonverbal communication, design changes in articles of every day usage etc. with a view to develop cost effective, user friendly and durable aids & appliances with the help of premier technological institutes.

The Technology Help to the Persons with Disabilities

Visual Impairments

Technology can help people with visual impairments to a greater extent by developing voice control navigation systems or smart voice recognizers such as Nuance' that converts text into speech that can help visually impaired people suffering from low vision or total blindness.

Visually impaired people are the ones who need maximum assistance. As and when the technology can serve as a solution to this, one can self-assist themselves with the help of guiding tools like the sensors in the walking stick that can sense bumps or uneven levels or obstructions that can safeguard the one with low or no vision.

Mobility Impairments

It isn't a new phenomenon to help people using technology from the advent of speech recognitions, to mobilize wheel chairs, to any hearing assistive technology. The use of adaptive technology can help providing mobility access to various places, plays a key role in creating a social status to those with semi ambulatory or ambulatory impairments.

Hearing/Speech Impairments

Amplified sound travels through the loop and creates an electromagnetic field that is picked up directly by a hearing loop receiver or a telecopies, a miniature wireless receiver that is built into many hearing aids. To receive the signal, a listener must be

wearing the receiver and be within or near the loop. As the sound is taken up directly by the receiver, the sound is much clearer, without as much of the competing background noise associated with many listening spaces. Some loop systems are portable, making it accessible for people with hearing loss to improve their hearing environments, as required, as they proceed with their daily agenda's. A hearing loop can also be connected to a public service system, a television, or any other audio source that produces sound. Hearing aids with embedded systems of telecopies or portable loop receivers are also available that gives a choice of selection for the users.

Speech Impairments

Persons with speech impairments are those who cannot convey information as they wish to due to multiple reasons. Language constraints or speech disability or in secureness in society. Technology can help people with speech impairments by providing assisting tabs or gadgets that can act as a medium of conveying messages, assisting themselves in a building without the need for others reference. 3D way finder is another such technology that is adopted in almost every new building that shows the 3-Dimensional view of floor plans by marking their current locations and showing path to reach their destinations

National Institutes working in the field of disability

There are seven National Institutes under MSJE working in the field of disability. These institutes are engaged in Human Resources Development in the field of disability, providing rehabilitation services to the persons with disabilities, research and development. These National Institutes including their regional centers and composite regional centers run 80 courses of one year or more duration. The seven National Institutes are:-

- National Institute for the Visually Handicapped (NIVH), Dehradun
- National Institute for Empowerment of Persons with Multiple Disabilities (NIEPMD), Chennai
- Swami Vivekananda National Institute for the Rehabilitation, Training and Research (SVNIRTAR),Cuttack
- National Institute for the Hearing Handicapped (NIHH), Mumbai
- National Institute for the Mentally Handicapped (NIMH), Secunderabad
- National Institute for the Orthopedically Handicapped (NIOH), Kolkata
- Pt. Deendayal Upadhyaya Institute for the Physically Handicapped (PDUIPH),
- New Delhi.

Conclusion

Disability is a phase in everyone's life which can be a parent with a pram, a person with an injured leg, a child in his infant age, the elderly people or any disability by birth. Treating the problems of all and giving solutions to it in the form of technological innovations, it would tend to provide a platform for the disabled to feel normal. This particular aspect has to be ensured to make anything Universal.

Developing technology that can help the people with disabilities means giving them a new life or a better life which they once lived.

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TEACHING METHOD FOR HEARING IMPAIRED STUDENTS

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Abstract

My topic is about teaching method for hearing impaired student. Hearing impaired is one of the disability. So that kind of student will be able to cope-up with normal student. So as teacher we can insteated new type of teaching methods . the best way to teach them in normal while comparing the hearing impaired student must be take more care. So my presentation is about how to teach hearing impaired student.

Introduction

Children with disabilities are one of the most marginalized and excluded groups in society. Facing daily discrimination in the form of negative attitudes, lack of adequate policies and legislation, they are effectively barred from realizing their rights to healthcare, education, and even survival. Estimates suggest that there are at least 93 million children with disabilities in the world, but numbers could be much higher. They are often likely to be among the poorest members of the population. They are less likely to attend school, access medical services, or have their voices heard in society. Their disabilities also place them at a higher risk of physical abuse, and often exclude them from receiving proper nutrition or humanitarian assistance in emergencies.UNICEF vision is to build a world where every child can grow up healthy, protected from harm and educated, so they can reach their full potential. Every day we're working to make this vision a reality. No matter who they are or where they are born, we reach out to the most vulnerable children wherever and whenever they need us".

Definition of Disability

Federal laws define a person with a disability as "Any person who has a physical or mental impairment that substantially limits one or more major life activities; has a record of such impairment; or is regarded as having such an impairment."

Types of Disability

- Hearing loss
- Low vision or blindness
- Learning disabilities, such as Attention-Deficit Hyperactivity Disorder, dyslexia, or dyscalculia
- Mobility disabilities
- Chronic health disorders, such as epilepsy, Crohn's disease, arthritis, cancer, diabetes, migraine headaches, or multiple sclerosis
- Psychological or psychiatric disabilities, such as mood, anxiety and depressive disorders, or Post-Traumatic Stress Disorder (PTSD)

- Asperger's disorder and other Autism spectrum disorders
- Traumatic Brain Injury

Teaching Strategies for Hearing Impaired Students

There is a range of inclusive teaching strategies that can assist all students to learn but there are some specific strategies that are useful in teaching a group which includes students with hearing impairments. In considering alternative forms of assessment, equal opportunity, not a guaranteed outcome, is the objective. You are not expected to lower standards to accommodate students with a disability, but rather are required to give them a reasonable opportunity to demonstrate what they have learned.

Lectures and Other Teaching Session

Keep instructions brief and uncomplicated as much as possible. When repeating instructions, repeat exactly without paraphrasing. Clearly define course requirements, the dates of exams, and when assignments are due. Provide advance notice of any changes. Present lecture information in a visual format (e.g., chalkboard, overheads, PowerPoint slides, handouts, etc.).Use more than one way to demonstrate or explain information. When teaching, state objectives, review previous lessons and summarize periodically. Make instructional on-line course materials available in text form. For that material which is graphical in nature, create text-based descriptions of material. Repeat the comments and questions of other students, especially those from the back rows. Acknowledge who has made the comment so students who are deaf or hard of hearing can focus on the speaker. When appropriate, ask for a hearing volunteer to team up with a student who is deaf or hard of hearing for in-class assignments. If possible, provide transcripts of audio information. Allow several moments extra for oral responses in class discussions. In small group discussions, allow for participation by students with hearing impairments. If there is a break in the class, get the attention of the student who is deaf or hard of hearing before resuming class. People who are deaf or hard of hearing often use vision as a primary means of receiving information. Captioned videos, overheads, diagrams, and other visual aids are useful instructional tools for students with hearing impairments.

Be flexible: allow a student who is deaf to work with audiovisual material independently and for a longer period of time .Assist the student with finding an effective note taker from the class. Provide hand-outs (preferably electronically) in advance of lectures and seminars. Ensure key notices e.g. regarding cancellations or re-scheduled classes, are also announced in ways that are accessible to deaf or hearing impaired students. In lecture/discussion classes, take care over seating arrangements and encourage people to take turns to speak. Work with the student on strategies to help them participate fully and find out if they wish any other adjustments. Circular seating arrangements offer students who are deaf or hard of hearing the best advantage for seeing all class participants. When desks are arranged in rows, keep front seats open

for students who are deaf or hard of hearing and their interpreters. Make field trip arrangements early and ensure that accommodations will be in place on the given day (e.g., transportation, site accessibility). Provide plenty of warning so a personal assistant or adaptive equipment can be arranged as appropriate for laboratory work and field trips. A health and safety assessment for the student may be necessary in certain situations, and should be carried out beforehand. 'Reasonable adjustments' must be considered in the light of any perceived risk. Individual induction to laboratory or computer equipment may be helpful.

Writing Assignments and Examination

Provide assistance with proofreading written work. Stress organization and ideas rather than mechanics when grading in-class writing assignments. Encourage the use of spell-check and grammar-assistive devices when appropriate to the course.

Strategies for Working with Students

Lip-reading is not easy and requires great concentration. Three quarters of it is guesswork and so clear speech and contextual clues are vital for understanding. There are lots of things you can do to make it easier for a lip reader to follow what you are saying. Position: The deaf student will know where it is best to sit — this will often be near the front, slightly to one side of you. Try to avoid moving around (this may demand a change in your normal teaching style!)Visibility: Face the light so you are not silhouetted in front of a bright window, for instance. Make sure you don't cover your mouth (e.g., with your hands, a cup or pen). Agree suitable cues with the student beforehand to ensure they are looking at you before you start to speak. Speech: Speak clearly and at a reasonable and natural pace. Do not shout as this will distort your voice and lip patterns. Reinforcing meaning: Give the student time to absorb what you have said and rephrase it if necessary. Remember sentences and phrases are easier to lip-read than single words. Use gestures where these are relevant but avoid exaggerated facial expressions. If you change the subject, make sure the deaf student knows. Write things down if you need to clarify them.

Lectures

Advance information: Lip-reading is easier when the subject area is known, so give the student a copy of lecture notes/OHPs/PowerPoint slides in advance to help familiarize with session content and vocabulary to be used. (If you put this on the Internet, everyone else will benefit too).Ensure the deaf student has relevant booklists well in advance, as they may rely more heavily on textbooks than lectures — early access to this information is a great help Structure: Well structured sessions are important for all students, but particularly for those who lip-read: Include regular opportunities to review what has been covered. Indicate when the subject is about to change, or a new concept is being introduced, by writing on the board or holding up an

appropriate book or article. Try to break up the session with opportunities to look at illustrations, pass round handouts or complete individual tasks. Allow a little extra time for a deaf student to assimilate information and respond before progressing to the next stage.

Seminars/Group Work

Size: The optimum size of group for a deaf person is between 6 and 10. If a group is bigger than this it may mean that the deaf student does not have full access to discussions. Divide into smaller sub-groups and use regular plenary feedback so key points can be written on the board, or get each group to write their own summary on an overhead transparency. Either will help to reinforce key issues. Seating: Arrange the room so that the deaf student can see everyone by putting chairs in a circle or horseshoe shape. Make sure no one is silhouetted against the light. The student may like to sit next to the chairperson as comments tend be addressed that way, or next to a note taker so that he or she can pick up on missed discussion and follow changes in subject. Visual cues: Signaling a change of speaker or asking participants to raise their hand before speaking can be very helpful to allow the student to look in their direction before they start to speak.

Use of Visual Aids

Boards and Flipcharts: When using OHPs, boards and flipcharts, allow students time to read what is written before starting to speak again. It is not possible to read and lip-read at the same time! Slides: When using slides in a darkened room leave a curtain open or a spotlight on the speaker or interpreter. Videos and Tapes: If possible, try to use subtitled videos or obtain a transcript of the commentary.

EDUCATIONAL PROGRAMMES FOR CHILDREN WITH *LEARNING DISABILITIES*

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Abstract

Learning disabilities (LD) are hidden disabilities that affect many individuals who usually have average or above average intelligence, but are unable to achieve at their potential. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage." Individuals with learning.

Introduction

Children with learning disability are the children with special needs. Once a learning disability is identified, three categories of assistance such as psychological, technological, and educational are to be provided. In educational programs, children must be provided optimum educational experience and remediation to overcome the lacunae.

Understanding the Term Learning Disablity

Learning disability (LD) is a term that denotes a group of disorders manifest as difficulties in the acquisition and use of disabilities such as reading, writing, reasoning, listening, arithmetic or of social skills. The term learning disability was given by SAMUEL A.KIRK in 1962.

Various definition of the phrase 'LEARNING DISABILITY' has been given. In view of KIRK, "A LEARNING DISABILITY" refers to a retardation, disorder or delayed development in one or more of the process of speech, language, reading, spelling, writing or arithmetic skills resulting form a possible cerebral dysfunction and emotional disturbance and not from mental retardation, sensory deprivation, cultural or instructional factors.

The Education for all handicapped children Act, defines learning disability as "specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written which may manifest themselves in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations.

The learning disabled children has often been referred as an individual with an "invisible handicap". These child usually appears normal in every respect expect for

the fact that his/her learning difficulties limit progress in school. Learning disabilities are if various types such as

- Oral language disabilities (dysphasia, aphasia)
- Reading disabilities (dyslexia, alexia)
- Writing disabilities (dysgraphia, agraphia)
- Arithmetic disabilities (dyscalculia, acalculia)

Oral Language Disabilities

Language is a means of communication. Language could be verbal or non verbal. Speech is the verbal aspect of language. Language development gets delayed in some children due to several reasons and it makes parents worried about their future growth, whether, their children will have normal language development or not. Some of the language stimulation techniques along with the case studies are discussed in this chapter.

Causes

Organic defects, stress, unhealthy family environment, parental conflict and neglect, disease, and lack of exposure to a stimulating language environment are often responsible for the delay in language development.

Techniques for Language Stimulation

Language stimulation can be provided to the child in the following manner.

- Identity his rewards. Example:- chocolates, food items, hugging etc…
- Focus on demand words. Example:-eat, drink, sleep, go etc…
- Generalization of demand words must be assured. This will enable the child to use the words in a variety of situations. Example :- drink water, drink milk, eat rice etc….
- After the child masters them, teach him another 50 words of thus types.
- Teach the child to combine the demand and functional words. example:- kick the ball, push the pillow

Dyslexia

Learning disabled children may exhibit their weakness and poor performance with regard to reading and comprehension of text material or manuscript. Their difficulties and deficies in respect of reading skills are quite varied and diversified.

Example: There is frequent kinetic reversal of letters (*b-d; flam-film*); of words (*saw-was*), and sometimes of entire sentences

Causes for Reading Disorder

Heredity

Family and twin studies confirm that there is a heritable component of Dyslexia. It is believed hat chromosome 6 is responsible for this.

Brain Pathology

Brain abnormalities, possible heritable, may be responsible for dyslexia. Right-handed individuals with childhood dyslexia have microscopic abnormalities in the location, number and organization of neurons on the left side of the brain.

Problems of Dyslexic Children

The readers omit letters (for example bett/bet) or whole words when reading. Generally, it is the middle and end part of a word that is omitted.

Additions and Insertions

The child inserts a letter/s where not required (play/played) or a syllable (care/careful).

Reading Methods and Materials

Early letter emphasis

Associate the sound with the printed materials. Letter learning is considered as a prereading skill.

Words in colors

It makes initial reading easier. Phonemic as peacts are written in colors.

Language experience approach to reading

The develooment of reading skill is interrelated with the development of listening,speaking and writing.

Dysgraphia

Handwriting is the most concrete of communication skills. It requires visual and motor skills. It is a way by which children show what they have learnt. Dysgraphia is a transcription disability, meaning that it is a writing disorder associated with impaired handwriting.

The word dysgraphia was coined form the greek word 'dys' meaning 'ill' or 'difficult' and 'graphe in' meaning to 'write' and is used to describe a severe problem with handwriting.

Causes of Writing Disorders

Brain damage

This simply states that learning disabled children with writing problems might have a defect in their left hemisphere of the brain which is the visual memory centre for words.

Brain injury

Some visual abnormalities may also be caused by brain injury.

Other Causes of Writing Disorders

The writing position

If the child is in a habit of sitting in an uncomfortable position, which goes unnoticed for a long time, then a child's writing can be badly affected similarly the position of the paper creating writing problems.

Behavioural factors

Children with learning disabilities also exhibit behavioural problems such as hyperactivity, distractibility and inattention.

Special Techniques for Remedy of Dysgraphia

Scribbling: The child must know how to hold a pencil and manipulate his fingers to perform random movements.

Propositional writing

The child can write on his own form memory and by framing new sentences.

Position and paper

Teach the child how to sit, how to hold the paper, how to hold the pen/pencil. Teacher usually ignore this part.

Drawing between lines

The child should practice drawing between double lines. Let the child make a figure by joining doffs.

Specific Learning Problems of the Child

Should be identified so adequate training appropriate environment, teaching strategies and proper remedies can be provided, at least five

- norm referenced test
- process tests
- informal tests/reading inventories
- criterion referenced tests
- direct daily measurement

Out of this five, first two are used to measure the child general ability along various dimensions .last three tests are used to measure the specific skills and behaviour that a child is to be taught

Educational Planning

Curriculum and teaching should be planned and designed so as to optimize the simultaneous acquisition of knowledge, skills and feelings. Myklebust gives thirteen principles of remediation planning such as:

- Individualize the problem
- Teach to the level of involvement
- Teach to the type of involvement
- Teach according to readiness

- Remember that input precedes output

Conclusion

A Single model of education program is not suitable for all children living in different areas. The service provided is based on need and accessibility. Various factors such as nature and degree of disability, age, transportation, culture etc. Influenced the selection of suitable model. Any model which provides right materials and technology in the right time and place makes the education of LD children as gainful as that of non disabled children.

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A STUDY ON THE ATTITUDE OF THE PARENTS OF INTELLECTUALLY CHALLENGED CHILDREN TOWARDS THE ATTRIBUTE OF SPECIAL SCHOOLS

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Abstract

The present study has been conducted among 200 parents of special Children belong to various Special Schools to find out the attitude towards the attribute of Special Schools. An attitude scale was used as a tool for this study. The attitude scale included 49 statements. The data collected was analyzed and interpreted to draw inference using appropriate statistical method F-test. The result shows that there is a significant difference between the attitude of parents in their attitude towards the attribute of special schools with respect to their occupation and also for the all the other variables ,null hypothesis is accepted and there is no significant difference between the attitude of parents in their attitude towards the attribute of special schools with respect to their community, religion, age group, size of the family, and the birth order of the child. The percentage analysis for response of each item by the parents were also found out and the results were discussed.

Introduction

Education implications are rich and varied. Special Education is about giving exceptional consideration and providing exceptional opportunities and exceptional help to those who need more **.**Teachers can make a significant contribution in empowering parents and reassuring them that they, and their child, are truly welcome as active partners. Mostly the information in the educational guidance insists on collaborative working among Parents, Teachers and the institution. However it is helpful to remember that it can be more crucial and relevant to a parent of a child with special educational needs, who may already be feeling anxious or even that they are a burden to school

Relationship between General Education and Special Education

The controversy about the relationship between special and general education has made the classroom teachers more aware of the problems. The students should be taught with specific curriculum, which students should receive special attention or services, and where and by whom these should be provided. However, it is clear that the relationship between general and special education should be one of cooperation and collaboration.

Classification of Differently Abled Persons

Disabled people do not form a homogenous group. They may be, Physically Disabled, Mentally retarded, Visually impaired, Hearing impaired and Speech impaired, those with retarded mobility or so-called "Medical Disabilities" and learning disabilities. They can broadly be classified as

- Physical and Communication Disabilities
- Mental, Psychological illness and Mental Retardation
- Learning Disabilities
- Multiple Disabilities
- Medical Disabilities (MD)

Parental Involvement of Intellectually Challenged

Special children have two main educators in their lives – their parents and their teachers. Parents are the prime educators until the child attends an early years setting or starts school and they remain a major influence on their children's learning throughout school and beyond. The school and parents both have crucial roles to play.

- As a Special child parent first, they should accept the child's limitations and the mental deficiency in the sense that the child cannot be given more intelligence and made normal.
- Secondly, they should be educated to behave normally with their mentally challenged child without being overprotecting or rejecting the child.
- Thirdly, the parents should be given training and education for handling the emotional and social adjustment problems of the rejected children. They should never compare their achievements and abilities with those of their normal siblings or other children in the home and neighborhood. It should be seen that the retarded child is not unnecessarily criticized by others.
- Fourthly, they should be educated to provide essential training at home to their mentally retarded.

Finally, the parents should be made to realize that if needed, there is no harm sending their children to special schools meant for the mental retardation or inclusive schools. It is the best place for their education and training.

Need and Significance of the Study

The need of this study is to find out the attitude of parents towards the attribute of Special Schools and to give suggestions for the betterment of special schools in various aspects such as infrastructure, barrier free environment and help to suggest ways to improve its structure and functioning. The investigator likes to develop the special children a safety environment and their learning with the fulfilment of their basic needs. Thus the Investigator is interested in researching the structure and functioning of special schools which is functioning throughout the state. It is a place

where multiple disabled children are also educated and it is necessary to examine the attitude of parents towards the attribute of Special Schools.

Objectives of this Study

1. To find out the attitude of parents towards the attribute of Special Schools.
2. To find out whether there is a significant difference between the attitudes of parents towards the attribute of Special Schools with respect to their community, religion, occupation, age group, size of the family, the birth order of the child.

Hypotheses of this Study

1. There is no significant difference between the attitudes of parents towards the attribute of Special Schools with respect to their community, religion, occupation, age group, size of the family, the birth order of the child.

Review of Related Literatures

Lata (1985), A study on "Impact of parental attitude on social, emotional and educational adjustment of normal and handicapped students."

The main aim of this study was to find out the Impact of parental attitude social, emotional and educational adjustment Normal and Handicapped student. The sample study were 150 (75 Normal and 75 handicapped) the dated were analyzed with the help of test and chi-square technique. The main findings of this study were Normal Students did not differ significantly from the handicapped in the field of social adjustment. Normal students differed significantly from the handicapped students in the field of educational adjustment. Parental attitude did not significantly affect the adjustment of handicapped girls but not affect the adjustment of handicapped boys.

Rangaswami(1995) A study on "Parental attitudes of mother towards retarded children with and without behaviour problems from both rural and urban areas in Madras, India"

The main purpose of this study was to examine parental attitudes of mothers towards retarded children with and without problems from both rural and urban areas in Madras India. There sample of this study was mothers of retarded children. The main findings of this study was that mothers' of retarded children with behavior problems have a problem in accepting their children, they are not hopeful about education, future of children, they are hopeful about education, future of children, home management and they also feel more hostile towards their children.

Method

Survey method had been used for this study.

Sampling Technique and Sample size

The study was conducted on a sample of 200 parents of special children studying different special schools in various parts of TamilNadu were selected randomly.

Tool

The Attitude scale for parents towards attribute of Special Schools is a four point scale. It is a self constructed and validated tool. The tool has been developed for the parents of Special children and it consists of 49 items.

Analysis and Interpretations

Hypotheses

There is no significant difference between the parents towards the attribute of special schools with respect to their community, religion, occupation, age group, size of the family, the birth order of the child.

F- test Table showing the significant difference between the attitudes of parents towards the attribute of special schools with respect to their community, religion, occupation, age group, size of the family, and the birth order of the child

S. No	Variable	Sources of variation	Sum of Squares	df	Mean Square	F	Sig
1	Community	Between groups within groups Total	1002.190 55877.630 56879.820	3 196 199	334.063 285.090	1.172	.322
2	Religion	Between groups within groups Total	701.707 56178.113 56879.820	2 197 199	350.854 285.168	1.230	.294
3	Fathers Occupation	Between groups within groups Total	4709.700 52170.120 56879.820	3 196 199	1569.900 266.174	5.900	.001*
4	Mothers Occupation	Between groups within groups Total	15124.993 41664.827 56879.820	3 196 199	5071.664 212.576	23.86	.000*
5	Age Group	Between groups within groups Total	3185.999 53693.821 56879.820	3 196 199	1062.00 273.948	3.870	.01
6	Size of the family	Between groups within groups Total	2605.967 54273.853 56879.820	5 194 199	521.193 279.762	1.863	.103
7	Birth order of the child	Between groups within groups Total	876.367 56003.453 56879.820	3 196 199	292.122 285.732	1.022	.384

Since F value is less than 0.05 for the variables mothers occupation and fathers occupation ,null hypothesis is rejected and there is a significant difference between the attitude of parents in their attitude towards the attribute of special schools with respect to their occupation and also F value is greater than 0.05 for the all the other variables, null hypothesis is accepted and there is no significant difference between the attitude of parents in their attitude towards the attribute of special schools with respect to their community, religion, age group, size of the family, and the birth order of the child.

Response of Parents against each item in Percentage

SA – Strongly Agree, A – Agree, D – Disagree, SD – Strongly Disagree

S.No	Main focus	SA%	A%	D%	SD%
Q1	Nature of disability	80	19	0.5	0.5
Q2	Severity of condition	58.5	32	7	2.5
Q3	Visit my child's school	70.5	25	3.5	1
Q4	Adequate teacher attention	75	22	3	0
Q5	Aware of IEP	66	28.5	4.5	1
Q6	Planning of IEP	66	31.5	2.5	0
Q7	Adequate training to handle CWMR	68	29.5	2.5	0
Q8	Infrastructure facilities	65.5	30.5	4	0
Q9	Educational needs	63	31.5	5.5	0
Q10	Vocational guidance	67.5	26.5	5	1
Q11	Progress	60	33.5	5.5	1
Q12	Curricular and Co - Curricular activities	70	25	5	0
Q13	Gets adequate support from the government	64	20.5	14	1.5
Q14	Teachers and parents have cordial relationship	64.5	28.5	5.5	1.5
Q15	Meet teachers frequently	62	25.5	9.5	3
Q16	Teachers Concern for students	61	31.5	7	0.5
Q17	Sports	61	29.5	6.5	3
Q18	Indoor and outdoor sports provisions	59	28	10.5	2.5
Q19	Sanitary facilities	63.5	27	7.5	2
Q20	Hall to accommodate all the students	56.5	30	6.5	7
Q21	Adequate training to CWMR	66	29.5	2.5	2
Q22	Management concerned the students	69.5	22.5	7.5	0.5
Q23	Computer training	60	27.5	10	2.5
Q24	Medical care	58.5	28	10	3.5
Q25	Home work	65.5	31.5	2	1
Q26	First aid facilities	70.5	22	5	2.5
Q27	Parents teachers meeting	65	28.5	5.5	1
Q28	Playground	60.5	34	4	1.5
Q29	Physical instructor	65	26.5	8.5	0
Q30	Co-curricular activities	67	21.5	10.5	1
Q31	Therapeutic services	73	22	4.5	0.5
Q32	Employment opportunities for students	67.5	26	4	2.5
Q33	Improvement the school	66.5	30	3.5	0
Q34	Vocational training	61	33	5.5	0.5
Q35	Job placement	64.5	28	6.5	1
Q36	Adequate number of classroom	64	28	6.5	1.5
Q37	Parent – teacher meeting	74	22	4	0
Q38	Educational tour	59.5	25.5	9.5	5.5
Q39	Adequate opportunity to participate	68.5	19.5	7	5

	competition				
Q40	Transport facility	64.5	24.5	6.5	4.5
Q41	Fees is nominal	65.5	29	5.5	0
Q42	Fee concession	66	24	10	0
Q43	Pure drinking water	71	24	4.5	0.5
Q44	Separate provision of toilets	66.5	28	5.5	0
Q45	Residential facilities	72	20	5.5	2.5
Q46	Library facilities	65.5	24	8.5	2
Q47	Ramp, Rail, Lift facilities	73	21	4	2
Q48	Barrier free environment	59	22.5	12.5	6
Q49	Canteen facilities	63.5	22.5	11.5	2.5

Out of the survey of 200 special students 45 students are studying in the school for 1 to 4 years, 67 are studying in the special school for 5 to 8 years and 88 students are studying in the school for more than 9 to 12 years. The age limit of the special children is from 5 to 19 years.

Discussion and conclusion

There is a significant difference between the attitude of parents in their attitude towards the attribute of special schools with respect to their occupation.

There is no significant difference between the attitude of parents in their attitude towards the attribute of special schools with respect to their community, religion, age group, size of the family, and the birth order of the child.

From the percentage analysis it is inferred that following discussions are found.

Most of the parents felt that the bus facility should be provided for the special children. Some parents suggest, having a good barrier free environment with adequate medical facilities. Also few parents are interested in having an awareness programs and vocational service programs for the children. Some parents felt that additional care should be given to the children .Few parents suggested to give speech therapy for all the students and also knowledge base learning should be provided. Some parents suggested having computer facilities for the students along with qualified teachers**.**

None of the parents were interested in changing the school, all the parents are happy with the present school in which the students are learning .All the special schools have a good relationship with the parents, it helps the parents to have a close association with the management and the teachers. It also helps the parents to know about the child performance easily.

Most of the Special child parents encourage their neighbor and friends who have a special child to get admitted in the school, for the betterment of their children.

Parents and teachers often view cognitive ability as a predictor of the general ability of the learner and tend to only focus on the Foundation Phase curriculum content in daily teaching. The intellectually challenged school needed Class Room Teaching, Physiotherapy, Speech Therapy, Dance, Drawing, Games, Sports, Vocational Training, Life Skills, Medical Checkup by doctors. The mentally handicapped children are given

such attention by the experienced staff in such activities as mentioned above, the self-confidence of the students will grow more and pave the way for the development of human resources aspect. The research findings have shown that depending on the individual, their punctuality, psychological stamina, adapted communication ability, their attitude towards others, using of materials and tools, quality of output and their consistency of performance vary between good and acceptable.

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THE EFFECTIVENESS OF SENSORY INTEGRATION STRATEGY TO OVERCOME BEHAVIOUR PROBLEMS AMONG STUDENTS WITH MILD INTELLECTUAL DISABILITY

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Introduction

Education is the most powerful instrument to tackle any problem that confronts mankind and achieve any goal that it sets before it. Every child is a unique personality and he/she has to be given the opportunity to develop his/her abilities, competencies and skills. This is applicable to both children with or without disabilities.

The United Nations Convention for Rights of Persons with Disabilities recognizes that persons with disabilities also have a right to education and lifelong learning. Providing primary education to intellectually disabled children is much significant. The children have to improve their skills of understanding themselves, establishing positive social relations, adjusting to the social, technological and physical environment, and surviving independently.

Sensory Integration strategy

Sensory motor processing involves the ability to take in information from the environment, organize it, make sense of it and it and formulate a response.

The following strategies are following the teaching for the children with Mental Retardation

- The **Visual system** helps the child determine what to pay attention to and what to ignore
- The **Auditory system** is affected by the volume, tone, pitch, rhythm and sequences of sounds in the child's environment.
- The **Gustatory system** is the child's sense of taste. A child with ASD can be hypersensitive to tastes and a dislike form many common and popular foods.
- The **Olfactory system** provides the child information regarding different types of smells that can have negative impact on the child's behavior.
- **Tactile system** provides information regarding pressure, vibration, movement, temperature and pain. It is made up of two components.Projective System: Alerts us to potentially harmful stimuli and response.

- Discriminative System: Tells us that we are touching something, something is touching us, where on the body the touch occurs, whether it is light or deep touch.
- **Vestibular System** tells us where our heads and bodies are in relation to the surface of the earth.
- It takes in information about balance and movement through the neck, eyes, and body.
- The vestibular system then sends this information to the brain, which help generate muscle tone to help us move. It tells us whether we are moving or standing still as well as the direction we are going and how fast.

Mild Mental Retardation Characteristics

Mental age range: 5-8 years old. IQ ranges: 50-70, affects 85 percent of population.
Language: functional with ability to effectively use a communication device.
Self-help: good. Social skills: capable of meaningful, yet immature relationships with peers and the opposite sex. Academic skills: can achieve up to sixth-grade level by late teens, although average achievement is at third-grade level. Vocational status: generally adequate for minimum self-support; some achieve semi- skilled or helper status; others are capable of unskilled employment on a competitive to marginally competitive basis. Adult status: most typically marry and become parents; can maintain an independent adjustment but may need assistance during periods of stress.

Need for the Study

All experts in the field of special education strongly recommend the education of the educable mentally retarded children in normal schools along with the education of normal children. They are of the view that these children can be educated in normal schools with the help of the well-equipped classrooms and teachers with special education. But in actual practice for certain practical reasons it is not possible to educate these children enrolled in normal schools. Number of mentally retarded children enrolled in normal schools for various classes are very few and in single digit in number. Teachers dealing with them may not be in a position to fulfill the fundamental needs of these children on the desired level. Curriculum and methods of teaching cannot be adapted to the mental development of the educable mentally retarded children without special training. As there is an urgent need to enhance the adaptive behaviours of these students and develop desirable behavior or characteristics of these students, the investigator has decided to focus his attention on selecting to finding the problem behaviours viz., BASIC _MR Part B focus on the problem of the behavior to faced the child with Mild Mental Retardation. The problem should be reduce to develop the good learner in the class room to adopt the Sensory Integration activities like 7 domain in the Sensory skills like Visual, Auditory, Smell, Oral, Physical, and Emotional social. Through SI activities increases the interest to learning. Once the levels of children learn the SI

skill they reduces the problem behaviours in the classroom after that the children learn independent in their skills. SI and Problem behavior are identified, adequate steps can be taken by parents, administrators and teachers to enhance adaptive behaviours through Sensory Integration activities. Under these circumstances, the effectiveness of sensory integration strategy to overcome behaviour problems among students with mild intellectual disability is planned.

Objectives

- To identify the behaviour problems exhibited by children with mild intellectual disability in the classroom.
- To develop sensory integration strategy to reduce the behavior problems of children with intellectual disability in the classroom
- To find out the effect of sensory integration strategy to reduce the behaviour problems of CWMR.
- To find out the relationship between academic performance of CWMR before and after implementation of sensory integration strategy.
- To study the level of Problem behaviours affecting the academic behaviours and social behaviours of the CWMMR with reference to their gender.
- To study the level of sensory integration strategies improve the academic behaviours and social behaviours of the CWMMR with reference to their class room.
- To study the level of SIS domain improve the academic behaviours and social behaviours of the CWMMR with reference to their classmate.
- To study the level of Difference between the PB(Problem Behaviour) their age group.
- To study the level of SIS through develop the adaptive behaviours of the CWMMR with reference to their parental acceptance.
- To study the level of SIS create self analysis their behavior problem for the CWMMR.

Hypotheses

There will be no significant effect in reducing problem behavior of CWMR before implementing sensory integration strategy.

There will be significant effect in reducing problem behavior of CWMR after implementing sensory integration strategy.

There will be significant effect in enhancing the academic performance of CWMR before and after implementing sensory integration strategy.

There will be correlation between the reduction of problem behavior and enhancement of academic performance through sensory activities before and after implementing sensory integration strategy.

Methodology

Experimental method will be adopted in the study. Pre test – Post test two group design will be adopted. An experimental involves the comparison of the effect of a particulars treatment with that of a different treatment or of no treatment. In a simple conventional experiment, reference is usually made to an experimental group and to a control group. These groups are equated as nearly as possible.

Research Design

Present study is a True experimental design and the study will be conducted on groups of children with mild intellectual disability. R O X O (Pre test – Post test two Group Design).

Selection of the Sample

This study will engage 'non-probability' sampling design and purposive sampling will be adopted to select the sample for the research study.

Population and Sample

Population of the present study comprises Educable Mentally Retarded children doing special education age 10 to 15 years in Our Model Special School, like CSI special School, Madurai. Bethshan Special School, Madurai and YMCA special School. Madurai.

A total of 30 mild intellectually disabled children will be chosen for the study.

A Skill Diagnostic test pre-pretest will be conducted in the group of the students.

Pilot study- Pre-test

Sample Result: 10 items in the problem behaviour to find the children based on the BASIC MR tool after that select the problem to be modified through Sensory Integration teaching strategy. Like Violent behaviour used visual and auditory strategy to accommodate the activities.

Items	Overall 15	Sex		Age		Education	
		Male	Female	10-12	12-15	Secondary	Pre-Vocational
Violent and destructive behavior	29.56	32.55	20.68	32.5	24.39	25	35.48
Temper tantrum	9.56	10.46	6.89	12.5	4.87	18.75	6.45
Misbehavior with others,	20.86	26.74	6.89	35	14.63	25	19.35
Self- injurious behavior	9.56	6.97	17.24	12.5	12.19	6.25	16.12
Repetitive behaviors	12.17	12.79	10.34	7.5	14.63	31.25	19.37
Odd behaviors	22.86	19.76	31.03	17.5	19.52	18.75	22.58
Hyperactive behaviors,	64.34	67.44	55.17	70	56.09	62.5	54.83

Rebellious behaviors	22.86	11.62	10.34	17.5	31.70	25	32.25
Antisocial behaviors	14.78	18.64	3.44	7.5	17.07	18.75	19.35
Fears	3.47	2.32	6.89	-----	4.87	6.25	-----

The results of the study are analyzed and discussed under following heading:

A).Distribution of Behavior problem in children with mental retardation:

- The analysis of results on distribution of behavior problem in children with mental retardation indicate that, 27% of children showed violent and destructive behavior, 10% of children showed temper tantrums, 21% of children showed misbehavior with others, 9% of children showed self injurious behavior, 12 % of children showed repetitive behavior, 23% of children showed rebellious behavior, 15% of children showed antisocial behavior and 3% of children showed fears.
- In relation to gender variable, result indicate that, male children with mental retardation showed 32.55% violent and destructive behavior, 10.46% showed temper tantrums, 26.74% showed misbehavior with others, 6.97% showed self injurious behavior, 12.79% showed repetitive behavior, 19.76%, showed odd behavior, 64.44% showed hyperactive behavior, 11.62% showed rebellious behavior, 18.64% showed antisocial behavior and 2.32% showed fears. Among female children with mental retardation 20.68% showed violent and destructive behavior, 6.89% showed temper tantrums, 6.89% showed misbehavior with others, 17.24% showed self injurious behavior, 10.34% showed repetitive behavior, 31.03% showed odd behavior 55.17% showed hyperactive behavior, 11.62% showed rebellious behavior, 3.44% showed antisocial behavior and 6.89% showed fears.
- In relation to age group variable In children 10-12 years old result shows that, 32.5% children showed violent and destructive behavior, 12.5% showed temper tantrums, 35% showed misbehavior with others, 12.5% showed self injurious behavior, 7.5% showed repetitive behavior, 17.5% showed odd behavior, 70% showed hyperactive behavior, 17.5% showed anti social behavior and none of the subject showed fear.
- In 13-15 years old children result indicate that, 24.39% children showed violent and destructive behavior, 4.87% showed temper tantrums, 14.63% showed misbehavior with others, 12.19% showed self injurious behavior, 14.63% showed repetitive behavior, 19.51% showed odd behavior, 56.09% showed hyperactive behavior, 31.70% showed rebellious behavior, 17.07% showed antisocial behavior and 4.87% showed fears.

Delimitation & Conclusion

- The present study is restricted to the Mild mentally retarded students of selected schools in Madurai districts of Tamilnadu.
- The Mild mentally retarded students enrolled in age of 10 to 15 years covered in the present study.
- Sensory Integration teaching strategy adopted for the class room and home environment.
- To reduce to undesirable behavior based on the assessment tools not in the social level.
- The sensory integration strategy is more used to mild and moderate mental retardation children.

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ASSISTIVE TECHNOLOGY FOR CHILDREN WITH LEARNING DISABILITIES

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Abstract

This article is discusses about assistive technology for kids with learning disabilities. Assistive technology (AT) is available to help individuals with many types of disabilities from cognitive problems to physical impairment. This article will focus specifically on AT for individuals with learning disabilities (LD).The use of technology to enhance learning is an effective approach for many children. Additionally, students with LD often experience greater success when they are allowed to use their abilities (strengths) to work around their disabilities (challenges). AT tools combine the best of both of these practices. This article will introduce parents to the role of AT in helping their children with LD. The better informed about AT, the greater the chances child will experience success in school, in recreation and, eventually, at work. Parents will also want to learn how to choose AT tools that are reliable and to select technology that is tailored children individual needs, abilities and experiences.

Key words: *Assistive technology, learning disabilities, Assistive Technology Tools.*

Introduction

Assistive technology is any device that helps a person with a disability completes an everyday task. If you break your leg, a remote control for the TV can be assistive technology. If someone has poor eyesight, a pair of glasses or a magnifier is assistive technology. Assistive technology includes many specialized devices as well, like typing telephones for people who are deaf and motorized wheelchairs for people who cannot walk. Assistive technology can be "low-tech" (something very simple and low-cost, like a pencil grip), or "high-tech" (something sophisticated, like a computer). Assistive technology can be critical for the person using it – if you wear glasses, think how hard it would be to get through the day without them. Assistive technology (AT) is available to help individuals with many types of disabilities from cognitive problems to physical impairment. This article will focus specifically on AT for individuals with learning disabilities (LD).The use of technology to enhance learning is an effective approach for many children. Additionally, students with LD often experience greater success when they are allowed to use their abilities (strengths) to work around their disabilities (challenges). AT tools combine the best of both of these practices. This article will introduce parents to the role of AT in helping their children with LD.

What Is Assistive Technology?

Assistive technology can be defined as any item, piece of equipment or system that helps people bypass, work around or compensate for learning difficulties. Assistive technology is an umbrella term, which can be divided into two main groups: hardware and software. Hardware refers to actual equipment. For example, tape recorders and

calculators are two common types of hardware. On a computer, the hardware includes the central processing unit (the computer's "box"), the monitor (the screen) and the internal circuit boards. Software, on the other hand, refers to the programs that run on computers, telling the computers what to do. The purpose of assistive technology is to work around specific deficits, rather than fixing them. It helps people with learning differences reach their full potential and live satisfying, rewarding lives. Assistive technology, however, should be a part of an overall program to help individuals with learning differences. Examples of assistive technology include "hi-tech" items, such as reading machines that read books out loud through a computerized voice to help persons with reading difficulties.

Why Use Assistive Technology?

Learning disabilities are professionally diagnosed learning difficulties- with reading, writing, speaking, listening, spelling, reasoning or math-that are the result of a presumed central nervous system dysfunction. Learning disabilities are neither cured nor outgrown. Children with learning differences grow up to be adults with learning differences. However, with hard work and helpful tools, children with learning differences can greatly improve their success in these areas. Assistive technology is one such tool. Although we tend to think of learning differences in terms of the school setting, individuals with learning differences must also function at home, in the workplace, at social gatherings and in recreational activities. Easily portable tools—many of which are pocket-sized—allow individuals to bring a bypass strategy into many different settings. Now a person with a learning difference can write a letter to a friend at home on a word processor. He can check for spelling errors at the library with an electronic spellchecker, or keep score in a card game at a friend's house with a calculator. Assistive technology provides support to "get the job done."Finally, assistive technology helps increase the independence of persons with learning differences. Many times, these individuals rely on parents, siblings, friends and teachers for help. Yet over-reliance on others may slow the transition into adulthood. It may also lower self-esteem, as it requires persons with learning differences to depend on others, rather than themselves, to solve a problem. Assistive technology provides a means for people with learning differences to accomplish specific tasks on their own.

What Types of learning problems does assistive technology address?

AT can address many types of learning difficulties. A student who has difficulty writing can compose a school report by dictating it and having it converted to text by special software. A child who struggles with math can use a hand-held calculator to keep score while playing a game with a friend. And a teenager with dyslexia may benefit from AT that will read aloud his employer's online training manual. There are AT tools to help students who struggle with:

- *Listening:* Certain assistive technology (AT) tools can help people who have difficulty processing and remembering spoken language. Such devices can be used in various settings (e.g., a class lecture, or a meeting with multiple speakers).
- *Math:* Assistive technology (AT) tools for math are designed to help people who struggle with computing, organizing, aligning, and copying math problems down on paper. With the help of visual and/or audio support, users can better set up and calculate basic math problems.
- *Organization and memory:* Assistive technology (AT) tools can help a person plan, organize, and keep track of his calendar, schedule, task list, contact information, and miscellaneous notes. These tools allow him to manage, store, and retrieve such information with the help of special software and hand-held devices.
- *Reading:* There is a wide range of assistive technology (AT) tools available to help individuals who struggle with reading. While each type of tool works a little differently, all of these tools help by presenting text as speech. These tools help facilitate decoding, reading fluency, and comprehension.
- *Writing :* There is a wide range of assistive technology (AT) tools available to help students who struggle with writing. Some of these tools help students circumvent the actual physical task of writing, while others facilitate proper spelling, punctuation, grammar, word usage, and organization.

Kinds of Assistive Technology Tools

The term "assistive technology" has usually been applied to computer hardware and software and electronic devices. However, many AT tools are now available on the Internet. AT tools that support kids with LD include:

- *Abbreviation expanders:* Used with word processing, these software programs allow a user to create, store, and re-use abbreviations for frequently-used words or phrases. This can save the user keystrokes and ensure proper spelling of words and phrases he has coded as abbreviations.
- *Alternative keyboard:* These programmable keyboards have special overlays that customize the appearance and function of a standard keyboard. Students who have LD or have trouble typing may benefit from customization that reduces input choices, groups keys by color/location, and adds graphics to aid comprehension.
- *Audio books publication:* Recorded books allow users to listen to text and are available in a variety of formats, such as audiocassettes, CDs, and MP3 downloads. Special playback units allow users to and search and bookmark pages and chapters. Subscription services offer extensive electronic library collections.

- *Electronic Math Work sheets:* Electronic math worksheets are software programs that can help a user organize, align, and work through math problems on a computer screen. Numbers that appear onscreen can also be read aloud via a speech synthesizer. This may be helpful to people who have trouble aligning math problems with pencil and paper.
- *Freeform database software:* Used in conjunction with word processing or other software, this tool allows the user to create and store electronic notes by "jotting down" relevant information of any length and on any subject. He can later retrieve the information by typing any fragment of the original note.
- *Graphic organizers and outlining:* Graphic organizers and outlining programs help users who have trouble organizing and outlining information as they begin a writing project. This type of program lets a user "dump" information in an unstructured manner and later helps him organize the information into appropriate categories and order.
- *Information/data managers:* This type of tool helps a person plan, organize, store, and retrieve his calendar, task list, contact data, and other information in electronic form. Personal data managers may be portable, hand-held devices, computer software, or a combination of those tools working together by "sharing" data.
- *Optical Character Recognition:* This technology allows a user to scan printed material into a computer or handheld unit. The scanned text is then read aloud via a speech synthesis/screen reading system. Optical Character Recognition (OCR) is available as stand-alone units, computer software, and as portable, pocket-sized devices.
- *Personal FM listening system:* A personal FM listening system transmits a speaker's voice directly to the user's ear. This may help the listener focus on what the speaker is saying. The unit consists of a wireless transmitter (with microphone) worn by the speaker and a receiver (with earphone) worn by the listener.
- *Portable word processor:* A portable word processor is lightweight device that is easy to transport (e.g., from classroom to home). It can be helpful to kids who may have trouble writing by hand and prefer to use a keyboard. Word processing allows the user to edit and correct his written work more efficiently than doing so by hand.*Proofreading programmes:* Students who struggle with writing (e.g., spelling, grammar, punctuation, word usage, and sentence structure) may benefit from software programmes (included in many word processing systems) that scan word processing documents and alert the user to possible errors.

- *Speech recognition program:* A speech recognition program works in conjunction with a word processor. The user "dictates" into a microphone, and his spoken words appear on the computer screen as text. This can help a user whose oral language ability is better than his writing skills.
- *Speech synthesizers/ screen readers :* These systems can display and read aloud text on a computer screen, including text that has been typed by the user, scanned in from printed pages (e.g., books, letters), or text appearing on the Internet.
- *Talking calculators:* A talking calculator has a built-in speech synthesizer that reads aloud each number, symbol, or operation key a user presses; it also vocalizes the answer to the problem. This auditory feedback may help him check the accuracy of the keys he presses and verify the answer before he transfers it to paper.
- *Talking spell checkers and electronic dictionaries:* Talking spell checkers and electronic dictionaries can help a poor speller select or identify appropriate words and correct spelling errors during the process of writing and proofreading. Talking devices "read aloud" and display the selected words onscreen, so the user can see and hear the words.
- *Variable speed tape records:* Tape recorders/players allow a user to listen to pre-recorded text or to capture spoken information (e.g., a classroom lecture) and play it back later. Variable speed control (VSC) tape recorders speed up or slow down the playback rate without distorting the "speaker's" voice.
- *Word prediction programmes :* Word prediction software can help a user during word processing by "predicting" a word the user intends to type. Predictions are based on spelling, syntax, and frequent/recent use. This prompts kids who struggle with writing to use proper spelling, grammar, and word choices, with fewer keystrokes

Conclusion

We are fortunate to live in an age with so many useful tools available to help persons with learning differences. But choosing the “best” technology for a child requires some time and patience. As you will recall, the right product depends upon the individual child, the setting in which it will be used and the task(s) to be accomplished. Assistive technology cannot fix or eliminate learning difficulties. However, by learning to capitalize on their strengths and bypass heir weaknesses, individuals with learning differences can lead satisfying, successful lives.

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"TEACHING STRATEGIES FOR CHILDREN WITH SPECIAL NEEDS"

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Abstract

Teaching-learning for disabled is a comprehensive task among inclusive education teachers. It requires specialized instructional strategies in a structured environment that supports and enhances their learning potential. It is important to remember that disabled students are not students who are incapacitated or unable to learn; rather, they need differentiated instruction tailored to their distinctive learning abilities. By Using curriculum adaptations and appropriate learning strategies and methods will be beneficial for educational rehabilitation of children with special needs.

Introduction

Inclusive education classes provide a unique service to physically or mentally challenged students. The ideal special education classroom provides quality instruction to students with disabilities. While the push in education these days seems to be toward online education and the inclusion of special education students within mainstream classrooms, Inclusive education classes are still needed for more severely disabled students. The purpose of the Inclusive education classroom setting is to provide more intensive, individualized attention to the students who most need it.

A good method of teaching is based on multi-sensory approaches, whether teaching disabled children or non-disabled children. While teaching, the teacher should bear in mind that children with disabilities have reduction in the range and variety of some learning experience due to their disabilities. However, they should also have the conviction that such reduced experiences can be compensated through effective methods of teaching.

Curricular Adaptations

Some of the major issues that general education teachers may have with creating instructional accommodations and adaptations in the classroom may include the need for a starting point with examples of how to modify lesson plans for students with special needs in addition to looking at what different types of adaptations there are. Even though most pre-service teachers are taught to create lesson plans for the general education setting, it is also necessary for these teachers to be aware of how to modify lesson plans for students with individual needs. All children do not learn the same way, therefore general education teachers need to be aware of methods they can use to alter lesson plans to benefit students with special needs. Being aware of different types of accommodations and adaptations is another important part of being a general education teacher, as these specific areas of adaptations will help teachers focus on what exactly they can change in their lesson plans to meet the specific needs of learners. Adaptations in terms of methods of preparation,

display, content, etc., may be necessary to enhance the learning experiences of these children. This approach not only helps children with disabilities, but also helps the teacher to assist children who have learning problems.

Teaching Methods

Children with disabilities do not require a separate method of study effectively irrespective of their disability. Therefore, the inclusive education setting emphasizes on curricular adaptations rather than prescribing a new curriculum.

Some methods of teaching useful for children with disabilities are listed follows:

1. **Begin a lesson by reviewing the last lesson:** The best teachers make sure students really understand the skills they need for the day's lesson. That's because the new lesson builds on the lesson of the day before. A study found that when teachers spent eight minutes every day going over homework and common mistakes, and practicing skills their students needed to memorize, students got higher test scores.
2. **Multisensory Activities:** Learning well involves all our senses. We need to see, hear, and touch to truly absorb and master new skills.
    - Visual learners like to see what they are learning.
    - Auditory learners prefer to hear oral instructions and then discuss what they have learned to solidify the material.
    - Hands-on learners absorb knowledge best when they can touch and manipulate objects.
3. **Play-way method of teaching:** In this method the child is kept in the classroom as a learner. The child is introduces the lesson through a number of play activities and in the process of such play, the teacher introduce specific concepts. Children who are learning through play-way method experience a sense of discovery.
4. **Providing concrete experience:** Children learn in the developmental stages. Firstly, they need concrete experiences involving three dimensional objects etc. Secondly they can learn through pictorial ideas, and thirdly they develop abstraction. As far as children with disabilities concerned, providing concrete learning experiences becomes pertinent.
5. **Facilitating learning by involving children with disabilities in groups:** Cooperative learning approach is considered to be an effective teaching-learning process in the classroom especially when the class has children of different abilities.
6. **Teacher assisted peer-group learning:** Peer group learning is considered to contribute to effective learning on the case of non-disabled children and it is not less so in the case of the disabled children. For adapting peer-group learning, a lot of preparation on the part of the teacher is needed. Activities for peer group learning, strategies for intervention, etc., are to be thoroughly planned by the teacher.
7. **Modifying method of teaching to suit the individual learning styles of disabled children:** The teacher should ascertain whether the child is a visual learner or an

auditory learner or a tactile learner for designing proper instructional strategies. Through classification of this kind is imperative in the general classroom too, its application with children with disabilities is of paramount importance because these children exhibit different skills at different levels.

8. **Criterion based teaching as well as evaluation techniques:** Usually evaluation in regular classroom is norm based. The teacher makes an evaluation of the child on the basis of quantitative scores. However, this type of evaluation may not be proper for all activities in the case of children with disabilities. Since disable children have to learn curricular as well as plus curricular activities, mastery of the child over certain skills are more important than comparing the child with another child. Therefore, criterion based evaluation is appropriate, which will help to see position of the child at various points of time. In criterion based evaluation, there is no pressure of comparative permanence and therefore, the child can learn in a natural way.
9. **Learning through field-trips and hands on experience:** Since children with disability experience reduction in the range and variety of experiences in many aspects, they have to be compensated by alternative modes of information. Field trips are such alternative experiences. Which contribute to the p[roper concept development of these children.
10. **Use of supplementary teaching aids and appliances for developing appropriate concepts:** It is essential to use additional teaching aids which may provide the needed concept development in the child. The supplementary teaching aids should not be considered as additional burden. In fact these are to be treated as essential for providing the substituted learning experiences to children with disabilities.
11. **Individualized education programs:** For specific categories, such as mentally retarded children, his/her needs and abilities must be assessed and appropriate instructional strategies must be designed and addressed based on his/her strengths and needs. It includes medical and psycho-educational interventions.

General strategies for Teaching

- Highlight major concepts and terminology both orally and visually. Be alert for opportunities to provide information in more than one sensory mode.
- Emphasize main ideas and key concepts during lecture and highlight them on the blackboard or overhead.
- Speak directly to students; use gestures and natural expressions to convey further meaning.
- Diminish or eliminate auditory and visual distractions.
- Present new or technical vocabulary on the blackboard or overhead, or use a handout.

- Use visual aids such as diagrams, charts, and graphs; use color to enhance the message.
- Give assignments both orally and in written form; be available for clarification.
- Provide adequate opportunities for participation, questions and/or discussion.
- Provide timelines for long-range assignments.
- Provide study questions and review sessions to aid in mastering material and preparing for exams.
- Give sample test questions; explain what constitutes a good answer and why.

Conclusion

All students bring a unique set of strengths and experiences to the lecture room and students with disabilities are no exception. The key to teaching a single curriculum to a diverse group of students who learn differently is to be flexible with the delivery of information and to provide the same content in different formats. Teaching and training for children with disabilities is not an easy task. It requires various methods. The inclusive education teacher uses various strategies and techniques for the education & rehabilitation of children with disabilities.

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TEACHER DEVELOPMENT AND EVALUATION FOR SPECIAL EDUCATION TEACHERS

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Abstract

Considerations for Meaningful, Accurate and Transparent Evaluations Minnesota districts must craft, through joint agreement with the exclusive representative of teachers, a model for teacher development and evaluation that complies with Minnesota teacher development as well as fair, transparent, and accurate evaluation results. Minnesota teachers represent a diverse body of teaching positions—from classroom, grade level, and subject area teachers to specialist positions like nurses, counsellors, and school psychologists. While all teachers can and should participate in a common development and evaluation process, some differentiation in implementation must occur in order to provide meaningful growth experiences and accurate, transparent and fair evaluations. See appendix a of "Teacher" in statute.

Introduction

The requirements in the evaluation statute offer unique design and implementation challenges for special education teachers. Even the term "special education teacher" represents a diverse spectrum of instructional responsibilities and practices, which is a main driver for specified licensure areas based on disability expertise and professional responsibilities. For example, while some special education teachers work directly with students in a classroom environment, other special education teachers may not directly interact with children or may coordinate support systems for students with minimal student interaction.

Educators raise these questions and more regarding the evaluation statute, and they are seeking meaningful solutions. One potential solution is the teacher development and evaluation state example model that is currently being piloted. Local districts and teacher unions may develop models that offer solutions for all teachers as well. A group of special education teachers and leaders has met over the past year to examine the evaluation statute and the state example model in order to identify options, strategies and recommendations for districts and teachers to consider in their local models. This letter and the associated documents are a product of their experience, passion, and productive dialogue. As our work evolved, the group quickly realized that the same implementation recommendations would apply for other specialized, licensed teachers, including TOSAs, speech/language anthologists, school counsellors, nurses, school psychologists, media specialists, and gifted and talented staff. Therefore, we strongly recommend that teachers and organizations representing other specialized teachers consider these recommendations for their context as well. Though Minnesota Department of Education (MDE) staff facilitated this process, this document is not

meant to represent the position of the department or the commissioner. Other, this is the product of the thoughtful and committed special educators listed below. Finally, this team was guided by and found great value in two published resources, and they highly recommend that educators read both and consider the insights from both as they engage in the work.

- Visit the Council for Exceptional Children Position on Special Education Teacher Evaluation.
- Visit the Centre for Great Teachers and Leaders website for Inclusive Design: Building

Evaluation Systems That Support Students with Disabilities
The following educators contributed to this work

- West Central Service Cooperative
- Freshwater Education District
- Minneapolis Public Schools
- Minnesota Administrators for Special Education representative
- Regional Low Incidence Facilitator, Region
- Goodhue County Education District
- Education Minnesota Special Education Committee
- Monticello Public Schools
- Supervisor, Special Education
- Director, School Support Division
- Specialist, Educator Evaluation

District and union design and implementation teams should consider the following recommendations about teacher development and evaluation specific to special education teachers. It is further recommended that other specialized teachers and professional organizations consider these as shared beliefs.

1. Local districts and unions should design one evaluation system that promotes effective teaching and learning, encourages collaboration, incorporates student outcomes, and exhibits appropriate differentiation to include and address each educator's individual role.
2. Special education teachers must be involved in the development, implementation and continual assessment of the teacher evaluation process.
3. Summative evaluators should develop an understanding of various roles, consult with special education teachers, and access resources in order to meaningfully develop and evaluate those teachers.
4. Special education teachers should participate in and would benefit from peer collaborations including peers with other instructional roles.
5. Learner outcomes can be defined and measured for all educators. For teachers who do not directly interact with Birth to 21 children/students, teachers and

summative evaluators should discuss and confirm options for defining "student" and the role of student outcome data in the summative evaluation.

6. Evaluation systems should include multiple measures of student growth that measure teacher contributions to growth in academic, developmental, behavioural, or functional domains, depending on the role of special educators and student needs.
7. Evaluations should not use a student's progress on their goals, objectives, and benchmarks in the IEP as a measure of a special education teacher's contribution to student growth.
8. All teachers, including special educators, impact student engagement, even when that engagement may look or sound different because special education students' needs are different. Therefore, teachers and summative evaluators should discuss and confirm which measures of student engagement are most meaningful and relevant.

Creating Flexible Models for Special Education Teacher Development and Evaluation

Rationale for Recommendations for Design and Implementation Purpose and Context. The purpose of this document is to summarize and highlight the key recommendations that came from the work of Minnesota special educators in the area of teacher development and evaluation. These recommendations may also apply to other educators that have unique teaching assignments. Some items include links to other documents and resource supports for district consideration. Local Minnesota school boards and exclusive representatives of teachers are reminded that their joint agreement must comply with Minnesota statute, and those locally agreed-to definitions and practices imply that both parties interpret the evaluation statute in the same way. The recommendations listed in this document and in other referenced materials may or may not align with your joint interpretation of statute or with requirements in the evaluation statute.

1. When the evaluation statute refers to "the annual evaluation process for teachers," local districts and unions should design one evaluation system that promotes effective teaching and learning, encourages collaboration, incorporates student outcomes, and exhibits appropriate differentiation to include and address each educator's individual role.
    - Some special educators--particularly those who have classroom instruction and/or support classroom instruction as a significant portion of their job--require differentiation comparable to that of teachers of different subject areas and grade levels.
    - Some special educators--particularly those who consult or work primarily with adults (such as other teachers or the student's family) or who do not spend a significant portion of their day providing classroom instruction--

require greater differentiation in order to accurately evaluate their work according to their job descriptions.

- For more information on individual roles and performance standards, see our recommendations for professional teaching standards and example differentiated rubrics in the appendix.

2. When the evaluation statute refers to "joint agreement" between the school board and the exclusive representative of teachers, special education teachers must be involved in the development, implementation, and continual assessment of the teacher evaluation process.
    - While early models and stages of implementation may not reflect the differentiation necessary to meet the needs unique teaching positions (see recommendation above), districts must move in that direction.
    - Special educators can be meaningfully involved in designing systems as well as modifying systems to meet their context. Special educators will be more meaningfully engaged when involved in early and ongoing conversations.
    - One example of how to differentiate activities for special educators and for evaluators is described in The Centre for Great Teachers and Leaders resource. A variation of this example is also recommended here.
3. When Teacher Development and Evaluation for Special Education Teachers Considerations for Meaningful, Accurate and Transparent Evaluations Minnesota districts must craft, through joint agreement with the exclusive representative of teachers, a model for teacher development and evaluation that complies with Minnesota Statutes, and local unions are striving to create systems that provide meaningful feedback for teacher development as well as fair, transparent, and accurate evaluation results. Minnesota teachers represent a diverse body of teaching positions—from classroom, grade level, and subject area teachers to specialist positions like nurses, counsellors, and school psychologists. While all teachers can and should participate in a common development and evaluation process, some differentiation in implementation must occur in order to provide meaningful growth experiences and accurate, transparent and fair evaluations. See appendix a of "Teacher" in statute. The requirements in the evaluation statute offer unique design and implementation challenges for special education teachers. Even the term "special education teacher" represents a diverse spectrum of instructional responsibilities and practices, which is a main driver for specified licensure areas based on disability expertise and professional responsibilities. For example, while some special education teachers work directly with students in a classroom environment, other special education teachers may not directly interact with children or may coordinate support systems for students with minimal student interaction. The diversity of special

educators' roles leads to several questions about model design and implementation, including the following:

Educators raise these questions and more regarding the evaluation statute, and they are seeking meaningful solutions. One potential solution is the teacher development and evaluation state example model that is currently being piloted. Local districts and teacher unions may develop models that offer solutions for all teachers as well.

As our work evolved, the group quickly realized that the same implementation recommendations would apply for other specialized, licensed teachers, including TOSAs, speech/language pathologists, school counsellors, nurses, school psychologists, media specialists, and gifted and talented staff. Therefore, we strongly recommend that teachers and organizations representing other specialized teachers consider these recommendations for their context as well. Though Minnesota Department of Education staff facilitated this process, this document is not meant to represent the position of the department or the commissioner. Rather, this is the product of the thoughtful and committed special educators listed below. Finally, this team was guided by and found great value in two published resources, and they highly recommend that educators read both and consider the insights from both as they engage in the work.

4. When the evaluation statute refers to "a qualified and trained summative evaluator such as a school administrator," summative evaluators should develop an understanding of various roles, consult with special education teachers, and access resources in order to meaningfully develop and evaluate those teachers.
    - School leaders must engage in meaningful and ongoing professional development in order to increase their expertise and experience across all content areas, grade levels, and specialty positions.
    - Evaluations should, when possible, be conducted by evaluators with expertise related to evidence-based service delivery models and individualized teaching practices and interventions in special education. To support useful and meaningful feedback in the evaluation, evaluators should understand how, when, and why these practices are implemented and the specific roles and responsibilities of special education teachers.
    - Evaluations should, when possible, be conducted by evaluators who have regular contact with the teacher being evaluated. A teacher may also have multiple individuals serving as summative evaluators.

Conclusion

Clearly identify special education teachers' specific roles and responsibilities. Based on these roles and responsibilities as well as the performance standards for all teachers, articulate clear performance expectations that are mutually agreed upon by individual special education teachers and evaluators. The use of focused instructional frameworks for specialized teachers can be instrumental for individual teachers and

evaluators to review student needs and the selection of instructional practices. These conversations and this activity allows special education teachers—particularly those in highly specialized areas—the opportunity to provide the rationale and evidence for instructional choices and possible deviation from performance standards and rubrics in particular This practice also creates structures within pre-observation planning conferences that facilitate teachers providing rationale and supporting evidence for instructional strategies chosen based on content and student needs.

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"TEACHING AND TRAINING TO PWDS"

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Abstract

This handbook is designed as a guide for setting up a small-scale business. Although meant for persons with disabilities, it offers basic knowledge for successful business management and self-employment for all small farmers to help them in generating income and improving their quality of life. The handbook is divided into four parts.

*The **first part** outlines the structure of the handbook. It explains the need for economic self-reliance for rural people with disabilities and how self-employment as a small-scale entrepreneur offers them a good alternative to being hired by another person. It evaluates the difficulties and advantages of this form of self-employment for a disabled person when compared to working for an employer.*

*The **second part** deals with the crucial aspect of the methodology used in training persons with disabilities. It outlines the importance of the attitude and orientation of the trainers as well as the steps in the process of training, from selecting, motivating and building the self-confidence of the trainees, to equipping them with the skills for starting and operating a small-scale rural enterprise. Disabilities differ in kind and degree and two persons with the same disability may have dissimilar abilities. This section stipulates ways of dealing with specific issues that can arise when training persons with disabilities and the need for follow-up action.*

*The **third part** reviews basic steps in the preparation and setting up of a micro-enterprise. It looks at the various challenges encountered by new micro-entrepreneurs and those that are specific to persons with disabilities starting a small-scale enterprise. It informs potential micro-entrepreneurs about selecting the right business, reviewing market demand and competition, choosing the size of their planned enterprise and the importance of location. It gives some direction on where to seek funding, resource organizations, where and how to select raw materials, and offers a checklist to verify feasibility.*

Furthermore, it reviews the various components of marketing and guides potential micro-entrepreneurs through the various steps involved in running the business, including basic accounting, cash-flow and strategic timing for expanding the enterprise. Finally, it addresses the advantages of training and explains how the success case replication methodology can and has been used as a tool for training persons with disabilities. Overall, it reviews the major steps in decision making and the need for technical know-how, marketing strategy development, access to credit and funding, accounting and management skills, and informed selection of raw materials.

This part does not claim to answer all questions related to micro-enterprise development for persons with disabilities in rural areas. However, the suggestions and ideas presented should help in avoiding problems that are commonly encountered.

*The **fourth part** on the success case replication methodology uses examples of successful micro-entrepreneurs as models and trainers for people who wish to start their own micro-enterprise. It examines the methodology, which has been tested in Asian countries, and the strengths and weaknesses of each of its nine steps. It also examines how the methodology can be used to train persons with disabilities in rural areas and explains the role of the field worker or organizer.*

Introduction

Although many programmes are available for the rural poor, more needs to be done to help the poorest of the poor - rural people with physical or/and mental disabilities. Many rural persons with disabilities are forced to go to the city for rehabilitation or livelihood training. More rehabilitation programmes for the disabled are needed in the rural areas. Poor farmers with disabilities, with or without land, need to generate income or supplementary income to become active participants in their family and community, thus reducing the burden of their disability on both family and society. More opportunities must be provided to enable disabled persons in rural areas to generate income and become self-reliant.

This guide is designed for government and non-governmental organizations working for the social integration, rehabilitation, training and empowerment of persons with disabilities in rural areas. Its main objective is to give direction on how to prepare persons with disabilities to become active members of society and generate income through micro-enterprise development.

Definitions

The socio-economic inclusion of persons with disabilities is the process undertaken by disabled persons in order to access vocational training and/or a decent income generating job, ensure livelihoods and meet the basic needs that are essential to their full individual and social development.

Situation of persons with disabilities

One of the most striking consequences of the civil war in Angola is the high number of persons with disabilities (PWDs). It is estimated that they represent 10 to 12% of the total population. And that 80% of PWDs live under the poverty threshold. The proportion is most probably higher in Angola, given the length and intensity of the conflict and the fact that the main causes of disability in the country are directly related to war. However, road accidents as well as after-effects of untreated diseases are becoming major causes of disability today.

Training Persons with disabilities

Before entering into a new venture, even if it is to be a small-scale enterprise, a person needs to have sufficient knowledge of the work involved in order to make the business successful. In several cases, training is needed in order to learn more about the technical aspects and procedures that will ensure success. This training is often not readily available to persons with disabilities. Several vocational training centers will not accept a person with a disability because they assume that such a person will "slow down" the learning process of other participants. Financing the necessary training is therefore another issue that cannot be ignored. How much does it cost? Who will finance it?

Governments and non-governmental organizations around the world are developing special programmes for persons with disabilities. Because such persons did not always have the opportunity to go to school, or could study for only a few years, many disabled persons can barely read or write, or are totally illiterate. Training programmes must be especially developed to take this into account and use hands-on training techniques to teach new skills to persons with disabilities.

Creating the opportunity for disabled persons to become self-reliant

The main objective is to enable rural persons with disabilities to become economically self-reliant through income generation as small-scale entrepreneurs. The trainer must keep this in mind at all times during the training. All trainees participate in the training by choice and because they believe that the training course will give them the tools necessary for improving their livelihood. It is the responsibility of the trainer to convince trainees that they **can do** anything and everything they set their minds to.

Considerations for training of rural disabled persons

Training must take into consideration the activities of trainees within their community. it is very difficult to organize training during these periods. Trainees may also have received different levels of education and, therefore, they must be encouraged to work as a team, helping one another. Both trainees and trainers must learn to work together towards a common goal, which is to succeed in starting a small-scale enterprise. If the trainees help each other, they can all learn from one another and will feel happier during the training.

Trainees must be well prepared for training in farming and rural activities. They must understand that it is not possible to close the enterprise during the weekend. Rural poor people often work seven days a week since some activities cannot be stopped. For example, animals need to be fed and crops need to be watered every day of the week. Trainers must arrange their schedule according to rural daily realities.

Act of Disability persons: (Preliminary Act)

1. This Act may be called the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995.
2. The appropriate Governments and the local authorities shall- **EDUCATION**
    - Ensure that every child with a disability has access to free education in an appropriate environment till he attains the age of eighteen years.
    - Endeavor to promote the integration of students with disabilities in the normal schools.
    - Promote setting up of special schools in Government and private sector for those in need of special education, in such a manner those children with disabilities living in any part of the country have access to such schools;

- Endeavor to equip the special schools for children with disabilities with vocational training facilities.

Parents or guardians to enable their children with disabilities to attend schools

- The removal of architectural barriers from schools. Colleges or other institution, imparting vocational and professional training;
- The supply of books, uniforms and other materials to children with disabilities attending school.
- The grant of scholarship to students with disabilities..
- Setting up of appropriate fore for the redressal of grievances of parent, regarding the placement of their children with disabilities.

Motivation and capacity-building

Trainers will have to prepare trainees for basic learning and for unexpected events that will certainly occur during and following the training.

Four main learning steps

The objectives and priorities in training rural people with disabilities for enterprise development are:

1. To improve daily living skills
2. To impart technical capabilities and capacities
3. To develop entrepreneurial skills
4. To establish a network and strategic partnerships

1. To improve daily living skills

Trainers should focus on the daily realities of the trainees' community life by direct discussion with the trainees and offering appropriate advice:

- Accept who you are and learn to love yourself as you are
- Think positively, and be convinced that you CAN DO
- Be an active member of your family and community
- Be responsible for your life by ensuring food security and quality, and practice good eating habits for yourself and your family
- Be aware of your needs
- Participate in your family and community activities as an equal member
- Confront and surmount problems through open-minded interactions among themselves and in addition, through personal prayers, meditation, reflection and physical exercises.

Finally, enterprise development will offer trainees the chance to become self-reliant once they are convinced that they are **capable of doing**, even if they do it differently. Surmounting new challenges is never easy but always brings a feeling of achievement and success.

2. To impart technical capabilities and capacities

1. Locate success cases
2. Assess replicability (profit and marketability)
3. Assess successful farmer's willingness to become a trainer
4. Establish a practical, hands-on training program me
5. Carefully select trainees
6. Supervise the training
7. Arrange follow-up support services for trainees
8. Achieve secondary multiplication after first level successes

Trainers must concentrate on the skills required for the successful accomplishment of all tasks associated with the chosen small-scale enterprise that is to be established in a rural area. These skills and tasks will vary from one business to another.

For persons with physical disabilities, certain techniques may be needed to replace the "conventional way" of doing things. For example, using the feet or mouth instead of hands has proven very efficient. Certain tools and devices can also be adapted to a person's physical disability.

3. To develop entrepreneurial skills

All aspects of a sustainable rural enterprise must be reviewed and well understood.

4. To establish a network and strategic partnerships

Regular communication with trainers and all parties involved will provide trainees with timely information about existing training programmes. Trainees should fully exploit opportunities for collaboration with various agencies and organizations. This will also facilitate their acceptance as full members of their community.

The following are examples of organizations and institutions that can be contacted for future collaboration or partnership.

1. Agriculture extension offices.
2. Local disability training centers.
3. Technical colleges.
4. Universities.
5. Private companies.
6. Local community small enterprises.
7. Organizations for persons with disabilities (local, national and international levels).
8. Non-government organizations (local, national and international levels).
9. Central government agencies (e.g. Ministry of Invalids, Ministry of Social Welfare, Ministry of Lab our, Ministry of Health)
10. Local government agencies.
11. UN agencies such as FAO, ILO, UNDP, UNICEF, UNIDO, WHO.

Selecting trainees

The selection of trainees should be based on well-defined criteria. Although many persons with disabilities can perform all required tasks, their motivation is crucial for success. Careful selection of the trainees is, therefore, vital for the successful replication of the enterprise and its future sustainability.

Persons with disabilities are capable of accomplishing most of the tasks involved in enterprise development. Nevertheless, certain activities may need to be adapted and strategies developed to compensate for the disability. Moreover, two persons with the same disability do not necessarily have the same capabilities and, consequently, it becomes necessary to understand their abilities while developing the strategy. Every person is different and therefore should be allowed to test his or her capabilities and limitations. Trainees must be allowed to develop their own personal way of accomplishing the tasks required in the enterprise. Trainers must be able to give advice, support and direction.

Trainee Selection Procedure

1. **Identification of the candidates**: In most countries, the names and addresses of persons with disabilities are registered with a government office responsible for their welfare, such as the Ministry of Invalids, the Ministry of Social Welfare or the Ministry of Health. Provincial or municipal governments may also have information on persons with disabilities. Radio or television announcements can be used to invite candidates for training on enterprise development. Information on training should be provided to disabled persons located in the remotest rural areas.
2. **Pre-selection**: The disabled person's age and type of disability should be verified. Ideally, the age should be between 20 and 35 years.
3. **Diversity of location**: Care must be taken to avoid market saturation. A diversity of locations for training in the same type of enterprise is necessary. Moreover, if trainees are selected from different locations, they will have the opportunity to replicate their enterprise and become trainers in their community.
4. **Each candidate visited at home**: Trainers must meet each candidate at his or her home. This will allow trainers to verify if the candidate has family and community support, as well as the financial and other material resources for establishing the new enterprise.
5. **Verification of commitment**: Trainers must check the will and commitment of the trainees and their families to attend the training course. This is especially true when the trainee has to leave home to attend the training which may last for several months.
6. **Verification of motivation**: Trainers must make sure that the candidates are highly motivated to learn about enterprise development and new skills.

7. **Verification of availability**: Trainers must make sure that the candidate is capable, committed and ready to leave home to learn. In case of a person with multiple disabilities, a family member may have to accompany the trainee.
8. **Final selection**: Trainers must sit together and evaluate each candidate, decide whether or not a candidate should be selected, and justify their decision. This will ensure impartial and objective selection. Trainers must always keep in mind that the training is not only for enterprise development but should also serve as a re-education of the disabled towards their full integration as active and self-reliant participants in society.

Gender issues

Training in enterprise development offers a good opportunity for women with disabilities. Small-scale enterprise development allows both women and men with disabilities to earn a living close to home.

Issues and considerations to be addressed prior to training

1. To ensure that trainees do not abandon the course before its completion, it should be ascertained if they have left their home in the past, whether for re-education, training or work. This will show how they cope with living away from home.
2. Trainees who have never left their family should be allowed to train closer to home rather than be sent to a distant training centre.
3. Trainees who have never undergone re-education are often incapable of taking care of themselves. This must always be considered when planning a training programme especially during budget preparation because offering re-education with skills training will take more time.
4. Some trainees may also have been over-protected by their families and not used to accomplishing certain tasks on their own. Trainees must initially understand that enterprise development may require specific tasks that can be difficult. They must have decided to attend the training because they truly want to learn new skills and not because family members have decided that it would be a good idea for the disabled person to learn new skills.
5. Many persons above 60 years of age have never had the opportunity to learn new skills or to undergo professional re-education or formal education. Learning enterprise development skills may be difficult for them and this is why it is recommended that trainees be between 20 and 35 years of age. Homogeneity within the group is also important. When trainees are both men and women, care must be taken that all women are not very young and men older. Different types of disabilities can also create different problems. For example, the needs of the visually impaired are different from those of the hearing impaired and the physically disabled.

6. Some trainees with multiple disabilities or with specific physical or mental disabilities may be incapable of systematic learning.
7. Safety and security must be ensured for women attending mixed training courses. Appropriate facilities must be available for women trainees with disabilities to ensure their safety and privacy.
8. Following up on the trainee's progress after the establishment of his or her enterprise is crucial for its continuation.

The Trainees follows nine distinct steps

Limitations of the methodology

This methodology is not expected to replace the methodologies already used by various agencies. It should be used as a complementary methodology. SCR has been used successfully in several countries allowing increased income generation for rural poor people. It can also be used with persons with disabilities as trainers and trainees.

1. Few cases of successful entrepreneur with a disability

It is quite difficult to find successful micro-entrepreneurs with disabilities within the community. Several studies have shown that data regarding disabled persons is scarce. Indeed, many persons with disabilities who are successful entrepreneurs are considered as "successful people" rather than "successful disabled persons". It may therefore be necessary to seek successful micro-entrepreneurs outside the community, which implies outside interference and trainers from a different background.

***2*. Replication in other communities or countries**

The SCR methodology needs to use already tested and proven successful cases. These success cases should preferably be selected from within the local or a nearby community. Know-how can be transferred from a non-disabled successful person to other non-disabled persons as was demonstrated during the field testing of the SCR methodology.

3. Full commitment of trainees

Careful selection of trainees is crucial for the success of the training. Unless people are fully committed, the training will only be a temporary exercise with no continuation. Family and community certainly contribute to the micro-entrepreneur's success. When the micro-entrepreneur's physical or mental capabilities are affected, he or she needs some help or support in accomplishing certain tasks. This is especially true if construction work is needed to start the enterprise. Talking to family and community members is the best way of verifying how the potential micro-entrepreneur trainee with a disability is perceived in his or her own family and community.

4. The importance of the field worker

This methodology can be implemented in any country. However, the importance of a good field worker cannot be emphasized enough. One person needs to locate the success case, make a careful evaluation and see how this case can be replicated with persons with disabilities.

5. Market constraints

Although replication appears to be totally positive, market constraints must be carefully considered. A market can easily become saturated when the number of people manufacturing the same product increases within a small community. This could also lead to trainers withholding precious information especially in their marketing strategies. Once persons with disabilities show they can earn substantial income, other people, whether disabled or not, will want to enter into the same business thus lowering market prices. Marketing strategies and the opening of new markets become essential to protect the new micro-entrepreneurs

Conclusion

Is real model still needs adaptation from other countries keeping in view their legislation, policies, and plans and infra structure. On the job vocational training models as wonderful advantages of practical nature but lacks theory of the concept. Apprenticeship vocational model also face problems of infra structure and lack of coordination between theory and practice. Proposed model also needs expansion towards all the disabilities/locations/professions meant for/adaptable by the PWDs.

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USE OF NEW TECHNOLOGY IN LIBRARIES FOR TEACHING AND TRAINING TO PWD

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Abstract

People with special needs have either single or multiple functional disabilities which can create great hindrances in their accessibility in day-to-day living. The present paper is an endeavor to seek the best as well as the easiest and most fruitful way of providing reference services to people with disabilities by incorporating Internet technology in the form of Digital Service. It is accepted that most of the people who need either physical or psychological assistance face great hindrances in getting information at the right time. The search engine Google has some great offerings in the form of assistive technology to people, such as Chrome Browser's ChromeVox, Google Search through Google Voice etc. Mobile operating systems like Android have some special apps like Text-to-Speech etc. for the blind and visually impaired; similarly the iPhone has some apps like AccessTech, Proloquo2Go, iConverse, iCommunicate for people with visual disabilities. DAISY Digital Talking Book, Audio books, Books for the Blind (Talking Book) etc. are some possibilities for reference service for people with special needs. The study reveals that Libraries and Information Canters should frame policies and should disburse a certain amount from their budget for acquiring adoptive and assistive technologies along with producing e-books complying with DAISY format for people with special needs, thereby securing their right to information.

Key Words: *Libraries, Digital Service ,Assistive Technology, Disabilities*

Introduction

The assistive technology plays an important role in the lives of the people with disabilities as it enhances information access and allows the user to accomplish their tasks in a more refined manner independently. The concept of assistive/adaptive technology and its role and importance in the access of information for the people with disabilities in the digital environment has been studied. There are thousands of computer based assistive aids and devices available today for the disabled and libraries are using these resources to provide services to their disabled community. The Library must deploy the best opportunity offered by evolving ICT to bridge the information gap between developing and developed countries, as well as the gap between "non-disabled" and people with disabilities.

Disability and Education

Disability refers to some physical or mental impairment to an individual which prevents them from carrying out their normal activities. Physical impairments may affect the senses such as sight, hearing and movement. Disability affects the way students study and in some cases, require special technology known as assistive or adaptive technologies to access information on the web. Depending on the disability, individuals will need personalized information in specific formats. Digital divide where

there is a wide gap between those who have and can use information and communication technology (ICT) and those with very limited or no access, there is a disability divide. This is the divide caused by information and communication technology inaccessibility to people with disabilities compared to able-bodied people [1]. Although there are special technologies (assistive technologies) that enable disabled people to access learning content online, some of these systems are still inaccessible to some disabled people. This cuts them away from others, resulting in a divide which places disabled people at a disadvantaged position. In many developing countries, people with some common forms of disability such as blindness still lack appropriate assistive technologies (screen readers, magnifiers, etc.) to access online content.

What is Assistive/Adaptive Technology?

The information age has transformed many library activities and brought an entire new group of potential patrons in the libraries which are so called people with disabilities. A properly adapted computer workstation can enhance the ability to access information displayed in digital format. The availability of alternative methods of computer input and output has freed and empowered the disabled population and opened up a new world of knowledge and power for them (Coombs,1999, p.207). Computers in libraries are essential tools and assistive technology is the key to use them for the people with disabilities. Assistive or Adaptive Technology (AT) involves a device or a computer based accommodation that helps an individual with special needs to work around or compensate for a disability and enhancing individual ability (Goddard, 2004, p.2). Video magnifiers, electronic readers, optical character recognition software, magnification software, speech output systems and electronic Braille devices etc. all provide a solution for a particular individual with disability and these computer related aids and equipment are commonly known as 'assistive', 'adaptive', 'access', or 'enabling' technology.

Assistive Technologies in Libraries

In a library, Assistive technology may be as simple as a magnifying glass or it can also be sophisticated as a computer workstation with software which can facilitate user with disabilities to scan a book and hear it read loud followed with highlighted text on a monitor screen. Similarly, libraries can add workstations configured according to the needs of the specific user groups like provision of speech recognition software for the blind to control the computer or enter the text via their voices, the touch screen monitor and an electronic tracking device for those who cannot make use of standard keyboards. The libraries can create the effective assistive technology programs to find the better solutions for providing the access to the library resources and the services (Goddard, 2004). The accessible workstation allows patrons to adjust the height of the worktable and includes a movable arm for mounting the monitor so that user can tilt the display as required. An ergonomic keyboard tray and a large monitor around 20

inches or larger can also be part of the workstation which allows patrons using screen-enlarging software to see more of the displayed text while moving through the documents (Mates, 2010, p.41). Well planned technological solutions and access points based on the concepts of universal design are essential for the effective use of information and other library services by all the people (American Library Association, 2001).

Visually Impairment and Technology

There are some organizations like German Central Library for the Blind, West German Audio Book Library for the Blind, Library of Congress, US and CNIB Library, Canada, Learning Ally, a non-profit volunteer organization in U.S., National Braille Library, India, National Talking Book Library, India etc. that are constantly procuring audio books or Talking Books for people At present more than 5000 public libraries offer free downloadable audio books which can be played using i-Pad, i-Phone, Mac-OS, Learning Ally software etc. Books for the Blind is a program in the U.S. which provides audio recordings of books in a proprietary cassette-tape format, along with a cassette player supporting that format, free of charge to the blind or visually impaired people. Learning Ally in 2012 contained 75000 titles of audio books which can be played in mainstream mobile devices or Learning Ally software. The books produced by Learning Ally can be played on assistive technology devices like Plextalk, Human ware Stream, and Intel Reader etc. In a library, reference documents are purchased from vendors in order to provide reference service to the patrons of the library. Similarly, libraries should pay attention to the procuring of audio books required by patrons with special needs by communicating with the above mentioned organizations and making available these documents to them.

Mobility impairment and Technology

Mobility impairment is that type of disability which includes one or more types of physical disabilities. Due to lack of proper coordination of the movement of the limbs of the body, people find it difficult to have movement. This was hitherto a great hindrance in getting information. Reference service in the digital environment does not mandate them to appear physically in front of the reference librarians to get reference services. Modern Asynchronous digital reference services (Singh, 2004) such as E-mail, Web forms, Ask A services and Synchronous digital reference services such as Chat reference, using Web content software, Video-conferencing or Web-camera services, Digital reference robots etc. along with Collaborative Digital Reference Services (CDRS) started by Library of Congress (LC) in 2002, Question Point by LC and Online Computer Library Centre (OCLC), 24/7 Reference services (Singh, 2004) etc. are very beneficial to the people with mobility impairments. The online 'Discussion Forum' of LC can help them communicate with other people in a virtual environment and access information they require. However, libraries and information centers can make some modifications

in their building structure including the availability of lifts, slope-ways for wheel chairs, and the availability of volunteers to assist them in order to make a smooth passage for people who want to avail the service from inside the library building.

Hearing impairment and Technology

Hearing impairment is the category of physical impairment that includes people who are completely or partially deaf. Google has a great many assistive technologies to offer for the hard-of- hearing or hearing impaired. Google+ Hangouts apps, Google SMS Application (available in Android Market), Google Translate Conversation Mode, and Gmail Video Chat for sign language speakers and Google Drive for people with special needs are some of the most useful apps for people with hearing impairments. Since this kind of disability does not create any kind of serious obstacles in getting information, people with hearing impairments do not face as much difficulty as people with visual impairments. However, for any kind of audio guides and multimedia presentation regarding the library, it seems to be difficult to communicate with these patrons. However, some of the latest types of application software like Tune wiki, Sound AMP, iHearClear available in Apple Apps Store turn an iPhone into a hearing aid. However, in communicating information with patrons with hearing impairments reference librarians may find it difficult to deliver referral as well as information service along with personal assistance and readers' advisory service. In such circumstance they can use iSign, a type of application for American Sign Language. It would be much better if the library pays attention to creating special resource persons among the library staff in order to help users with hearing impairments.

People with autism and developmental disabilities and Technology

Autism is a disorder of neural development characterized by impaired social interaction and communication and by restricted and repetitive behavior. It affects information processing in the brain by altering how nerve cells and their synapses connect and organize; how this occurs is not well understood. The children's' reference section of any library can procure reference books from Learning Ally etc. type organizations with pictures that may help in the cognitive development of any child. Digital reference service such as Kids Ask etc. should be developed so that children with autism may benefit from this. This type of service can be better performed if pictures and graphics are used with the specific purpose of providing reference service to children. Application software like Proloquo2Go, iConverse that displays six different icons that represent a person's most basic needs in audio and video form, iCommunicate etc. are great tools for these children. Similarly, libraries should develop software applications with iconic details of the reference section for the children's use and thus the child could be delivered digital reference service with some fruitful results. Software like IRC, MOO, IM etc. are very useful for people who find it a difficult task to

ask for help from the reference librarians such kinds of cognitive developmental problems can be handled with the above mentioned software and mobile apps.

Problems in implementations

- In the course of the survey for the study, so many problems have been identified which
- truly reveal the reasons behind the failure of providing fruitful reference services to people with special needs in libraries in India. These are: Lack of service mindedness of the libraries and information centers;
- Lack of expertise in the field of libraries and information science to work for people with special needs especially in those areas of utilizing the communication technologies;
- Lack of proper financial support from the authorities of the academic libraries to provide infrastructure for people with special needs;
- Isolation-treatment for people with special needs assuming that they can never be a part of the mainstream of life and hence that budget allocation is not necessary for them;
- Lack of knowledge in handling reference questions from the people with special needs that results in the failure of providing right information to the right people;

Recommendations

Staff and Student Training: The library staff, as well as students, needs training in order to operate assistive and adaptive technologies.

Collaboration and Net-Working: Universities should collaborate with other libraries in and outside India, and promote inter-library loan facility for users who are visually and physically impaired. Every university should subscribe to bookshare.org.

Promotion through Research and seminars: Universities should allot funds to promote research on inclusive libraries. Conferences and awareness camps need to be organized in colleges to promote inclusiveness.

Conclusion

This paper has examined some disabilities facing students in higher education and the assistive technologies utilized to compensate for their impairments. Digital services are being provided by libraries in order to provide personal assistance to local or remote users of the library employing modern Internet technologies. People with special needs, indisputably, can be greatly helped by these digital services if applied properly with appropriate skills. These new type of reference services in the digital environment as a blessing since these enable them to seek information independently They are greatly enriched in getting digital reference services from the

libraries and information centers through mobile apps and other similar kind of technologies.

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TEACHING AND TRAINING PERSONS WITH DIABILITIES POSITIVE BEHAVIOUR SUPPORT FOR PEOPLE WITH DISABILITIES IN TEACHING AND TRAINING

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Abstract

The term "disability" broadly describes an impairment in a person's ability to function, caused by changes in various subsystems of the body, or to mental health. The degree of disability may range from mild to moderate, severe, or profound. Disability can be measured objectively (observed) or subjectively (self-report).Conditions causing disability are classified by the medical community as: inherited (genetically transmitted); congenital, meaning caused by a mother's infection or other disease during pregnancy, embryonic or fetal developmental irregularities, or by injury during or soon after birth; acquired, such as conditions caused by illness or injury; of unknown origin. On the 1st of January 1996 the Government of India passed the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act 1995. It is high time that the education sectors concentrate on the various gadgets in teaching and training the persons with disabilities. The present study is entitled "POSITIVE BEHAVIOUR SUPPORT FOR PEOPLE WITH DISABILITIES IN TEACHING AND TRAINING" .The study is carried out with the relevance to the B.Ed graduates because they directly had experience of being taught and trained together with the PWD in their academic intakes by the University. Findings show :The level of positive behavior support for pwd among B.Ed graduates is above average ; there is no significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of Gender and Family type and there is a significant difference in terms of Locality and Type of institution studied.

Introduction

Disability is the consequence of an impairment that may be physical, cognitive, mental, sensory, emotional, developmental, or some combination of these that result in restrictions on an individual's ability to participate in what is considered "normal" in their everyday society. A disability may be present from birth, or occur during a person's lifetime. An *impairment* is a problem in body function or structure; an *activity limitation* is a difficulty encountered by an individual in executing a task or action; while a *participation restriction* is a problem experienced by an individual in involvement in life situations. Thus, disability is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives.—*World Health Organization, Disabilities*

The term "disability" broadly describes an impairment in a person's ability to function, caused by changes in various subsystems of the body, or to mental health. The

degree of disability may range from mild to moderate, severe, or profound. A person may also have multiple disabilities. Disability can be measured objectively (observed) or subjectively (self-report).

Conditions causing disability are classified by the medical community as:

- inherited (genetically transmitted)
- congenital, meaning caused by a mother's infection or other disease during pregnancy, embryonic or fetal developmental irregularities, or by injury during or soon after birth
- acquired, such as conditions caused by illness or injury of unknown origin.

Researches suggest that inclusivity is no longer defined by physical and cognitive disabilities but also includes a full range of human diversity with respect to ability, language, culture, gender, age and of other forms of human differences" (Research conducted by Richard Wilkinson and Kate Pickett indicates "student performance and behaviour in educational tasks can be profoundly effected by the way we feel, we are seen and judged by others. When we expect to be view as inferior, our abilities seem to diminish"

Need for the Study

In 1992, India adopted the Proclamation on the Full Participation and Equality of People with Disabilities in the Asian and Pacific Region. As a signatory of this proclamation, India's Ministry of Law, Justice and Company Affairs proposed an act to safe guard the rights of Persons with Disabilities (PWD). On the 1st of January 1996 the Government of India passed the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act 1995. It is hightime that the education sectors concentrate on the various gadgets in teaching and training the persons with disabilities.

Background of the Study

The researchers are involved in the educational institution which is in the forefront to promote education of the underprivileged. The development of the disabled is a major concern to them. Their contribution towards the understanding of the PWD has made them choose the title POSITIVE BEHAVIOUR SUPPORT FOR PEOPLE WITH DISABILITIES IN TEACHING AND TRAINING. The study is carried out with the relevance to the B.Ed graduates because they directly had experience of being taught and trained together with the pwd in their academic intakes by the University. Their personal experience would contribute to the better understanding and knowing issues involved in this task.

Terms and Definitions

Positive Behaviour Support

Refers to attitude and attributes of affective domain towards pwd

People with Disabilities

disability such as blindness, low vision, leprosy- cured, hearing impairment, loco-motor mental retardation and mental illness.

Teaching and Training

Various strategies used to make PWD empowered

Sample for the Study

100 B.Ed graduates of 2013-2015

Objectives of the Study

1. To construct a tool to find out the level of positive behavior support for pwd among B.Ed graduates
2. To realize the importance of teaching and training pwd
3. To find out whether any difference exists among the B.Ed graduates in their attitude towards positive behavior support for pwd among B.Ed graduatesin terms of the following variables:
    - Gender
    - Locality
    - Family type
    - Type of institution studied

Hypotheses of the Study

1. The level of positive behavior support for pwd among B.Ed graduates is above average
2. There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of the following variables**:**
    - Gender
    - Locality
    - Family type
    - Type of institution studied

Tool

In order to carry out the study the researchers constructed a tool based on the positive behavior support. The tool consists of 15 items.

Methodology

Survey method, with random sampling techniques and the following statistical techniques used: MEAN and STANDARD DEVIATION, 't' test

Mean

Mean was calculated by the formula- $\bar{X} = \frac{\sum X}{N}$ Where X = Score, N = Total Number of the scores.

Standard Deviation

Standard deviation was calculated by the following formula

$$\sigma = \frac{\sqrt{(X - \bar{X})^2}}{N}$$

Where $\bar{X}$-+ = Mean

X = Individual score

N = Total Number of the scores

Test of significant difference ('t' test)

Since the groups were large independent samples, the 't' test was applied through the statistical package by using the following formula:

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

Where M_1 - denotes mean of group 1

M_2 -denotes mean of group 2

σ_1 - denotes standard deviation of group 1

σ_2 - denotes standard deviation of group 2

N_1 -denotes total number of respondents in group 1

N_2 -denotes total number of respondents in group 2

Hypothesis 1

The level of positive behavior support for pwd among B.Ed graduates is above average

Table- 1 Level of positive behavior support for pwd among B.Ed graduates

No.of Samples	Theoretical mean	Calculated Mean	Result
100	57.7	63.8	High

The above table 1 shows that the calculated mean 63.8 is higher than the theoretical mean57.7. Hence the hypothesis " The Level of positive behavior support for pwd among B.Ed graduates is above average" is accepted.

Hypothesis 2

There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of the following variables**:**
Gender, Locality, Family type and Type of institution studied

The details of the results of the 't' test in the attitude towards positive behavior support for pwdbased onGender, Locality, Family type and Type of institution studied is given in table no.2.

Table-2 Difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of the following variables:

Gender, Locality, Family type and Type of institution studied

Variables	Sub variables	N	Mean	SD	' t' value	Level of Significance	Result
Gender	Male	50	78.2	13.2	1.78	0.05	NS
	Female	50	81.3	15.6			
Locality	Rural	50	69.5	5.2	2.61	0.05	S
	Urban	50	76.7	8.7			
Family Type	Joint	50	58.3	11.4	0.88	0.05	NS
	Nuclear	50	77.4	9.8			
Type Of Institution	Govt/Aided	50	82.3	8.3	2.32	0.05	S
	Private	50	83.1	11.5			

It is evident from table no.2 that the calculated 't' value for Gender 1.78 is less than the table value 1.96 at 0.05 level. This shows that there is no significant difference in theirattitude towards positive behavior support for pwd in terms of Gender. Hence the hypothesis, "There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of Gender" is rejected.

It is evident from table no.2 that the calculated 't' value for locality2.61 is higher than the table value 1.96 at 0.05 level. This shows that there is a significant difference in their attitude towards positive behavior support for pwd in terms of Locality.Hence the hypothesis, "There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of Locality" is accepted.

It is evident from table no.2 that the calculated 't' value for locality 0.88 is less than the table value 1.96 at 0.05 level. This shows that there is no significant difference in their attitude towards positive behavior support for pwd in terms of Family Type.Hence the hypothesis, "There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of Family type is rejected.

It is evident from table no.2 that the calculated 't' value for locality 2.32 is higher than the table value 1.96 at 0.05 level. This shows that there is a significant difference in their attitude towards positive behavior support for pwd in terms of Type of Institution studied.Hence the hypothesis, "There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of Type of institution studied is accepted.

Hypotheses Verification

1. The level of positive behavior support for pwd among B.Ed graduates is above average- **Accepted**
2. There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of Gender -**Rejected**
3. There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of Locality-**Accepted**
4. There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of Family type-**Rejected**
5. There is a significant difference among the B.Ed graduates in their attitude towards positive behavior support for pwd in terms of Type of institution studied-**Accepted**

Educational Implications

1. The result of the study lead to encourage the youth to develop positive attitude towards teaching anfg training persons with disabilities.
2. The educational climate in most places is conducive for the pwd for learning. Hence institutions need to be supported with facilities required for the teaching and training of pwd.
3. As equality is maintained among students based on gender so also empathy need to be created towards pwd.
4. More awareness need to be given to the students of urban locality towards development of pwd
5. Families need to teach and influence children to accommodate pwd in their lives and live well with them
6. The presence of pwd need to be prioritized among trainees
7. Participatory programme need to be enhanced for pwd in learning environments
8. Students association should be inclusive of pwd
9. Faculty collaboration toward training pwdneed to be focused on.

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ASSISTIVE TECHNOLOGY FOR PWDS

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Abstract

Technology can be the great equalizer in a classroom with diverse learners. The rapid development and application of computer-based technology, however, has created a sea change in available options for disabled students, ending the isolation and limited opportunities disabled students have long faced. Computer programs have been designed to make it easier for disabled students to access material, communicate their ideas and work, and participate in educational experiences. A child with learning disabilities often have better technology skills than their teachers and are drawn to computers and other gadgets, so using them in the classroom makes perfect sense. For children with physical disabilities, technology can give access to learning opportunities previously closed to them. E-readers help students turn book pages without applying dexterity, and voice adaptive software can help students answer questions without needing to write. Computers are engaging and more advanced than the typical modified lesson allows. Assistive technology is not always just for students with disabilities; it can be used to help any student with motivation, academic skills, and social development.

Assistive Technology (AT) Devices

The Tech Act defines AT devices as any item, piece of equipment, or product system (whether acquired off the shelf, modified, or customized) that is used to increase, maintain, or improve functional capabilities of individuals with disabilities. AT devices may be categorized as high technology and low technology. Many low-tech devices can be purchased at a hardware store, selected from a catalogue, or fabricated using tools and materials found in home workshops (Franklin, 1991). Examples might be note-taking cassette recorders, pencil grips, NCR paper/copy machine, simple switches, head pointers, picture boards, taped instructions, or workbooks. High-tech devices frequently incorporate some type of computer chip, such as a hand-held calculator or a "talking clock." Examples might be optical character recognition (OCR) calculators, word processors with spelling and grammar checking, word prediction, voice recognition, speech synthesizers, augmentative communication devices, alternative keyboards, or instructional software.

AT can be Applied in Instruction: Lahm and Morrissette (1994) outlined seven areas of instruction where AT could assist students with mild disabilities. These areas include organization, note taking, writing assistance, and productivity, access to reference materials, cognitive assistance, and materials modification. A number of approaches are available to assist students with mild disabilities in these areas of instruction.

Organization: Low-tech solutions include teaching students to organize their thoughts or work using flow charting, task analysis, webbing or networking ideas, and outlining. These strategies can be accomplished using graphic organizers to visually assist students in developing and structuring ideas. A high-tech solution might be the outline

function of word processing software, which lets students, set out major ideas or topics and then add subcategories of information.

Note Taking: A simple approach is for the teacher to provide copies of structured outlines for students to use in filling in information. A high-tech approach might include optical character recognition, which is software that can transform typewritten material into computer-readable text using a scanner.

A teacher's typewritten notes can be duplicated using either NCR paper (carbonless copies) or a copy machine. A slightly more high-tech method is to use microcassette recorders. Or, notes can be read by a voice synthesizer, allowing students with reading difficulty to review the notes much the same as reviewing a tape recording. Recorders are beneficial for students with auditory receptive strength, but they may be less useful for those needing visual input. Videotaping class sessions may be helpful for visual learners who pick up on images or body language, or for students who are unable to attend class for extended periods of time.

Laptop or notebook computers can provide high-tech note taking for many students with disabilities. An inexpensive alternative to a full-function portable computer is the portable keyboard. The limitations of these keyboards are in formatting information and a screen display limited to four lines of text.

Writing Assistance: Word processing may be the most important application of assistive technology for students with mild disabilities. Many of these students have been identified as needing assistance in the language arts, specifically in writing. Computers and word processing software enable students to put ideas on paper without the barriers imposed by paper and pencil. Writing barriers for students with mild disabilities include mechanics: spelling, grammar and punctuation errors; process: generating ideas, organizing, drafting, editing, and revising; and motivation: clarity and neatness of final copy, reading ability, and interest in writing.

Grammar/spellcheckers, dictionaries, and thesaurus programs assist in the mechanics of writing. Macros, a feature that allows keystrokes to be recorded in a file that can be used over and over, also assist in mechanics. Macros can be used for spelling difficult text, for repetitive strings of words, or for formatting paragraphs and pages. Macros also save time for students who have difficulty with either the cognitive or motor (keyboarding) requirements of writing. Word prediction is assistive software that functions similarly to macros. If a student has difficulty with word recall or spelling and cannot easily use the dictionary or thesaurus feature, then word prediction software offers several choices of words that can be selected.

Teachers can use the editing capabilities of the word processor during the writing process, making electronic suggestions on the student's disk. If the computer is on a network, students can read each other's work and make comments for revision. Painter (1994) indicated that peer feedback was an effective way to assist students in generating and revising text. Computer editing also reduces or eliminates problems

such as multiple erasures, torn papers, poor handwriting, and the need to constantly rewrite text that needs only minor modifications. The final copy is neat and legible.

Motivation is often increased through the desktop-publishing and multimedia capabilities of newer computers. A variety of fonts and styles are available, allowing students to customize their writing and highlight important features. Graphic images, drawings, and even video and audio can be added to the project to provide interest or highlight ideas. Multimedia often gives the student the means and the motivation to generate new and more complex ideas.

Productivity: Assistive productivity tools can be hardware-based, software-based, or both. Calculators, for example, can be the credit-card type or software based, which can be popped up and used during word processing. Spreadsheets, databases, and graphics software also offer productivity tools, enabling students to work on math or other subjects that may require calculating, categorizing, grouping, and predicting events. Productivity tools also can be found in small, portable devices called personal digital assistants (PDAs). Newer PDAs can be used as notetaking devices via a small keyboard or graphics-based pen input. Some PDAs can translate words printed with the pen input device to computer-readable text, which can then be edited with the word processor and transmitted to a full function computer.

Access to Reference Materials: Many students with mild disabilities have difficulty gathering and synthesizing information for their academic work. In this arena, telecommunications and multimedia are providing new learning tools for the students. A computer and a modem can transport students beyond their physical environment to access electronic information. This is particularly appropriate for individuals who are easily distracted when going to new and busy environments such as the library. Telecommunications networks offer access to the information superhighway. Students can establish "CompuPals" with other students, which often motivate them to generate more text and thus gain more experience in writing. Students can also access electronic encyclopaedias, library references, and online publications. However, these experiences should be structured, because the information highway is complex and it is easy to get distracted or lost as opportunities are explored.

Multimedia-based tools are another way in which information can be made accessible to students. Multimedia's use of text, speech, graphics, pictures, audio, and video in reference-based software is especially effective in meeting the heterogeneous learning needs of students with mild disabilities.

Cognitive Assistance: A vast array of application program software is available for instructing students through tutorials, drill and practice, problem-solving, and simulations. Many of the assistive technologies described previously can be combined with instructional programs to develop and improve cognitive and problem-solving skills.

Multimedia CD-ROM-based application programs offer another tool for assisted reading. Similar to talking word processors, CD-based books include high-interest

stories that use the power of multimedia to motivate students to read. These books read each page of the story, highlighting the words as they are read. Additional clicks of the mouse result in pronunciation of syllables and a definition of the word. When the student clicks on a picture, a label appears. A verbal pronunciation of the label is offered when the student clicks the mouse again. These books are available in both English, Spanish and other languages, so students can read in their native language while being exposed to a second language.

Materials Modification: Special educators are familiar with the need to create instructional materials or customize materials to meet the varied needs of students with disabilities. Today there are powerful multimedia authoring and presentation tools that educators can use to develop and modify computer-based instructional materials for students with mild disabilities, providing a learning tool that these students can access and use to balance their weak areas of learning with their strong areas.

Authoring software allows teachers and students to develop instructional software that can incorporate video, pictures, animation, and text into hypermedia-based instruction. Multimedia authoring software is very easy to learn and use. In fact, authoring software packages are even available for young children. **Speech-Recognition software, Voice Thread** (free software programme) and **Text-to-Speech software** For example, if the objective is to teach map reading, an image of a local map can be scanned in and specific locations can be made into buttons that the students can click on, causing a short video clip playing of the familiar location. A set of questions might be asked using both text and synthesized speech to have students give directions on how to get the location shown on the video. Students could then write directions (or draw their own map). Digitized pictures of landmarks could also be incorporated into the directions. These directions, along with the images, could then be printed for use in completing the assignment. Without the ability to author and incorporate multimedia easily into instructional software, such computer-based training would be impossible because of the need to incorporate the shared learning concepts inherent in local environments into the assisted-learning process. Such instruction can make learning more efficient and certainly more real for students for whom abstract learning and generalization may be difficult.

Conclusion

Most students with disabilities can and do benefit from technology in the classroom. Incorporating technology increases students' motivation to learn and personalizes lessons to a student's individual needs. Even the students with the most severe and profound disabilities can use assistive technology to join a classroom of typical students, and their potential can be reached in ways we didn't have before.

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TRAINING PERSONS WITH DISABILITIES

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Abstract

Before entering into a new venture, even if it is to be a small-scale enterprise, a person needs to have sufficient knowledge of the work involved in order to make the business successful. In several cases, training is needed in order to learn more about the technical aspects and procedures that will ensure success. This training is often not readily available to persons with disabilities. Several vocational training centres will not accept a person with a disability because they assume that such a person will "slow down" the learning process of other participants. Financing the necessary training is therefore another issue that cannot be ignored. How much does it cost? Who will finance it?

Governments and non-governmental organizations around the world are developing special programmes for persons with disabilities. Because such persons did not always have the opportunity to go to school, or could study for only a few years, many disabled persons can barely read or write, or are totally illiterate. Training programmes must be especially developed to take this into account and use hands-on training techniques to teach new skills to persons with disabilities.

Creating the opportunity for disabled persons to become self-reliant

Trainers must realize their responsibility towards trainees with disabilities because they will play a major role in the future of the trainees; their work will offer disabled persons a chance for a better life with self-reliance, food security and an improved quality of life.

The main objective is to enable rural persons with disabilities to become economically self-reliant through income generation as small-scale entrepreneurs. The trainer must keep this in mind at all times during the training. All trainees participate in the training by choice and because they believe that the training course will give them the tools necessary for improving their livelihood. It is the responsibility of the trainer to convince trainees that they **can do** anything and everything they set their minds to.

Considerations for training of rural disabled persons

Training must take into consideration the activities of trainees within their community. In Asia, rice sowing and harvesting are the busiest times of the year for farmers and, therefore, it is very difficult to organize training during these periods.

Trainees may also have received different levels of education and, therefore, they must be encouraged to work as a team, helping one another. Both trainees and trainers must learn to work together towards a common goal, which is to succeed in starting a small-scale enterprise. If the trainees help each other, they can all learn from one another and will feel happier during the training.

Trainees must be well prepared for training in farming and rural activities. They must understand that it is not possible to close the enterprise during the weekend. Rural poor people often work seven days a week since some activities cannot be stopped. For example, animals need to be fed and crops need to be watered every day of the week. Trainers must arrange their schedule according to rural daily realities.

The use of a small-scale entrepreneur's experience can be very helpful and highly encouraging for trainees with disabilities. Trainers should include specialists in enterprise development, disability matters, and agriculture and rural affairs. The training can be provided either by one person with all these specializations or by a strategically selected training team.

Trainers may work on a rotating schedule. Communication between trainers, trainees, consultants and all parties involved is necessary for an effective outcome.

Motivation and capacity-building

Trainers will have to prepare trainees for basic learning and for unexpected events that will certainly occur during and following the training.

Four main learning steps

The objectives and priorities in training rural people with disabilities for enterprise development are:

1. To improve daily living skills
2. To impart technical capabilities and capacities
3. To develop entrepreneurial skills
4. To establish a network and strategic partnerships

Selecting trainees

The selection of trainees should be based on well-defined criteria. Although many persons with disabilities can perform all required tasks, their motivation is crucial for success. Careful selection of the trainees is, therefore, vital for the successful replication of the enterprise and its future sustainability.

Persons with disabilities are capable of accomplishing most of the tasks involved in enterprise development. Nevertheless, certain activities may need to be adapted and strategies developed to compensate for the disability. Moreover, two persons with the same disability do not necessarily have the same capabilities and, consequently, it becomes necessary to understand their abilities while developing the strategy. Every person is different and therefore should be allowed to test his or her capabilities and limitations. Trainees must be allowed to develop their own personal way of accomplishing the tasks required in the enterprise. Trainers must be able to give advice, support and direction.

Trainee selection procedure

1. **Identification of the candidates**: In most countries, the names and addresses of persons with disabilities are registered with a government office responsible for their welfare, such as the Ministry of Invalids, the Ministry of Social Welfare or the Ministry of Health. Provincial or municipal governments may also have information on persons with disabilities. Radio or television announcements can be used to invite candidates for training on enterprise development. Information on training should be provided to disabled persons located in the remotest rural areas.
2. **Pre-selection**: The disabled person's age and type of disability should be verified. Ideally, the age should be between 20 and 35 years. Nevertheless, it has been demonstrated in some cases that the selection of younger or older candidates was fully justified and highly rewarding for both trainees and trainers with the success of the trainee's new enterprise. Persons with multiple disabilities may have difficulties following a training course because of limited mobility and their capability for active participation must be verified. Candidates with basic literacy will also, generally speaking, find the training course more enjoyable and easier to understand; they are also more likely to succeed and, therefore, may be given priority.
3. **Diversity of location**: Care must be taken to avoid market saturation. A diversity of locations for training in the same type of enterprise is necessary. Moreover, if trainees are selected from different locations, they will have the opportunity to replicate their enterprise and become trainers in their community.
4. **Each candidate visited at home**: Trainers must meet each candidate at his or her home. This will allow trainers to verify if the candidate has family and community support, as well as the financial and other material resources for establishing the new enterprise.
5. **Verification of commitment**: Trainers must check the will and commitment of the trainees and their families to attend the training course. This is especially true when the trainee has to leave home to attend the training which may last for several months.
6. **Verification of motivation**: Trainers must make sure that the candidates are highly motivated to learn about enterprise development and new skills.
7. **Verification of availability**: Trainers must make sure that the candidate is capable, committed and ready to leave home to learn. In case of a person with multiple disabilities, a family member may have to accompany the trainee.
8. **Final selection**: Trainers must sit together and evaluate each candidate, decide whether or not a candidate should be selected, and justify their decision. This will ensure impartial and objective selection. Trainers must always keep in mind that the training is not only for enterprise development but should also serve as

a re-education of the disabled towards their full integration as active and self-reliant participants in society.

Note: Although all selection criteria have been followed, it is still possible that some trainees return home before the end of training due to unexpected events in their family. However, meeting the selection criteria increases the chances of completion of training courses. A questionnaire for initial review of the candidates is given in Annex 1.

Size of the training group

The number of trainees will depend on the number of trainers. A ratio of five to one or six to one has been shown to be successful. With only five or six interns, it is possible for a trainer to better understand the physical, psychological and emotional needs of the trainees. The trainer should always keep in mind that the training programme is not only for enterprise development but also for self-motivation and confidence-building to ensure that the disabled person-turned-entrepreneur can be an active and self-reliant participant in community development.

Gender issues

Training in enterprise development offers a good opportunity for women with disabilities. Small-scale enterprise development allows both women and men with disabilities to earn a living close to home. A small-scale enterprise can be set up near the house allowing the woman to take care of home and children while generating supplementary income. It can also offer single women, single parents or widows an opportunity to establish a sustainable business that will enable them to become financially self-sufficient. Experience has shown that women can learn just as well as men, the skills needed for successful enterprise development. Attention must be given to the safety and security of women when training in mixed groups.

Issues and considerations to be addressed prior to training

1. To ensure that trainees do not abandon the course before its completion, it should be ascertained if they have left their home in the past, whether for re-education, training or work. This will show how they cope with living away from home.
2. Trainees who have never left their family should be allowed to train closer to home rather than be sent to a distant training centre.
3. Trainees who have never undergone re-education are often incapable of taking care of themselves. This must always be considered when planning a training programme especially during budget preparation because offering re-education with skills training will take more time. Ideally, the trainees should have undergone re-education. Trainees with multiple disabilities may need continuous assistance.

4. Some trainees may also have been over-protected by their families and not used to accomplishing certain tasks on their own. As a result, it may be quite difficult for them to overcome certain physical challenges and trying to do so may cause serious emotional confusion. Trainees must initially understand that enterprise development may require specific tasks that can be difficult. They must have decided to attend the training because they truly want to learn new skills and not because family members have decided that it would be a good idea for the disabled person to learn new skills.
5. Many persons above 60 years of age have never had the opportunity to learn new skills or to undergo professional re-education or formal education. Learning enterprise development skills may be difficult for them and this is why it is recommended that trainees be between 20 and 35 years of age. Homogeneity within the group is also important. When trainees are both men and women, care must be taken that all women are not very young and men older. Different types of disabilities can also create different problems. For example, the needs of the visually impaired are different from those of the hearing impaired and the physically disabled.
6. Some trainees with multiple disabilities or with specific physical or mental disabilities may be incapable of systematic learning. For example, mentally-disabled persons may need additional attention. Although they may be capable of accomplishing specific tasks, especially repetitive actions, they may not necessarily be capable of analysis and decision-making. Other members of the group must understand the mental capabilities of their peers and can help during training by giving additional explanations and training.
7. Safety and security must be ensured for women attending mixed training courses. Appropriate facilities must be available for women trainees with disabilities to ensure their safety and privacy.
8. Following up on the trainee's progress after the establishment of his or her enterprise is crucial for its continuation. Like any other new entrepreneur, the disabled person will face problems, expected or not, usually shortly after set-up or during installation. A resource person, ideally the trainer, should be available for follow-up action and troubleshooting. This will protect trainees-turned-entrepreneurs from being overwhelmed with problems, which can often be solved easily. Failure must be avoided to ensure that the new entrepreneur becomes more self-confident and, therefore, self-reliant.

TO IMPROVE THE DAILY SKILLS OF PERSONAL WITH DISABILITIES

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Abstract

Ten percent of the world's population lives with disability, and Eighty percent of the people with disabilities live in developing countries. They are facing lot of troubles in their learning. Even our Government of India has attempted to create many policies, that are inclusive for people with disabilities, their implementation efforts have not resulted in an inclusive system of education. This paper presents the meaning of disability and how to improve disabilities through their daily skills, such as home environment, social wellbeing and their activities.

Introduction

"I don't have a dis-ability, I have a different-ability."

----Robert M. Hensel.

Disability is the consequence of an impairment that may be physical, cognitive, mental, sensory, emotional, developmental, or some combination of these that result in restrictions on an individual's ability to participate in what is considered "normal" in their everyday society. A disability may be present from birth, or occur during a person's lifetime.

Disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions. An *impairment* is a problem in body function or structure; an *activity limitation* is a difficulty encountered by an individual in executing a task or action; while a *participation restriction* is a problem experienced by an individual in involvement in life situations. Thus, disability is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives. Disability is a contested concept, with different meanings for different communities.[On the one hand, it may be used to refer to physical or mental attributes that some institutions, particularly medicine, view as needing to be fixed (the medical model); it may refer to limitations on participation in social life imposed on people by the constraints of an ableist society (the social model); or the term may serve to name a social identity claimed by people with disabilities in order to mark their shared goals and politics.

The contest over disability's definition arose out of disability activism in the U.S. and U.K. in the 1970s, which challenged how medical conceptions of human variation dominated popular discourse about disabilities and how these were reflected in common terminology (e.g., "handicapped," "cripple"). Debates about proper terminology as well as over appropriate models and their implied politics continue in disability communities and the academic field of disability studies. In many countries

the law requires that disabilities be clearly categorized and defined in order to assess which citizens qualify for disability benefits.

To Improve the PWDS through the Home Environment

1.Recognize the person's basic needs of daily living.

These include getting dressed, bathing, eating, toileting, paying the bills, cleaning, shopping, making telephone calls, etc. Is the person able to do these tasks on his or her own, or is the disability preventing them from doing so? Sit down with the person and discuss these things to show that you care.

- A good way to frame these questions is to say that you read that they are important and normal questions to check in on for all people in "situations such as yours" (referring to the person who is disabled).
- Another option, if you are uncomfortable asking such personal questions, is to set up an appointment with the family doctor, who has been trained to go over these questions in a professional and respectful way.

2. Ensure that the person with a disability has adequate support.

If he or she is unable to complete any or all of the tasks of daily living above, think about who you can put in place to be of assistance. Are you or other family members or friends able to help? Is a full-time caregiver needed?

- Note that ensuring the basic needs of daily living are accounted for and looked after is key to enhancing life for a person with a disability.
- It not only lifts one's spirits by alleviating stress that these things will be taken care of, but also helps someone living with a disability to feel supported and cared for by those around them as it shows that others have taken an interest in their wellbeing

3. Make sure the home is adapted to fit the person's disability.

One option is to contact an occupational therapist (someone whose job consists of helping to adapt home situations for people with disabilities). You can start by making some basic adjustments yourself to help the person with a disability, as you and the affected person see fit. Some things to consider include:

- Is the person now wheelchair bound? If so, are there ramps to get in and out of the house? Whether or not they are in a wheelchair, are they able to get from one floor or the house to another if it is a multi-floor house? Is there any way to make this easier, such as with the insertion of handrails?
- Bathroom tasks may also be made easier with handrails, for instance to help with showering and/or toileting.
- If the person is at risk of falls where they may not be able to get up to reach a telephone and call for help, do they have a medical alert button they can press and/or a medical alert bracelet detailing their medical conditions for if and when something happens and emergency medical personnel arrive?

- These are just some of the things to consider. The person themselves (with the disability) can likely give you the best indication as to things he or she is struggling with mobility-wise at home, and either you or the occupational therapist can then think of creative ways to help.
- The occupational therapist can also conduct a complete evaluation of the home environment that is much more thorough, and provide innovative solutions that we often cannot think of ourselves given that they work in this field and have lots of experience.

4. Introduce the person with a disability to internet grocery shopping and other home delivery services if they are able or if it is appropriate.

Look into assistance programs such as "Meals on Wheels" to see if your loved one qualifies for this assistance. These are great services that can ensure ready-to-eat meals delivered to their door.

5. Consider transferring the disabled person to a care facility.

In cases of extreme injury and/or illness, it may be impossible for the person to manage on their own at home. It may also be too expensive to hire full-time caregivers, and even full-time caregivers may not be able to provide adequate medical care and support in severe cases.

- For cases where the medical
- needs of looking after the disability are higher, consider transferring the person to a facility where this type of care can be available on an "as-need" basis, or even on a 24/7 basis.
- Another reason to transfer someone with a disability to a group care facility is to enhance their social connections. It is a fine line to walk, because some people get depressed at the idea of moving out of their home; however, others thrive as it gives them many more options of things to do during the day, people to connect with, and others who are in similar situations.

To Improve the PWDS through the Social Wellbeing

1.Plan regular trips or visits.

If a loved one, family member, or dear friend is suffering from a disability, one of the most powerful ways to show your love and support - and to demonstrate to them how much you care - is to stop by for regular visits. Life can be hectic with a number of personal commitments, but if you can take the time out of your busy schedule to stop by once a week, or even once a month (whatever you have time for), it can make a big difference to their mental and emotional wellbeing. Connection with other people is one of the most vital things in helping us to thrive as human beings!

- When you do visit, bring an excited energy to make the person feel wanted and appreciated.
- Also, make an effort to relate to them in the same way you did prior to the disability. This will show them that you see them as the same person, and that

nothing has changed for you at the heart level as a result of the challenges they are facing with their body.

- This will boost their self-esteem and feelings of self-worth, because many people do not want to be viewed in a different light by their loved ones simply because of a physical disability or challenge.

2. Check with a social worker for locally run day trips and other programs that the community offers

In addition to home visits (or outings you may do with your loved one), encouraging them to get involved in community events can be a great way to meet new friends and also to feel engaged in life.

- Trying different activities may also help the person with a disability to find something they are passionate about, which can re-kindle their sense of enthusiasm for life. Having a passion with other people outside of the home can do wonders for one's mental and emotional wellbeing (and note that mental health problems such as depression can be one of the greatest problems accompanying disability).

3. Find a pet for them, if they are interested.

Pets can be great companions. It is important to choose a type of animal that the person likes, and that they are able to look after given their disability. Having a pet (or anything to look after - even a garden!) can contribute to one's sense of responsibility, and overall happiness and wellbeing.

- Pets have been shown to increase the mental health of people living alone. In studies of how people relate to dogs, for instance, it has been shown that having a dog increases your levels of oxytocin, which is commonly known as the "love hormone" (it gives you that great feeling when you hug, cuddle, or kiss someone, or otherwise connect with a living being such as a pet).
- Some disabilities would also qualify people for a "service animal."[7] Service animals are specifically trained to help with the given disability, such as guide dogs for people who are blind. Service animals are also available for people who are diabetic, autistic, or suffer from severe anxiety, among other things. If your loved one's disability qualifies them for a service animal, look into this option as well - it provides not only companionship, but also assistance moving through the world in a functional way.

To Improve the PWDS through their Hobbies & Activities

1.Inquire if the disabled person is interested in taking courses.

Many people whose bodies are disabled are not held back at the level of the mind, so engaging in courses or programs that stimulate their brain - as well as the creative flow of ideas and new learning - can be very beneficial. Ask if the person is interested in enrolling in an internet course or a degree (perhaps even one that can be obtained "long-distance" via internet courses, if they are unable to transport themselves to a college or university).

2.Offer to introduce the disabled person to health focus type fitness programs or sports groups.

These usually range from a more gentle activity such as Tai Chi, water exercises and other kinds of exercises aimed at improving mobility and circulation, to more complex sports and games depending upon the person's abilities and the extent of the disability.

3.Find ways that the disabled person can contribute to others

It gives a sense of confidence, self-esteem, and happiness to give to others who are in need or less fortunate, and it can also help a disabled person to feel better about their own situation as they realize they still have gifts they can give to others who may be in even more challenging situations than they are.

- Examples might be volunteer services such as knitting blankets or scarves for the homeless, volunteering as a mentor to other people with disabilities, or finding other services that they can do.
- There are also companies that specialize in employing the disabled for paid work and will even organize transport. This may be a good option to look into if the person is still interested in working.
- It is important to recognize not all disabled people are unable to make a career for themselves. A qualified individual such as an accountant, an architect, a phone-based salesperson, etc., can still work from home with the use of a computer, so it is wise to inquire if their employer can find ways to keep their employee active.

4.Help the person to see how they can live with meaning and purpose **regardless of disability.**

If the person with the disability is to thrive mentally and emotionally in the long-term, it is important that they find ways to enjoy their life and to feel like they can make a meaningful contribution to the world around them despite their handicap. Brainstorm ideas with your loved one as to how he or she may regain passion for life and an overall sense of purpose.

Conclusion

To conclude this we can the famous quote of Mark Twain "***Kindness is the language which the deaf can hear and the blind can see.***" Thus the disability people will really benefit through the improving skills of home environment, Social wellbeing and their hobbies and activities from my point of view.

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ICT AS A TOOL FOR TEACHING AND LEARNING IN RESPECT OF LEARNER WITH DISABILITY

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Abstract

Education is an essential thing for everyone in the world. People with disabilities are not exceptional from that. But it is not that easy for them to learn because of the problem that they are having. We should think differently and we need something special for them to learn easily. Teaching through ICT will be the solution for Teaching and Training to PWDs. ICT has become a very important part of the educational delivery and management processes. ICT to a great extent facilitates the acquisition and absorption of knowledge. Through ICT, many things can be done easily and through more innovative softwares, we can educate them by overcoming the problems they are having in learning.

Introduction

The ICT stands for Information and Communication Technologies and is defined as a *"Diverse set of Technological tools and resources used to communicate, and to create, disseminate, store and manage information"***.** ICT has become a very important part of the educational delivery and management processes. ICT to a great extent facilitates the acquisition and absorption of knowledge. ICT is changing processes of teaching and learning by adding elements of vitality to learning environments including virtual environments for the purpose. New technologies make it possible for complicated collaborative activities of teaching and learning by dividing it in space and time, with seamless connectivity between them. Due to its capability to offer anytime and anywhere, access to remote learning resources, ICT is a potentially powerful tool for offering educational opportunities, both to previously underserved constituencies including persons with disabilities, as well as all others who for reasons of cost or because of time constraints are unable to register for on campus programs.

Types of Disability

Vision Impairments: The term "vision impairment" is used to describe many degrees of vision loss, such as low vision, legally blind, and totally blind.

Hearing Impairments: Hearing impairments vary greatly from mild hearing loss to deep deafness. The term "hard-of-hearing" describes those who have mild to moderate hearing loss. People with hearing impairments are generally dependent on visual cues for communication.

Physical Impairments: The term "Physical impairments" is used to describe numerous

disabling conditions which affect movement and functioning of limbs. Physical impairment includes cerebral palsy, loss of limbs, arthritis etc.

Cognitive Impairments: Also it is known as "developmental disability" and includes mental retardation, cerebral palsy, autism epilepsy, and learning disability Dyslexia is one example of a learning disability. The characteristics of dyslexia may include severe difficulty in remembering a printed word or symbol, improper letter sequencing or reversal of letters, unusual spelling errors, and illegible handwriting. Individuals with learning disabilities can learn; however, they need to be taught in a variety of ways that allows them to use their abilities to compensate for their weaknesses.

Difficulties of Disabled in using ICT

Due to different kind of limitations , disabled people may not be able to use ICT applications and devices with ease , as it may be used by others. Some of the difficulties which are generally faced by different types of a disabled are:

- A physical impaired user may have difficulties in using input devices.
- A visual impaired user may have difficulties in seeing display devices.
- A hearing impaired user may have difficulties in hearing audio information.
- A person with learning/cognitive disability may have problem in understanding system operations.

To solve above mentioned problems assistive technologies are used. Assistive technologies usually refer to those products, devices or equipment's, which are used to increase or improve the functional capacities of individuals with disabilities. Some of the assistive technologies such as touch screen interface can be beneficial to those who have difficulty in *using input devices* such as a mouse or keyboard. When it is used in combination with software such as on-screen keyboards, or other assistive technology, they make computing facility more accessible to people who are having difficulty in using computers..

How Can ICT Help to Disabled in Learning

ICT have the potential for reducing discrimination and providing more opportunities to engage people with disabilities in all aspects of life including teaching and learning. ICT offers a range of specialized software and hardware solutions for communicating, accessing and inputting data/information to/from web applications. Following are some of the ICT tools/applications for assisting different kind of disabled learners:

- ICT bases specialized vocational training to perform functions within abilities
- Specialized Keyboards, such as Braille
- Braille Printer
- Conversion of local language to Braille
- Screen Readers
- Touch Screens

- Eye Tracking
- Talking word processors
- Screen Magnifiers

Accessibility and W3C Recommendations:

Accessibility is the quality of a system that makes it easy to learn, easy to use, easy to remember, error tolerant, and subjectively pleasing. Content and tools included in the LMS should also be accessible, i.e., that people with disabilities should be able to use and access all the information provided for the learning experience, regardless of the type or degree of disability they suffer.

Web Accessibility Initiative (WAI) guidelines are the result of the negotiations that the World Wide Web Consortium (W3C) adopted for promoting the use of ICT for people with disabilities. These guidelines are published and broadly used guidelines for W3C Web Accessibility Initiative.

Web Content Accessibility Guidelines (WCAG) 2.0 has given wide range of recommendations for making Web content more accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these web applications developed using these guidelines often make Web content more usable to users in general. Web Content Accessibility Guidelines 2.0. (WCAG) explains in detail how to make a Web site accessible for people with a variety of disabilities some of the key points of WCAG2.0 are:

- Provide text alternatives for any non-text content
- Provide alternatives for time-based media.
- Create content that can be presented in different ways without losing information or structure.
- Make it easier for users to see and hear.
- Make all functionality available from a keyboard.
- Provide users enough time to read and use content.
- Make text content readable and understandable.
- Help users avoid and correct mistakes.
- Maximize compatibility with current and future user agents, including assistive technologies.

Some Assistive Technologies Software:

Assistive technologies are used for helping the disable people for studying and gaining knowledge with the ICT; we briefly discuss abut some of the softwares used by different types of disabled people including physically impaired, visually impaired and hearing impaired.

Window- Eyes is one of the most established and powerful screen reader tools available today. This tool gives total control over what you hear and how you hear it. It also provides enhanced Braille support. Window-Eyes provides key to opening the doors of unlimited information, to the visually impaired. Window-Eye application converts components of the Windows operating system into synthesized speech, allowing for complete and total access to Windows based computer systems to the visually impaired. Window-Eyes integrated into Windows provides seamless instant access to the operating system without having to learn a complicated set of keystrokes.

JAWS is a powerful accessibility solution for visually impaired, that reads information on computer screen using synthesized speech. It provides many useful commands that make it easier to use programs, edit documents, and read Web pages. With a refreshable braille display, JAWS can also provide braille output in addition to, or instead of, speech. JAWS cab be customized as per individual needs and preferences.

TOBII Eye Tracking System is a specialized eye tracking and eye control technology. This technology makes it possible for computer to know exactly where users are looking. Tobii's eye tracking technology work on principles of advanced image processing of a person's face, by using eyes and reflections in the eyes of near-infrared reference lights to accurately estimates the 3D position in space of each eye. It finds the precise target to which each eye gaze is directed towards. It is a fully automatic eye tracking technology with high tracking accuracy and tolerance of head-motion.

I Communicator is an assistive tool for the people with hearing impairments. It assists in dependent communication for persons who are deaf or hard-of-hearing .It translates contents in real-time, like Speech to Text, Speech/Text to Video Sign-Language and Speech/Text to Computer Generated Voice. Content once translated can be used by the user for obtaining definitions, synonyms and antonyms, with the help of inbuilt dictionary in the system.

Head-Mouse Extreme is an innovative solution for wireless head-pointing on personal computers, Macintosh systems, and Alternative and Augmentative Communication (AAC) devices. The Head-Mouse Extreme replaces the standard computer mouse for people who cannot use or have limited use of their hands when controlling a computer or augmentative communication devices. The Head-Mouse translates natural movements of a user's head into directly proportional movements of the computer mouse pointer. The Head-Mouse has a wireless optical sensor which tracks a tiny disposable target that is conveniently placed on the user's forehead, glasses, hat, etc. It works just like a computer mouse, with the mouse pointer being moved by the motion of the users head. It is very useful for disabled suffering with arthritis, spinal cord injury as well.

Math Daisy is an application developed for making math accessible to the student with disabilities. It enables us to save documents in the DAISY Digital Talking Book format with accessible math. The students can use Math Player™-enabled DAISY player software to read classroom materials in the manner that suits to the disabled learners.

Text Help System provides literacy software solutions. This software is developed to help struggling readers and writers, those with literacy difficulties, learning disabilities such as dyslexia, mild visual impairments, and also those for whom English is a second language. It helps to improve users reading, writing and research skills at school, in the workplace, and at home.

5. Scope for Future Development in Disabled Friendly ICT

Despite all the progress in the designing and development in the area of assistive technologies, the growth in technological development and use of ICT at different levels including teaching and learning, for assisting disabled still suffers from limitations.

5.1Limitations in Using ICT for Disabled

- Lack of specialized disabled friendly teacher training
- Limited flexibility in training options for people with disability
- Limited availability of specialized disabled friendly hardware and software resources, due to business constrains
- Lack of formal involvement of the government organizations and support structure for ICT for the disabled
- Attitude barriers towards people with disability
- Lack of appropriate disabled friendly policies and their implementation
- Limitation of finances

Conclusion

ICT means new digital technologies (hardware and software) and of course new hope for people with disabilities for their teaching and learning. ICTs can be a powerful tool in supporting education and inclusiveness of the people with disability. The learning resources must be developed to meet the requirements of all disabled people by overcoming the traditional barriers to mobility and geographic distance. Designers and developer of ICT applications do not have to forget usability, and must adhere to the conformance all accessibility guidelines in their applications.

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PROVIDING TEACHING TECHNIQUES FOR DISABLED CHILDREN

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Abstract

Inclusion means welcoming all children to general education classroom without any discrimination on whatsoever ground and providing education to them by making required modification in means, method and materials in response to the diversities. Inclusive setting facilitates better socialization in children with special needs in such a way that they ful more comfortable and able to live in the community they belong. This paper dwells upon the disabilities of the children and importance of inclusive education besides throwing more light on inclusive teaching techniques which can ensure optimum learning outcome in the inclusive classrooms.

Introduction

Person with disabilities (PWD) constitute one of most disadvantaged, marginalized and excluded sections of Indian society. A substantial part of this population is concentrated in far flung hilly and rural areas amidst poverty, isolation, unemployment and frustration. Normally, regarded as the "largest invisible minority groups", they are distinct from others in that, unlike other minority groups, anybody could be gripped by the phenomenon of disability at any stage during lifetime.

In the context of developing countries like ours, poverty is considered both a cause and consequence of disability. These factors further aggravate the levels of vulnerability and exclusion of persons with disabilities, especially at work places. This is due to lack of adequate education or training, lack of motivation, preconceived ideas about disability on the part of employers, lack of physical accessibility to the workplace, and lack of adequate transportation. The persons with disabilities constitute such a considerable percentage of our population that they cannot be ignored altogether .Also ,we cannot aim at optimum human resource development without providing for the empowerment of persons with disabilities that are very much an integral part of our human resource.

Education and entrepreneurship can play a decisive role in harnessing the capabilities of persons with disabilities which can make significant tangible contribution to human resource development. Education is the foundation stone of the knowledge rich society. Indian society is at the cross road. It has tremendous potential as a manufacturing economic. Its population dividend makes it a fertile ground for the

service industry also. However , its projected economic supremacy depends upon its capacity to harness the human resource potential. For human resource development, the educated masses need proper training in protective skills. Right to Education Act has definitely raised the expectations of in billion plus masses. India needs to identify the missing link between its potential and actual performance. This envisages the needs for optimum human resource development. Effective utilization of other resources also largely depends on the degree of human resource development achieved. Human resource development is an organized learning experience growth and development. It is a system in which a series of learning activities are to produce behavioural changes in human being in such a way that they acquire desired level of competence to play their present as well as future role with significant efficiency.

Concept of Inclusive Education

Inclusive education means welcoming all children, without discrimination, into regular or ordinary schools, Indeed , it is a focus on creating environments responsive to the differing developmental capacities , needs, and potentials of all children. Inclusion means a shift in services from simply trying to fit the child into 'normal setting'; it is a supplemental support for their disabilities on special needs and promoting the child's overall development in an optimal setting (Evans J.L., 1998). It calls for a respect of difference.

Therefore , the task become one of developing the school in response to pupil's diversity. This has to include a consideration of overall organization , curriculum and classroom practice. Support for learning and staff development (Ainscow, 1997). It does not mean that we should case to identify and refer to the disabilities of the learner, or to provide particular kinds of support of when and where needed. It does mean that we should cease perceiving learners as all being similar because they are referred to by the same name (Bride and Mass, 1999).

Inclusive education believes that every child has the right to education in the regular school include the child with special needs. A child with special needs does not have to be segregated and enrolled in special schools. His needs can be served in a natural setting in the regular school. Thus, the goal every teacher in an inclusive classroom is to make learning for every learner in an inclusive classroom is to make learning meaningful for every learner in his/her class. According to universalization of Elementary Education and Equalization of Education Opportunity to All, teacher has to notice to mild disabilities in the classroom and see to meet their needs in regular classroom within the school premises with the help of resource teachers.

The teacher has to central role to play in the process of inclusion. The duty of the teacher is not only transforming the knowledge and helping the students

as philosopher and guide but he /she has to help as reformer in inclusive education. The teacher is significantly responsible for education planning, instruction, evaluation, curriculum adaptation and so on. Teacher who have taught in an inclusive classroom say " the philosophy of inclusion hinges on helping students and teachers become better member of a community by creating new visions for communities and for schools. Inclusion is above membership and belonging to a community". The vital factor in inclusive education is that the instruction devised should reach out to all the learners in the classroom, whichever category they may belong to.

Need for Inclusive Education

Education is basis to the empowerment of all categories of person with disabilities. Education is the kingpin of national development. There are a number of physically challenged people. These people may not have strong brawn but they have sharp brain. In term of intellect they are not inferior to any one . Given equal opportunity and proper education, they can excel or at least do as well as any other non-disabled person. Education will provide for self confidence, professional confidence and also economic independence for these people. If these people are properly educated they may become scientist , technologist and successful professional in various fields including IT and Software industries. These people usually make a mark in whatever field they are. There are physically challenged people with average and above average IQ. Once educated, they find them selves in government job in the services of private sectors. There are 30% reservation for them in people sector under takings. To enable the persons with disabilities to get a suitable job proper education must be provided to the them. With the advent of inclusive education they have to be educated in general education classrooms. Hence, they following measures are essential to provide persons with disabilities for the education of person with disabilities in general education classroom Which will pave the way for their empowerment and will be another milestone in human resource development.

Category wise Teaching Techniques

Categories	Teaching techniques
1.Visually impaired	Use of Braille mobility training, adaption in instruction, instructional material and classroom environment.
2. Hearing impaired	Total communication approach, oral approach, modification of physical environment, interaction and oral communication.
3. Speech impaired	Speech therapy, articulation correction, speech training extracurricular activities, co-operative learning.
4.Mentally retarded educable	Individualization, ensuring learning readiness, graded curriculum repetition, periods of short duration.
5.Mentally retarded trainable	Self care, social training, sensory training, language development, craft work and music.
6.Slow learners	Individual attention, restoration and development or self confidence, development of good work habits, elastic curriculum, remedial instruction, learing contract, peer tutoring.
7.Child with emotional / behavioral disorder	Psycho analytic approach, psycho educational approach, humanistic approach and behavioral approach, increasing appropriate behavior, decreasing inappropriate behavior, preventing inappropriate behaviors.
8.Learning disabled	Behavioral intervention, cognitive behavioral intervention, medical intervention, multi sensory approach , direct instruction.
9.Physically challenged (Locomotors disabilities)	Assistive device, barrier free environment, modification of physical structures
10.Autistic Children	i)Structured teaching, ii)Speech and language therapy, iii)Social skills therapy, iv)Occupational therapy.

Conclusion

Inclusive education is a human rights issue. Professional development will provide the teachers with new knowledge and practice in the field of inclusive education. Teachers commitment, competence and acceptance of diversities will promote the success of children with special needs . An adequate insight into the inclusive teaching techniques will enable them to play their professional role with significant success for them and the special children. The positive attitude of teachers to view diversity as a natural phenomenon and not as a problem is very important in inclusive education.

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EFFECTIVENESS OF COMPUTERASSISTED INSTRUCTION IN TEACHING SCIENCE TO LOW ACHIEVERS

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Abstract

The present experimental study was undertaken with two objectives in view (i) to develop computer assisted instruction software for Class VIII Science subject and (ii) to measure the effectiveness of computer assisted instruction with special reference to low achievers. Two matched groups of low achievers were constituted for the purpose of this experiment and a normal group comprising average and above average students was also formed in order to assess how far computer assisted instruction enables the low achievers to cope with normal students. The control group and the normal group were taught through traditional lecture method while the experimental groups were taught through computer assisted instruction. The obtained results show that the computer assisted instruction was more effective than the traditional lecture method in teaching physical science and it enabled the low achievers cope with normal students to a considerable extent.

Introduction

The problem that every educator invariably encounters in teaching every subject, at every grade level of our educational system is how to teach a lesson to a class that consists of students with different skills, learning rates and learning styles. Accommodating instruction to individual differences is one of the most fundamental problems and the foremost task of any teacher. The problem of accommodating instruction to individual differences is so important that many educators have subtly suggested that instruction must be completely individualized so that every student can learn independently at his or her own rate.

Tansley and Panckhurst (1981) defined the learning disabled students as those students who in the absence of sensory defect or overt organic damage have intractable learning problems in one or more of reading, writing, speaking, and mathematics and who do not respond to normal teaching.

These students with low achievers are marked for disorders of attention, hyperactivity and impulsivity, memory disorder, and disorders in listening, reading, writing and spoken. Besides, these students exhibit poor social and interpersonal skill, visual perceptual deficit, auditory perceptual deficit and motor deficiencies. As a result, they lag behind in learning and using. But, these students with low achievers constitute such a considerable percentage of student population that they cannot be ignored. Also, one cannot conceive of any all-round national development without ensuring adequate human resource development of the disabled, deprived and disadvantaged students in every classroom. Effective and optimum utilization of other resources also depends on the degree of human resource development. Children of today are the citizens of

tomorrow and they are going to be the pillars of this country. Hence, it is very essential to ensure that each pillar is as strong as the other. This warrants a special teaching learning strategy for the students with low achievers.

Need for the Study

Now-a-days we are passing through the age of information technology wherein knowledge explosion is taking place rapidly in every sphere and new media are being extensively used for transmitting information. Many are unable to keep pace with this phenomenon. This can be attributed to the lack of development of higher mental abilities, self-study habits, initiative on the part of students, etc. The present classroom practice miserably fails to take cognizance of these. Many researchers have made efforts to develop instructional strategies which attempt to take care of the above inadequacies. These researchers have developed instructional strategies comprising various components for teaching a variety of subjects right from school to university. Almost all these researchers have studied the effectiveness of their instructional strategies in terms of achievement and reaction of students towards different components of the strategy as a whole. But, no study has been attempted so far to study the effectiveness of computer assisted instruction with special reference to socially, culturally and academically disadvantaged students

Computer-assisted instruction (computer assisted instruction) refers to instruction or remediation presented on a computer. Many educational computer programmes are available online and from computer stores and textbook companies. They enhance teacher instruction in several ways. Computer programmes are interactive and can illustrate a concept through attractive animation, sound, and demonstration. They allow students to progress at their own pace. Computers provide immediate feedback, letting students know whether their answer is correct.

The computer assisted instruction programmes provide for considerable visualization of objects and processes which are essential for formulation of accurate concepts. What impact a visual presentation can do, any amount of verbal exposition cannot do. Moreover, in a fast developing world, where knowledge explosion is taking place in every sphere, it is unreasonable to expect that the spoken or written words alone could convey the volume of relevant information to the learners. Computer assisted instruction programmes provide unique experience to the learners in the presentation of the content. Computer assisted instruction can penetrate more deeply into human character with an immediate effect and excitement than any other single medium.

Computer assisted instruction caters to individual differences. In the traditional classroom setting, the disadvantaged students are too inhibited to ask the teacher to clarify a concept or to get a doubt cleared. But, in computer assisted instruction, even if they don't understand something at the first attempt, they can understand the concept

thoroughly by making use of the provision for playback. Besides, they can also take the software to their houses and listen to or view the instructional programmes according to their own convenience and thereby learn at their own rate without inhibition or the feeling of being preyed upon by the teacher.

Chang et al. (2008)/ Chai and Tan (2009), Lee and Guo (2009), Daniel (1999), Winter (1994), Stella (1993), Reddy and Ramar (1995, 1999) and Karuppasamy (2011) have studied and established the effectiveness of computer assisted instruction. But no study has been attempted with special reference to disadvantaged students. Systematic researches are, therefore necessary to develop computer assisted instruction software so as to assess their effectiveness with reference to socially, culturally and academically disadvantaged students.

Objectives

The main objective of the study was to apply computer assisted instruction for Science subject of Class VIII and to assess its effectiveness with special reference to students with low achievers. Keeping the above main objective in mind, the following specific objectives were framed.

i) To find out whether there is any significant difference between the pre-test and the post-test mean scores of the slow learners in the control group.
ii) To assess whether there exists any significant difference between the pre-test and post-test men scores of the low achievers in the experimental group.
iii) To find out whether there is any significant difference between the post-test mean scores of the experimental group and the control group**.**

Hypotheses of the Study

i) There exists no significant difference between the pre-test and post-test mean scores of the low achievers in the control group when the subject is taught through traditional lecture method.
ii) There exists significant difference between the pre-test and post-test mean scores of the low achievers in the experimental group when the subject is taught through computer assisted instruction.
iii) There exists significant difference in the post-test performance between the control group students with low achievers and the experimental group students with low achievers.

Methodology

The various steps followed in the methodology of this study are construction of research tool, identifying students with low achievers, sampling technique, design of the study, applying computer assisted instruction for Science subject of class VIII, administration of the tool for pre-test and post-test and employing appropriate statistical techniques for arriving at scientific conclusions.

Development of Computer assisted instruction Software

An earnest effort was made to develop computer software for computer assisted instruction. A computer expert was consulted for the purpose and it was discussed with him how to develop software for computer assisted instruction based on the selected concepts / units. Though there are various computer assisted instruction programmes such as "drill and practice programme", "tutorial programmes", "generative programme", "dialogue enquiry programme" and "simulation programme", the investigator decided to follow the first two i.e., drill and practice and tutorial programmes since these are the most widely used types of computer programmes (Slavin, 1986). Accordingly the computer assisted instruction software was developed. After validation, it was used in experimental treatment.

Diagrams and sketches were also incorporated in the software in appropriate places through scanning procedure. For subjects and units different codes were allotted. The software was prepared in such a way that it ensured the following.

1) Letting students work at their own pace.
2) Measuring performance quickly and giving students information on their performance.
3) Providing immediate feedback and reinforcement

Identifying low achievers

For the purpose of this investigation the low achievers were identified on the basis of a three phase process. The phases are:

i). Identifying phase

ii). Scientific Confirmatory phase

iii). Counter Check phase

For the first phase, the third measure recommended by Transely and Guilford (1992) was followed. In the second phase, the identified low achievers were subjected to scientific confirmatory test. For this purpose standard progressive Matrices designed by Raven J.C. and successfully and effectively used by Soundararaja Rao and Rajaguru (1995) in Indian setting was administered to them as a scientific confirmatory test. In the confirmatory test, those who got less score and took more time, were classified as low achievers. Lastly, these low achievers were counterchecked on the basis of their rate of learning.

Construction of Tool

To measure the performance of the students before and after the experiment, an achievement test was constructed by the investigator on the basis of item analysis. The content validity of the tool by expert opinion, item validity by item analysis and the reliability of the tool by split half method were established.

Identifying low achievers students

For the purpose of this investigation the students with low achievers were identified on the basis of curriculum based assessment and their performance in the diagnostic tests.

Sample Design

For the purpose of this investigation, 50 students with low achievers of Class VIII from TNPMMN Higher Secondary School, Dalavaipuram were selected and two groups were formed following systematic random sampling technique. They were placed in the order of merit. All the odd number students formed the control group while the even number students constituted the experimental group. To see whether both the groups were matched ones or not, mean and standard deviation were calculated for their half yearly exam scores. Then t-test was applied. The obtained t-value (0.62) and (0.78) revealed that both the groups were matched ones before the experiment. The control group was taught through the traditional lecture method and the experimental group was taught through computer assisted instruction.

To assess how far this computer assisted instruction enabled the students with low achievers to cope with normal students, a normal group comprising average and above average students was also formed. For this group, out of 200 students every eighth student was selected on the basis of systematic random sampling technique. This normal group was also taught through the traditional lecture method only.

Data Collection

The experiment was conducted for a period of thirty working days. At the end of the experimental period, a post-test was conducted on the low achievers of the experimental group, the students of the control group and the students of the normal group. After a lapse of two months, a retention test was conducted to measure the retention of the students. The responses given by these three groups in pre-test and post-test formed the vital data required for analysis.

Scoring Procedure

The achievement test consisted of 100 objective type questions. These test items were selected on the basis of item analysis. The total score of the test was 100. For each correct answer, the score was one and for each wrong answer, the score was zero.

Statistical Techniques used in the Study

The data thus obtained were then analyzed by using appropriate statistical techniques such as mean, standard deviation and t-test.

Findings and Conclusions

1) There is no significant difference between the pre-test and post-test mean scores of the control group low achievers taught though through traditional lecture method. Though difference (refer table 1

Table 1

Pre-test and Post-test Scores Analysis of Control Group and experimental group of Low achievers

	Control group				Experimental group			
Test	N	Mean	SD	t-value	N	Mean	SD	t-value
Pre-test	25	20.4	5.42	1.92NS	25	19.6	5.37	7.55**
Post-test		25	22.6	6.37		25	36.2	9.82

Note: ** significant at 0.01 level

Moreover, an analysis of the rate of progress made by both the control group and the experimental group throws light on the effectiveness of the computer assisted instruction in teaching Science to students with low achievers. From a meager mean score of 19.6 in the pre-test, they could gain an impressive mean score of 36.2 in the post-test, which is more than double the pre-test mean score. But the control group students with low achievers could not make significant mean gain in post-test. This vouchsafes the advantage of computer assisted instruction over the traditional lecture method with special reference to students with low achievers.

2) There is significant difference between the post –test means scores of control group slow learners taught through traditional lecture method and the experimental group slow learners taught through computer assisted instruction. Further, the achievement of experimental group low achievers is higher than the achievement of control group low achievers. (refer table-2).

Table 2

Comparison between control , experimental and normal groups on post-test scores

	Post-test Scores Analysis					
	Control	Experimental Group	Normal Group	C vs E Group	C vs N	E vs N
Mean		22.80	36.20	49.50		
		5.73**	7.44**	3.42**		
SD		6.37	9.82	16.77		

Note: ** significant at 0.01 level.

Moreover, the rate of progress made by the experimental group low achievers is higher than that of the control group low achievers. In terms of percentage, the rate of progress shown by the experimental group low achievers taught through computer

assisted instruction is 90.2 percent while the rate of progress made by control group low achievers is 12.39 percent. The variation in the rates of progress made by the groups is the resultant product of implementation of computer assisted instruction and it vouches for the effectiveness of computer assisted instruction with special reference to low achievers.

3) Moreover, the rate of progress made by the experimental group students is higher than that of the control group students. In terms of percentage, the rate of progress shown by the experimental group students taught through computer assisted instruction is 100.41 percent, while the rate of progress made by the control group students is 10.12 per cent. The variation in the rates of progress made by both the groups is the resultant product of implementation of computer assisted instruction and it vouches for the effectiveness of computer assisted instruction with special reference to students with low achievers.

Conclusion

The above analysis and the findings lead to the conclusion that computer assisted instruction is more effective than the traditional lecture method in teaching Science to the students with low achievers. Further, the strategy enables the students with low achievers to cope with normal students to considerable extent. Hence, this strategy can be applied as a viable instructional strategy in inclusive setting.

Implications

1) The results of the study have established that computer assisted instruction is more effective than the traditional lecture method in teaching Science of Class VIII to the students with low achievers. When, it is very effective to the students with low achievers, it has to be equally effective, if not more effective, to other backward students like under-achievers, low achievers, and low achievers etc.
2) Since the use of the computer assisted instruction enhances the achievement of students with low achievers, it would diminish wastage and stagnation in our schools. Therefore, necessary orientation may be given at District Institute of Education and Training level so that awareness can be created among primary school and high school teachers also and they would be able to identify and combat low achievers at the early stage itself.

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LIBRARY RESOURCES FOR PWDS

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Abstract

As more information is delivered using computer and network technologies, libraries play an increasingly important role in ensuring access for all people to Internet and other information resources. In making electronic resources accessible, principles of universal design should be employed. Although a library cannot be expected to have specialized equipment for every type of disability, staff should be aware of the options for making library resources accessible and should make available equipment that they can anticipate will be used or is available at relatively low cost. In addition, develop a procedure to ensure a quick response to requests for accommodations to meet the needs of patrons with disabilities. In general, "person with a disability" means "any person who has a physical or mental impairment which substantially limits one or more major life activities including walking, seeing, hearing, speaking, breathing, learning, and working, has a record of such an impairment, or is regarded as having such an impairment." e sure that the library's World Wide Web pages and other electronic resources are designed to be accessible to people with disabilities. Consider these items in ensuring accessible electronic resources. Libraries play a catalytic role in the lives of people with disabilities by facilitating their full participation in society. Libraries should use strategies based upon the principles of universal design to ensure that library policy, resources and services meet the needs of all people.

Introduction

Libraries play a catalytic role in the lives of people with disabilities by facilitating their full participation in society. Libraries should use strategies based upon the principles of universal design to ensure that library policy, resources and services meet the needs of all people. Libraries must not discriminate against individuals with disabilities and shall ensure that individuals with disabilities have equal access to library resources. To ensure such access, libraries may provide individuals with disabilities with services such as extended loan periods, waived late fines, extended reserve periods, library cards for proxies, books by mail, reference services by fax or email, home delivery service, remote access to the OPAC, remote electronic access to library resources, volunteer readers in the library, volunteer technology assistants in the library, American Sign Language (ASL) interpreter or real time captioning at library programs, and radio reading services. Libraries should include persons with disabilities as participants in the planning, implementing, and evaluating of library services, programs, and facilities.

Disabilities and differences

Any disability or difference does not define the person. People may experience a combination of disabilities and differences and each person will have needs which are

unique to them. Any student population reflects the diverse nature of the general population and this is increasingly so due to initiatives such as widening participation.
This section considers the following disabilities and differences:

- The dyslexic spectrum
- The autistic spectrum
- Mental health
- Medical conditions
- Visual impairment
- Hearing impairment
- Physical impairment

Provision of appropriate resource/materials

Every library should have written selection/acquisition and collection development policies including standards for:

- Types and levels of provision of resources appropriate to the needs of people with disabilities.
- Resource-sharing and inter-library loan arrangements.
- Repair and maintenance of resources with particular attention being paid to adaptive equipment and audio-visual materials.
- Provision of independent access to resources
  In developing such policies it should be recognized that people with disabilities have the same information needs as the general public. However information may be required in another format.
  The major areas of suggested resource material are:
- Reference materials on disabilities.
- Special format materials
- Resources already in library collections, but not previously-identified as being useful to people with disabilities
- Resource-sharing
- Technical aids and adaptive technology
- Internet resources

It is preferable that materials and aids are readily-accessible and clearly-visible.

Reference material on disabilities

Apart from the general information needs of people with disabilities (which are as diverse as the needs of non-disabled people), it is essential to provide current and up-to-date information about the various disabilities. When selecting materials, it is important to take into account the needs of individuals, families (including siblings), carers, and professionals. Every library should collect and display:

- Current information on various disabilities including medical, educational, and legal information.

- Information to support independent living.
- Information/publications on government services.
- Information/directories about local service providers.
- Information/directories of local and national self-help groups.
- Information on equipment which can be used to assist people with disabilities.

Where possible such information should be provided in a format which is suitable to the needs of the reader.

Special format materials

Resources for people who are deaf or hearing-impaired

It is a widely-held assumption that people who are deaf or hearing-impaired do not have any special difficulties in using traditional library services and facilities. While this is certainly true for some people who are deaf or hearing-impaired it cannot be assumed that it is true for all.

A collection on deafness and hearing impairment is the most-essential area of collection development for deaf and hearing-impaired people. Such a collection should take into account the diversity of deaf and hearing-impaired people.

It is preferable that information on deafness and hearing impairment be regarded as an integral part of the library collection and is available for all, rather than as a special collection. However it is the responsibility of the library to ensure that people who can most benefit from such a collection are aware of its existence. Collections on deafness and hearing impairment should include:

- ✓ Current information on deafness and hearing impairment.
- ✓ Materials on all aspects of deafness, including legal rights, deaf culture and heritage.
- ✓ Information about organisations, institutions and individuals providing services for deaf and hearing-impaired people.
- ✓ Books and pamphlets on sign language, dictionaries of signs, etc.

  Other resources which can benefit deaf and hearing-impaired people (as well as others) include:
- ✓ High-interest/low-vocabulary reading materials
- ✓ Well-illustrated materials.
- ✓ Films/videos including captioned and non-captioned materials.

Resources for people with print disabilities

The library needs of people with print disabilities are generally the same as those of sighted people. However, by definition, people with print disabilities cannot use conventional print materials. They must depend upon large type, audio (spoken word), tactile devices (such as Braille) and/or mechanical or optical aids - or a combination of these.

One of the difficulties in providing a broad range of special-format materials for blind and visually-impaired people is the relatively low density of the blind population. Resource-sharing should be regarded as a fundamental aspect of providing services for blind and visually-impaired people. Libraries should participate in the National Union Catalogue of Materials for People with Disabilities (NUC:D). Libraries should facilitate access to the resources held by other libraries/agencies and be willing to make their own resources available to other agencies/individuals.

Collections for people with print disabilities should include:

- Large-print books - for both adult and junior readers.
- Talking books, audio magazines and newspapers (see also discussion on equipment).
- Large-print magazines and newspapers.
- Computer files of text.
- Braille and other tactile materials.
- Audio-descriptive videos.

It is recognized that, at this time, these resources are not always available or that it is not always reasonable to expect all libraries to collect all of these formats, however it is suggested that access to these resources should be provided as required, through the specialist library services available in each state.

Resources for developmentally-disabled people

The provision of resources for people with a developmental disability (the term preferred to describe people who have an intellectual impairment) is a relatively new area of collection development for libraries. The development of such collections (and services for this group of people) reflects the changes which are occurring in the social and educational environment of this group.

Information about developmental disabilities is an essential area of collection development. Every library should provide a basic collection covering a broad range of information as an integral part of the library collection. In addition people with a developmental disability will benefit from access to:

- High-interest/low-vocabulary materials
- Tape-and-text kits
- Well-illustrated materials
- Music collections
- Audio materials

Resources already in library collections, but not previously identified as being useful to people with disabilities

It is important to note that materials which are useful for people with disabilities are already in libraries although their value to different groups may not be recognized. Such materials would include:

- High-interest/low-vocabulary materials including English as Second Language materials (ESL).
- Music collections
- Spoken-word collections
- Picture books
- Books in enlarged print (particularly junior books)

Resource-sharing

As noted previously, resource-sharing should be regarded as a fundamental aspect of providing services to people with disabilities - particularly for people requiring special-format materials.

Every library with holdings of alternative-format materials should participate in the National Union Catalogue of Materials for People with Disabilities (NUC:D).

Every library should actively participate in inter-library lending both for materials and technical aids.

Contacting colleagues and networking with people and organisations working with people with disabilities is a means of further identifying resources and information.

Access to specialist collections overseas is now available through the internet.

t not discriminate against individuals with disabilities and shall ensure that individuals with disabilities have equal access to library resources. To ensure such access, libraries may provide individuals with disabilities with services such as extended loan periods, waived late fines, extended reserve periods, library cards for proxies, books by mail, reference services by fax or email, home delivery service, remote access to the OPAC, remote electronic access to library resources, volunteer readers in the library, volunteer technology assistants in the library, American Sign Language (ASL) interpreter or realtime captioning at library programs, and radio reading Services. Libraries should include persons with disabilities as participants in the planning, implementing, and evaluating of library services, programs, and facilities.

Collections

Library materials must be accessible to all patrons including people with disabilities. Materials must be available to individuals with disabilities in a variety of formats and with accommodations, as long as the modified formats and accommodations are “reasonable,” do not “fundamentally alter” the library’s services, and do not place an “undue burden” on the library. Examples of accommodations

include assistive technology, auxiliary devices and physical assistance.

Within the framework of the library's mission and collection policies, public, school, and academic library collections should include materials with accurate and up-to-date information on the spectrum of disabilities, disability issues, and services for people with disabilities, their families, and other concerned persons. Depending on the community being served, libraries may include related medical, health, and mental health information and information on legal rights, accommodations, and employment opportunities.

Assistive Technology

Well-planned technological solutions and access points, based on the concepts of universal design, are essential for effective use of information and other library services by all people. Libraries should work with people with disabilities, agencies, organizations and vendors to integrate assistive technology into their facilities and services to meet the needs of people with a broad range of disabilities, including learning, mobility, sensory and developmental disabilities. Library staff should be aware of how available technologies address disabilities and know how to assist all users with library technology.

Library Education, Training and Professional Development

All graduate programs in library and information studies should require students to learn about accessibility issues, assistive technology, the needs of people with disabilities both as users and employees, and laws applicable to the rights of people with disabilities as they impact library services.

Self-Scan with Audio Output

Scanners with JAWS software may be found at the Alternative Media Center and at the Moffitt basement general computer lab for use by students whose vision impairment precludes their use of the Book Scan scanners. There is no charge to use an audio-output scanner, which downloads scanned text into all preferred alternative media formats. Students may save scanned text onto a personal flash drive or use personal headphones to hear synthesized speech at a workstation

Conclusion

Libraries should provide training opportunities for all library employees and volunteers in order to sensitize them to issues affecting people with disabilities and to teach effective techniques for providing services for users with disabilities and for working with colleagues with disabilities.

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PROFESSIONAL DEVELOPMENT OF SPECIAL EDUCATION TEACHERS

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Abstract

The various types of disabilities that require services of special education trained personnel include specific learning disabilities, speech or language impairments, mental retardation, emotional disturbance, multiple disabilities, hearing impairments, orthopedic impairments, visual impairments, autism, combined deafness and blindness, traumatic brain injury, and other health impairments. This paper deals with the nature of job of special Education teachers, discusses the need for professional development of special education teachers; the Areas of Professional Development and Various types of professional development of special education teachers

Introduction

The various types of disabilities that require services of special education trained personnel include specific learning disabilities, speech or language impairments, mental retardation, emotional disturbance, multiple disabilities, hearing impairments, orthopedic impairments, visual impairments, autism, combined deafness and blindness, traumatic brain injury, and other health impairments. Children with these disabilities are unable to learn in a traditional classroom environment, special education classes can provide an alternative or better learning experience for these students.

They teach them basic literacy, independent living skills and communication skills. The work of special education teacher can be emotionally demanding and physically draining. Many students with mental or emotional disabilities can cause frustration for a teacher. A special education teacher should also have a solid understanding of human psychology and emotions.

Jobs in special education require individuals who not only possess patience for the students with disabilities, but an enormous capacity for understanding as well as a passion to nurture and help those less fortunate.

Nature of job of Special Education Teachers

Special education teachers use various techniques to promote learning. Depending on the disability, teaching methods can include individualized instruction, problem-solving assignments, and small group work. When students need special accommodations in order to take a test, special education teachers see that appropriate ones are provided, such as having the questions read orally or lengthening the time allowed to take the test. Special education teachers help to develop an Individualized Education Program (IEP) for each special education student. The IEP sets personalized goals for each student and is tailored to the student's individual needs and ability. Teachers work closely with parents to inform them of their child's progress and suggest techniques to promote learning at home. They are involved in the students' behavioral,

social, and academic development, helping the students develop emotionally, feel comfortable in social situations, and be aware of socially acceptable behavior. Special education teachers communicate and work together with parents, social workers, school psychologists, speech therapists, occupational and physical therapists, school administrators, and other teachers.

Where do Special Education Teachers work?

i) Special schools: Mostly you find them working in special schools helping children with the academic skills. ii)**Rehabilitation centre**: There are many public/private rehabilitation centres that employ special educators. iii) **Private support**: In India private practice is very common where many Special educators work independently. They may be working part-time in any of the facilities mentioned above along with private tutoring also.

Need for Professional Development of Special Education Teachers

Research Shows that Twenty-five percent of special education teachers leave the profession in the first three years.*(Boe, Cook, & Sunderland, 2008).* Attrition in special education is slightly greater than in general education.*(Sindelar, Brownell, & Billingsley, 2010)*

Burn-out," rate for special education teachers is extremely high compared to most other professions. 50% of special education teachers leave their jobs within 5 years. Half of those who make it past 5 years will leave within 10 years. This equates to a 75% turnover rate every 10 years (Dage, 2006).

The Reasons: Special education is a very challenging field. Here are the top 10 stressors of being a special education teacher. **1. Lack of appreciation:** Special education teachers, in most instances, do not get as much appreciation as their general education colleagues; **2. Lack of Parent support: E**stablishing a positive relationship with parents is difficult and teachers quickly feel defeated when that doesn't immediately happen. Teachers often so discouraged when parents do not return their phone, calls, respond to emails, or even read the notes they send home. **3. Lack of Public support:** Bashing teachers and their jobs has become the new form of media entertainment. It has rained especially hard on special education teachers. 4. Paperwork: Sometimes, teachers feel that they have no time to teach because they are to deal with paperwork and meetings. Additionally they have their lesson planning, report cards, progress reports, medical aid billing forms, and so much more. As a special education teacher they have to just embrace the paperwork. 5. Scheduling: Teachers have to coordinate their schedule with 15 different teachers and their schedules, and that's not including coordinating with the physical education teacher, art teacher, and the music teacher. They must account for recess and lunch when creating their resource schedule and they have to be considerate of their speech pathologists, occupational therapists, and physical therapists schedules.6.Training and supervising

paraprofessionals: Working with two other adults who are there to help the special education teachers can be extremely beneficial. They are so thankful for their aides and feel that they couldn't do their job without them. The challenge is that it also adds a considerable amount of work for the teacher as well. On top of the teacher's schedule and their student's schedule, the teacher should I also create a daily schedule for her/his "paras". Usually this setup also requires that they first teach my aides so my students can be taught. 8. Data collection: Data collection is huge in special education. The teacher need to be able to validate everything they do and make sure it coincides with everything in the student's IEP. The teacher has to keep track of and monitor all this data, understand its implications for that child's educations, and adjust instruction accordingly.9. Evidence of student growth: For students with special needs, the teacher should celebrate the smallest of accomplishments. Their growth is not going to be as fast or as noticeable as their general education peers. However, it is progress! Sometimes, it is very hard for people to recognize the successes of a student when they are constantly comparing them to the best and brightest of the class. This is only doing a disservice to the student, not the special education teacher. 10. Variability of student's needs: In all classes, we can see students who are at different ability levels, learn in different ways, and understand concepts at different times. Differentiated instruction and individualized teaching practices are challenging for all teachers. It gets even more difficult in a special education, multi-aged classroom.

First-year teachers who participated in a comprehensive set of induction activities were half as likely to leave the field as those who did not participate.(Strong and Ingersol(2004)

New special education teachers who have strong induction support report that their roles are manageable, believe that they are successful in helping students with IEP goals, and indicate that they can help even the most difficult students (Billingsley,B.,Griffin,C., SmithS.J., Kammman.M, & Israel,M.2009)

Areas of Professional Development of Special Education Teachers

No two new special educators will enter the classroom with exactly the same knowledge, experience, or level of preparation. Professional development (PD) creates opportunities for these teachers to keep learning. New special education teachers need the same PD available to all teachers, such as content-based instructional strategies. However, new special education teachers also need PD specific to their responsibilities, such as strategies that address working with students with particular needs (e.g., learning disabilities, hearing loss), implementing behavior intervention plans, or coordinating support staff (e.g., paraprofessionals). some key topics for professional development for new special education teachers are Content areas, Disability specific topics, Co-teaching and collaboration Teaching strategies, Use of technology, Paperwork, Paraprofessionals, Parents, Behavior management Teachers need to update curriculum to improve students' technical skills.

Mentors should be offered some direction to help them provide appropriate supports. There are three types of content support mentors often provide: instructional, emotional, and school culture and procedural.

Instructional Support: A primary role for mentors is to provide instructional support for new special education teachers. Instructional support does not always occur in a focused mentoring conversation. It can also take place in other contexts such as Co-planning, Modeling, Developing and implementing an action plan.

Emotional Support**:** Emotional support is among the forms of support most highly valued by new special education teachers. Emotional support includes providing reinforcement in a difficult situation, sharing similar experiences, and listening. Mentors can supply emotional support through: i) Positive affirmations (e.g., "What a great idea for dealing with that problem.") ii) Active listening (e.g., maintaining eye contact, nodding, summarizing what the speaker has said) iii) Focusing on challenges that lead to actionable situations (e.g., finding a solution to a frustration)

School Culture and Procedural Support: New special education teachers often feel isolated at their schools and overwhelmed by procedural demands. Mentors play a crucial role in helping new special education teachers to navigate their school culture and to feel confident in performing procedural requirements. Mentors can help new special education teachers:

- Connect with colleagues: Mentors can help new special education teachers to connect to key faculty and can encourage continuing collegial relationships.
- Communicate with parents: New special education teachers might need assistance in effective written communication strategies, timelines for communication, and the best way to run meetings.
- Understand policies and procedures: Mentors can encourage new special education teachers to attend all district professional development on policies and procedures and can answer questions about their roles and responsibilities.
- Master IEPs: Mentors can offer assistance in time management skills, co-planning and drafting special education teachers' paperwork, and identifying partnerships for assistance.

Link to Resources: Not all new special education teachers have the curriculum and resources they need to plan instruction. Mentors can help by providing connections to available resources

Various types of professional development of Special Education Teachers

Group Courses: This series of lessons is typically taught over time to new teachers with similar needs. For example, all new special education teachers will likely need information about procedures, such as how to write and implement IEPs.(Individual educational Plan) Many new teachers may need information about providing instruction for a diverse student body.

Group Meetings*:* These meetings are typically a time when all the new teachers in a district can meet to discuss or learn about one particular topic. Groups meetings are usually scheduled on a regular basis, and leaders and mentors must be sure to create an opportunity for follow-up for new special education teachers.

Online: In this emerging practice, a teacher participates in either a formal online format (e.g., an online course) or in a more informal one (e.g., a Webinar).

No matter the PD's format, structure, or content, research suggests that if it is to influence teacher knowledge, attitudes, and practice, it should: Align with the overall goals of induction and contain clear outcome measures; Be implemented in a planned and organized manner; Follow the said best practices: Occur over time (i.e., not a one-time workshop); Provide active opportunities to learn with feedback; Align with the larger district or state context; Focus on student data; Provide a reasonable number of evidence-based strategies; Include follow-up with a mentor

Responsive Mentoring: Responsive mentoring is a critical feature of induction and is often the primary source of support for new teachers. Mentoring is a formal or informal relationship usually between two people, one with experience in the field (mentor) and one just entering the field (mentee). Mentors assist the development of the new teacher's expertise by focusing on improving the mentee's ability to provide effective instruction. Mentors' work can be structured in a number of ways

Full-Time Mentors: Generally, full-time mentors are veteran special education teachers who devote 100% of their time to mentoring multiple teachers, earning a regular teaching salary plus a supplement. Some advantages of having full-time mentors is that they can: Focus solely on mentoring; Be matched to new teacher's characteristics and needs; Be more available and flexible for scheduling mentoring sessions; Meet with other mentors and provide support to each other.

Part-Time Mentors: Part-time mentors are typically veteran special education teachers located at the new teacher's school. They are assigned the responsibility of mentoring in addition to their regular teaching duties. Compensation usually is provided through a stipend. One advantage to this structure is proximity. New teachers have direct access to a mentor who likely has specific knowledge of the context of the teacher's own school.

Group: Typically, in group mentoring, a veteran special education teacher serves as a mentor for a group of new special education teachers. These mentors may be full or part time. The group works together on common professional development needs or to address immediate instructional needs or behavioral concerns. One advantage to this structure is that the new teachers develop a collegial network of support that might extend beyond the first year.

Electronic: In this structure, the mentor uses technology to support the new teacher. They might do this through email, blogs, discussion boards, chat rooms, or video conferencing. It can be particularly helpful for new special education teachers in certain locations (e.g., a rural setting where they are the only special education teacher, an

urban setting where there are no veterans). An advantage of this structure is that mentors can be selected according to their expertise and matched carefully to the needs of the new special education teacher. Moreover, there is great flexibility in correspondence.

Combination: One way to meet the needs of new special education teachers is to provide a variety of mentoring structures.

Reflective Mentoring: An approach in which the mentor typically asks a series of questions to provoke thoughtful reflection by the new teacher to improve classroom practice; also called cognitive coaching. It is recommended for: New teachers who have a strong command of basic teaching skills and are thoughtful about their classroom practice

Direct Mentoring: An approach in which the mentor takes on the role of problem-solver by providing specific feedback to the new teacher on how he or she can improve classroom practice. The mentor provides new special education teachers with explicit answers and advice to questions or problems they are experiencing. It is recommended for: New teachers who are struggling with solving problems on their own

Conclusion: Teachers need to update curriculum to improve students' technical skills. Teachers need continual upgrade training to incorporate technology in instructional delivery. So that all students will develop appropriate technical skills to meet course, graduation, and/or employment requirements. All students will demonstrate basic competencies in technology. Teachers need to review and update their employability profiles. The need for professional development for special education teachers, the area of Professional Development for them, and the various types of Professional development were elaborately discussed.

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EFFICACY OF AN INTEGRATIVE STRATEGY IN DEVELOPING COMMUNICATIVE SKILL IN LD STUDENTS AT MIDDLE SCHOOL LEVEL

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Abstract

The present experimental study was undertaken with two objectives in view: (i) to apply integrative strategy to develop communicative skill in students with language learning disabilities in class VIII and (ii) to measure the effectiveness of integrative strategy with special reference to students with language learning disabilities in class VIII. Two matched groups of students with language learning disabilities were constituted for the purpose of this experiment. Each group consisted of twenty five students with language learning disabilities. In order to verify how far this strategy enables the LD students to cope with normal students, a normal group was also constituted comprising average and above average students. The control group was taught though the traditional lecture method while the experimental group was taught through the integrative strategy. The normal group students were also taught through traditional lecture method. The results obtained show that the integrative strategy was more effective than the traditional lecture method in developing communication skill in students with language learning disabilities.

Key words: *Integrative strategy, students with language learning disabilities, communicative skill*

Introduction

English began as an obscure tongue, spoken in a remote and unimportant corner of the world. Today it is the most significant of all living languages. The problem that haunts every teacher at every grade level in teaching English is how to develop communicative skill in our students who differ from one another in a variety of ways. The problem of accommodating instruction to individual differences is so important that most of the educators have subtly **s**uggested that instruction be completely individualised so that every student can work independently at his or her own speed.

According to Kirk (1976) the language learning disabled students are those students who have disorders in development in language speech, reading and associated communication skills needed for social interaction. These students with language learning disabilities are marked for disorders of attention, hyperactivity and impulsivity, memory disorder and disorders in listening, reading and writing.

An instructional strategy or a learning strategy can be said to be very effective only when it caters to the student differences in the classroom. A strategy can be successful only when it ensures active participation of the students in the teaching learning process. This is where the proposed integrative strategy exactly fits in.

Need For the Study

In this twenty first century, with the globalization of knowledge and culture, the need for acquiring good communicative skill in English by all has assumed great significance. During the last two decades the use of English for communicative purposes was not confined to the elite group but extended to the people of middle and lower middle classes also. All consider communicative English to be a valid passport for a guaranteed placement and significant success in life.

The scope for developing communicative skills in plus one English syllabus is enormous. Such skills can be developed by applying an integrative strategy based on the framework of class VIII English syllabus. On scrutiny of class VIII English syllabus one can understand how the various components in class VIII English syllabus can be integrated into a viable strategy to develop communicative skills in class VIII students with language learning disabilities who are poor in retention.

Effectiveness of various instructional strategies like multimedia instructional strategy, CAI strategy, modular instructional strategy, metacognitive instructional strategy and learning strategies like active learning strategy, cooperative learning strategy, collaborative learning strategy and soft learning strategy have been established in enhancing the achievement of students in English. But no study has been attempted to devise an integrative strategy based on the framework of class VIII English syllabus and to verify the efficacy of such developed integrative strategy in developing communicative skills in class VIII students with language learning disabilities. The proposed study is an earnest effort in this regard.

Objectives

The main objective of the study was to devise an integrative strategy based on the framework of class VIII English syllabus and to assess its effectiveness with special reference to students with language learning disabilities. For achieving this main objective, the following specific objectives were framed.

1. To find out whether there is any significant difference in the performance of control group students with language learning disabilities between pre-test and post-test.
2. To know whether there is any significant difference in the performance of experimental group students with language learning disabilities between pre-test and post-test.
3. To assess whether there exists any significant difference in the post-test performance between experimental group students and the control group students.
4. To verify whether there is any significant difference in the post-test performance between control group students with language learning disabilities and the normal group students.

5. To measure whether there is any significant difference in the post-test performance between experimental group students with language learning disabilities and the normal group students.

Methodology

Experimental study was adapted by the investigators. The methodology of study included the following steps i.e. construction of tool, identifying students with language learning disabilities, selection of sample, applying the strategy, data collection, scoring procedure and analysis of data applying appropriate statistical techniques to arrive at scientific conclusions.

Construction of Tool

To measure the performance of the students before and after the experiment, an achievement test was constructed on the basis of item analysis. Validity of the tool by experts' opinion and reliability of the tool by split half method were established.

Identifying Students with Language Learning Disabilities

The students with language learning disabilities were identified on the basis of curriculum based assessment and their performance in the diagnostic tests administered for the purpose of investigation.

Sample Design

As stated above, 50 students with language learning disabilities of Class VIII from TNPMMN Higher Secondary School, Dalavaipuram were selected for the purpose of investigation. Out of the 50 students with language learning disabilities selected finally for the study, two groups were formed following systematic random sampling technique. They were placed in the order of merit. All the odd number students formed the control group whereas the even number students constituted the experimental group. To test whether both the groups were matched ones or not, mean and standard deviation were calculated for their half-yearly exam scores. Then t-test was applied. The obtained t-value (0.62) showed that both the groups were matched ones before the experiment. The control group was taught through the traditional lecture method and the experimental group was taught through integrative learning.

Data Collection

The experiment was conducted for a period of 30 working days. At the end of the experimental period, a post-test was conducted to the students of the experimental group, the students of the control group and the students of the normal group. The responses given by these three groups in pre-test and post-test formed the vital data required for analysis.

Statistical Techniques used in the Study

The data thus obtained were analysed by using appropriate statistical techniques such as mean, standard deviation and t-test.

Hypothesis wise Analysis

H 1.1 There is no significant difference in the performance of control group students with language learning disabilities between pre-test and post-test, when the subject is taught through traditional lecture method.

Table 1

Pre-test and Post-test Scores Analysis of Control Group LD students

Name of the Test	N	Mean	SD	Calculated t-value
Pre-test	25	20.6	5.25	
				1.62@
Post-test	25	23.2	6.15	

Note:@not significant at 0.05 level

There is no significant difference in the performance of the control group students with language learning disabilities taught though traditional lecture method between pre-test and post-test. Though their performance was better in the post test, they were not able to make any significant difference. **(refer table1)**

H 1.2 There exists significant difference in the performance of experimental group students with language learning disabilities between pre-test and post-test when English is taught through integrative strategy.

Table 2

Pre-test and Post-test Scores Analysis of Experimental Group students

Name of the Test	N	Mean	SD	Calculated t-value
Pre-test	25	20.2	5.21	
				11.26**
Post-test	25	42.4	8.42	

Note: ** significant at 0.01 level

There is significant difference in the performance of the experimental group students with LLD between pre-test and post-test when the subject is taught through integrative strategy. Further, their achievement is higher in post-test than in pre-test **(refer Table2)**

An analysis of the rate of progress made by both control group and experimental group shows the effectiveness of the integrative strategy in teaching English to students with language learning disabilities. From a meager mean score of 20.2 in pre-test, they could gain an impressive mean score of 42.4 in post-test, which is more than double the

pre-test mean score. But the control group students could not make significant mean gain in post-test. This vouchsafes the advantage of integrative strategy over the traditional lecture method with special reference to students with language learning disabilities.

H 1.3 There is significant difference in the post-test performance between control group students and experimental group students.

Table 3

Post-test Scores Analysis of Control Group and Experimental Group students

Name of the Test	N	Mean	SD	Calculated t-value
Pre-test	25	23.2	6.15	
				9.23**
Post-test	25	42.4	8.42	

Note: ** significant at 0.01 level

There is significant difference in the post-test performance between the control group students taught through traditional lecture method and the experimental group students taught through integrative strategy instruction. Moreover, the achievement of the experimental group students is higher than the achievement of the control group students. **(refer Table 3)**

Further, the rate of progress made by the experimental group students is higher than that of the control group students. In terms of percentage, the rate of progress shown by the experimental group students taught through integrative strategy instruction is 109.9 percent, whereas the rate of progress made by control group students is 12.62 percent. The variation in the rates of progress made by both the groups is the resultant product of implementation of integrative strategy and it vouches for the effectiveness of integrative strategy with special reference to LD students.

H 1.4 There is significant difference in the post-test performance between control group students with language learning disabilities and normal group students.

Table4

Post-test Scores Analysis of Control Group and Normal Group

Name of the Test	N	Mean	SD	Calculated t-value
Pre-test	25	23.2	6.15	
				14.29**
Post-test	25	51.6	7. 84	

Note: ** significant at 0.01 level

There is significant difference in the post-test performance between the control group students with language learning disabilities and the normal group students. Moreover, the achievement of normal group students is higher than the achievement of control group students with language learning disabilities. **(refer Table 4)**

The mean value (23.2) obtained by the control group students in the post-test reveals that they could make a meager mean gain only and they could not narrow down the gap between them and the normal group students. It means that the traditional lecture method could not enable control group students with language learning disabilities to cope with normal students.

H 1.5 There exists no significant difference in the post-test performance between the experimental group students with language learning disabilities and normal group students.

Table 5

Post-test Scores Analysis of Experimental Group and Normal Group

Name of the Test	N	Mean	SD	Calculated t-value
Pre-test	25	4 2.4	8.12	3.97**
Post-test	25	51.5	7. 84	

Note: ** significant at 0.01 level

There is significant difference in the post-test performance between the experimental group students with language learning disabilities and the normal group students. The performance of the normal group students is better than the performance of experimental group students with language learning disabilities. **(refer Table 5)**

However, a critical analysis of mean value signifies that the experimental group students with language learning disabilities significantly improved their achievement after the experiment. Further, the integrative strategy instruction enabled the experimental group students with language learning disabilities to cope with normal students to a great extent. The narrowed down gulf of difference between both the groups bears testimony to the effectiveness of the integrative strategy. Moreover, a comparative study of Table-4 and Table-5 testifies to the advantage of integrative strategy over the traditional lecture method.

Conclusion

The results of the study reveal that integrative strategy is more effective than the traditional lecture method in teaching English to the students with language learning disabilities of Class VIII. If it is very effective to the students with language learning disabilities, it will be surely effective, if not more effective, to other backward students such as under-achievers, low-achievers and slow learners. The use of integrative strategy instruction enhances the achievement of students with language learning disabilities. It implies that the wastage and stagnation in the schools can be diminished. Hence, necessary orientation can be given at DIET level so that awareness can be created among primary school and high school teachers also and they would be able to identify and combat learning disabilities at the early stage itself. Keeping the result of the study in mind, the NCERT and SCERT can conduct orientation programmes for the

in-service teachers for creating awareness among them about the effectiveness of the integrative strategy which will find an expression in their classroom practices.

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ROLE OF OPEN AND DISTANCE LEARNING FOR PERSONS WITH DISABILITIES

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Abstract

Technology has been of immense help in assisting persons with disabilities (PWDs) in education. In order to provide open access to higher education to all especially to persons with disabilities (PWDs) who could not join the formal system of education due to inbuilt constraints of the formal system. Open and Distance Learning institution have been increasing their access to higher education and training for larger segment of population in all categories by incorporating all available technologies effectively. The different technologies would supplement and complement the other modes of delivery thereby enhancing the learners' skills and eliminate the fear of distance form a classroom teacher. Further, it delivers cost effective and quality teaching and training with easy understanding signals. This paper focused the need of Open and Distance Learning (ODL) for Person with Disabilities (PWDs) through the technologies which are available and applicable to them.

Introduction

"Life-long education is a cherished goal of the educational process. This presupposes universal literacy. Opportunities will be provided to the youth, housewives, agricultural and industrial workers and professionals to continue the education of their choice, at the pace suited to them. The future thrust will be in the direction of open and distance learning (ODL)"

– National Policy on Education (1986).

Education is the route to the full development of people as human beings with social, spiritual, intellectual, and cultural aspirations as well as with economic interests (Daniel, 2004). Open and Distance Learning (ODL) has emerged as a business unusual approach in increasing education opportunities to reach the unreached. It has the potentiality to bring education to the geographically dispersed. Increasing access to formal education at school and higher education levels and creating a learning community both in rural and urban areas through non-formal education such as ODL mode is an unavoidable and it is needed for accelerating achievement of our educational goal. Learner-centric approach plays a pivotal role in ODL and Learners' are heterogeneous group and their level of understanding differs from individual to individual and they are from different segments of the population from different places and also ODL is an effective tool for teaching and training person with disabilities (PWDs) particularly.

Different Disabilities

A disability is a contested concept and a disability is an umbrella term, covering impairments, activities and participation restrictions. Disabilities are the consequence of an impairment that they are:

- Physical Disability
- Sensory Disability
- Vision impairment
    - ✓ Hearing impairment
    - ✓ Olfactory and gustatory impairment
    - ✓ Somatosensory impairment
    - ✓ Balance disorder
- Intellectual Disability
- Mental Health and Emotional Disabilities
- Pervasive Developmental Disorders
- Developmental Disabilities
- Non-Visible Disabilities

Difficulties Facing by PWDS

A person with a disability studying in mainstream educational institutions experiences many difficulties in navigating through the obstacle course of the Indian educational system. Problems exist in many areas like

- course content,
- staff,
- facilities,
- resources
- educational and examination process
- physical inaccessibility of educational institutions,
- unavailability of accessible content in different languages,
- lack of trained and sensitive teachers, and
- the lack of awareness about developments in enabling technologies

ODL and PWDs

The role of Open and Distance Learning (ODL) as an intervening strategy break the conventional business as usual and to providing basic educational services and dissemination of information and knowledge that effects personal and community life of individual in general and Person with disabilities in particular. It is evident that the collaboration and networking among the ODL providers and stakeholders is necessary to reach the millions of the students and to accelerate the achievement of our national goal of education.

The higher education is expected to accommodate for educating and training high quality human resources with necessary skills to command the best in the national development schema. It is recognized that the recognized the importance of ODL and suggested strategies for development of the ODL as an alternative system to increase access to higher education. Again the challenge for ODL to become a mainstream higher education system is to have shift in paradigm of attaching importance to it as a vehicle to meet higher education needs. It is needless to prove the success of ODL in delivering mass higher education by means of utilizing all available technologies in education. If technologies are being effectively implemented in all aspects, there is no doubt that the person with disabilities could reach their level of expectations for their study and training without fail. On the other hand, following are the reasons to prefer ODL:

- Authorization
- Flexibility
- Tuition Fees
- Personal Support and Service
- Study Materials
- Technological support
- Digital learning environment

Education systems need to be more realistic and conscious of diversification in order to close the social class gap in education. ODL mode as the best because one may continues to leave in his/her environment with necessary adaptations while studying. ODL Universities are to be encouraged to make provisions for all including the disadvantaged to have their reputation felt.

Technologies for Pwds

There are number of devices are being widely developed and implemented for PWDs' learning and training. Some of them are:

- Computer-based screen readers
- Screen magnifiers
- Screen readers for phones
- Text-to-Speech (TTS)
- Dictation software
- Electronic low vision aids
- Optical low vision aids
- Accessible OCRs
- Scanners
- Braille Production System
- Applications for keyboarding and spelling training
- Math Aids
- Digital Recorders

- Tactile Graphic Production system
- Braille Note Taker
- Other talking devices

Open and distance learning is getting more dependent on information and communication technology (ICT) and has been playing an important role in the delivery strategies of ODL. Effective applications of all technologies available make the process of providing teaching and training of PWDs through ODL in a productive way.

Role of Technology in Teaching and Training PWDs

Technology has been of immense help in assisting people with disability in education or even otherwise in coping up with day to day tasks. The role and the use Technology in Open and Distance Learning (ODL) is a proven fact now. The ODL system responded positively and quickly to the revolution in Technology. The reasons behind are:

- Reduce the cost of imparting education
- Introduce need based educational programmes to a large number of people and
- Reduce time required for sanctioning new programmes by adopting new flexible nature of administration.

The use of modern technology as an assistive tool to enable PWDs and has made it possible for them to read and work independently.

Conclusion

Education is the stepping stone for every human to build a successful life and career and this applies to everyone including people with disabilities. India having signed United Nations Convention on Rights of Persons with Disabilities (UNCRPD) has undertaken full responsibility of bringing the disabled citizens to the main stream. UGC has started teacher preparation, establishing special cell for PWDs in universities and colleges, constructing infrastructure facilities and providing finance and support. The concept of ODL and its proven effectiveness to bring education and learning opportunities to PWDs is yet to be grasped by policy makers, leaders, practitioners and policy implementers. ODL as an alternative opportunity to pursue formal education among the PWDs and they can get all educational opportunities without any other support and confidently approach anyone without any hesitation by means of accommodating appropriate technologies available around them effectively.

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USE OF NEW TECHNOLOGIES FOR TEACHING AND TRAINING TO PWDS

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Abstract

The meaning of the term 'Education' is very broad. It has its literary as well as technical meaning. The education is mainly considered as a process of human development. There are some special types of students called exceptional children needs specific education. The term 'children with specific learning disabilities means those children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language spoken or written which may manifest itself in a imperfect ability to listen think , speak, read, write, spell or do mathematical calculations. This paper discussed some methods of new technologies for teaching person with a disability.

Introduction

A teacher who teaches for disabled students faces tough day daily. Statistics clearly depicts that 75% faculties are getting out of their job in this field. Staff faces variety of issues which is hard to explain in one go. Some of them are myth says that teaching disable students is easier than regular students, generally we denote them with a term person with disabilities but they will be having multiple issues to be dealt with which is again a challenge to a tutor. Teachers who teach for disable students automatically got isolated from their normal professionalism. Parents of disabled students will never try to understand the issues faced by the staff. There also exist financial crises in dealing with such students. In this paper we introduce some new technologies that find solution for some issues to teach those students. Further this paper is divided into three section viz., robotic therapy; hybrid ontology based e-learning and algorithmic thinking using haptic models.

Robotic Therapy

Much evidence suggests that intensive therapy improves movement recovery. But such therapy-is expensive, because it requires. therapists on a person-to-person basis. Recently, 'there has been an [1] increased interest in restoring functions through robot-aided therapy. This' approach is to design therapy platform, such as force fields and moving constraints, to substitute therapist's work. In this paper, the role of a therapist is replaced by the learned skill. When a human performs a task, their actions reflect the skill associated with that task. When one does a particular task many times, each time it is little different although it represents the same skill. Since Hidden Markov Model is feasible to model a stochastic process, such as speech or a certain assembly skill, it is possible to characterize the skill of moving along a desired trajectory, In this paper, we have modelled the human action so

that. The underlying nature of' it is revealed and can be used to transfer the skill to people with disabilities. It is' desired that persons with disabilities can train the manipulation skill. The skill is. Incrementally improved through learning practice, learning from observation is a paradigm where one observes other persons' performance and learns from it. This is also like physical therapy training for a specific disability. In this paper we presented a HMM based approach for labyrinth moving skill learning and transferring the learned skill to persons with disabilities. The multidimensional model is built for the XV plane translation. The learned skill is not the best or the worst one of the numerous of task executions, but the one the operator is most likely to do. The learned skill was used as a therapist for persons with disabilities. They were asked to follow the "virtual therapist" as closely as possible. The difference between the subject and the "virtual therapist" provides visual feedback that helps eye-hand coordination control capability. After several times of therapy training, operators could control the end-effectors tip to avoid collisions and make the trajectory smoother. The purpose of therapy is to restore the lost function of persons with disabilities to the extent of normal subject. What is presented in this paper is different from the robot- aided therapy device. This paper emphasizes the movement control through eye-hand coordination training through learning from normal subject's performance. So once the skill has been learned, the labyrinth trajectory can be used as a robotic physical therapy tool for upper limb coordination, tremor reduction and motion control capabilities.

Teaching Algorithmic thinking using Haptic Models

Computer science [2] plays a prominent role for visually impaired students (VI) as a regular subject, computer science is nowadays also taught to VI in mainstream classes in most countries with a functioning school system. This is one of the consequences of the adoption of the Convention on the Rights of Persons with Disabilities: The UN General Assembly stated in Article 24 that all states parties shall ensure an inclusive education system at all levels. Furthermore, computer science is a popular major choice for high school students with disabilities planning on going to college. Moreover, computer science is essential for the development and availability of most assistive technologies. They are crucial for educational inclusion and also for an equal participation in society. Assistive technologies allow VI to read and write in a normal way and to access information. But assistive technologies and the knowledge how to use them are certainly not enough for a successful inclusion. VI students in inclusive education systems daily feel that they are different, because they are usually alone among nondisabled people. Their physical difference leads to a strong pressure to adapt. They do not like to be different, and they do not like attention drawn to them. A study shows that they are often placed in atypical educational and social situations and therefore they view assistive technologies as stigmatizing obstacle for the inclusion.

Such a typical situations arise e. g. from their technical aids, special education teachers, or fundamentally different teaching concepts. In computer science, algorithmic thinking is a basic ability that is fundamental for successful programming. Some students do not know how to program, because they do not know how to create algorithms, mainly due to their lack of general problem solving abilities Gomes et al. identified three main problems: Relating knowledge, problem understanding and reflection about the problem and the solution. Because of the uncommon perception and therefore the world view of VI, especially the task of relating knowledge can differ substantially in comparison to sighted students. This problem becomes even more apparent in inclusive classes. Sighted teachers and students tend to rely heavily on diagrams to facilitate the comprehension [4] and the majority of problem descriptions are based on visual media like sketches, graphics or animations. However, VI students need descriptions that address more than only the visual sensory channel. Providing these would be an advantage for all students, because the more senses that are activated, the more likely it is that information will be encoded. Reflecting about the solution after they understood the problem should then be the same challenge for VI and sighted students. With this paper we propose an inclusive teaching method to introduce algorithmic thinking. In contrast to many visually oriented methods that cause atypical situations for VI, we used a haptic model (toy building bricks and plates) suitable for both, VI and sighted students. Of course we do not intend to substitute the several approved teaching methods to introduce algorithmic thinking. We intend to add a new method that allows teaching this topic in mainstream classes that include VI students. There are only a very limited number of people who have a visual impairment. Therefore the testing groups in this area naturally are not very big.

VI are supposed to have learned the individual handicapspecific techniques (e. g. screen reader, Braille display, display modes) outside the ordinary class in special trainings. This includes safe handling of handicap-specific input and output devices (especially the keyboard), of the graphical user interface, and the basics of file management.

This compensates most of the differences between the handicaps and removes the disadvantage compared to normally-sighted students, who are able to tap the basic user skills more intuitively.

- Lessons should address more than only the visual sense. This means that teaching should address the haptic or auditory sensory channel, too. We believe that olfaction and the gustatory sense are hardly usable.
- Teaching concepts should basically be beneficial for all students. Teaching concepts that are useful only for VI should be excluded.
- VI students should get just the necessary and not more attention compared to other students.

This technology uses toy building bricks and plates. They are supposed to help all students understanding the given problem by recreating the initial situation and the steps of the solution on the plate. We assume that these tools are known by most of the

students and are able to attract their attention. The haptic model is suitable for both, VI and sighted students.

In our case study it turned out that the proposed teaching method is a suitable way to teach basic algorithmic thinking to VI. After using the haptic model, all participants were able to understand the underlying concepts and to solve the given tasks. Furthermore they were able to describe the algorithms with their own words. The method has the advantage to inhibit the common problem of thinking of many steps concurrently, because it forces the students to carry out the steps with their hands consecutively. Therefore this method is also a suitable way to teach sighted students, and can presumably be successfully used in inclusive classes as well. An additional advantage is, that the method does not need expensive or complicated equipment, but only relies on a few very simple tools. The spreadsheets are available online.

The major limitation of our experiment is the small sample size. Fortunately, the number of VI is relatively small. Unfortunately, this imposes a major restriction to the size of VI test groups. Therefore, the preconditions (educational and social backgrounds, disabilities etc.) are very different in larger groups. However, the focus of our research was to examine whether such a teaching method is viable, and not to perform an extensive quantitative analysis. We considered the opportunity to test the concept in inclusive mainstream classes, but the presence of an additional foreign teacher would have lead to further atypical situations for the included VI and we started with the idea to reduce such situations.

Conclusion

Teaching for disabled students is a challenge but it could be made possible with the help of trending technologies. These two technologies though have little drawbacks it is capable of making a noticeable change in the life of disabled students. Researchers are going on in this area to make it better. These researches would give disabled students a equality in education as same as normal students which enlighten the education system.

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USE OF ASSISTIVE TECHNOLOGY FOR TEACHING AND LEARNING TO DISABILITIES

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Abstract

Nowadays learning technologies transformed educational systems with impressive progress of Information and Communication Technologies (ICT). Furthermore, when these technologies are available, affordable and accessible, they represent more than a transformation for people with disabilities. In this paper presents on overview of the assistive technology tools for students with learning disabilities in the education classroom and the best practices for teaching students with learning disabilities. In this lecture, I have considered technology applications for PWD$_s$, assistive technology for persons with learning disabilities, assistive technology for learning disabilities, types of learning problems does assistive technology address, and Kinds of Assistive technology tools. Assistive technology devices are any item, piece of equipment, or product system (software) used to increase, maintain, or improve the functional capabilities of a student with disabilities. Assistive technology comes in different forms, whether it is through a learning software program or through hardware, such as a Braille keyboard. An example of assistive technology software would be a voice recognition software program that can assist students who are physically unable to type using a keyboard. The technology enables students with learning disabilities to work more efficiently.

Introduction

Disability is the consequence of an impairment that may be physical, cognitive, mental, sensory, emotional, developmental, or some combination of these that result in restrictions on an individual's ability to participate in what is considered "normal" in their everyday society. A disability may be present from birth, or occur during a person's lifetime.

Disabilities are an umbrella term, covering impairments, activity limitations, and participation restrictions. An *impairment* is a problem in body function or structure; an *activity limitation* is a difficulty encountered by an individual in executing a task or action; while a *participation restriction* is a problem experienced by an individual in involvement in life situations. Thus, disability is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives.

—World Health Organisation

Technology Applications for Pwd$_s$

The importance of technology that assists students to access content more easily cannot be overstated. Established technology includes a wide variety of tools, including: calculators, note-taking or voice-recognition programs, screen reading software and

digital organizers. Added to these are today's modern applications that provide students with independent learning opportunities as part of daily learning routines. Apps get high marks from teachers as motivating, technological tools that engage students to independently practice math, writing, reading, study skills, memory strategies, organization, note-taking or handwriting by strengthening speed, accuracy, automatic recall and critical thinking skills.

Students with learning disabilities can be successful learners when they identify their learning strengths and the strategies that work best for them to comprehend and retain information. To that end, teachers must assess individual learning styles and provide the appropriate instructional approaches that can maximize each student's learning potential. By incorporating new instructional approaches with traditional teaching methods for students with learning disabilities, learning success for every child is possible. For example, while Braille reading and writing techniques have helped blind or visually-impaired students continue their education since the nineteenth century, new assistive computer technologies (AT) that include mobility, hearing, and visual aids make Braille, as revolutionary as it was, pale in comparison.

Assistive Technology for Persons With Learning Disabilities

Assistive technology (AT) is available to help individuals with many types of disabilities — from cognitive problems to physical impairment. This article will focus specifically on AT for individuals with learning disabilities (LD).

The use of technology to enhance learning is an effective approach for many children. Additionally, students with LD often experience greater success when they are allowed to use their abilities (strengths) to work around their disabilities (challenges). AT tools combine the best of both of these practices.

Assistive Technology for Learning Disabilities

AT for Persons with LD is defined as any device, piece of equipment or system that helps bypass, work around or compensate for an individual's specific learning deficits. Over the past decade, a number of studies have demonstrated the efficacy of AT for individuals with LD. AT doesn't cure or eliminate learning difficulties, but it can help your child reach her potential because it allows her to capitalize on her strengths and bypass areas of difficulty. For example, a student who struggles with reading but who has good listening skills might benefit from listening to audio books.

In general, AT compensates for a student's skills deficits or area(s) of disability. However, utilizing AT does not mean that a child can't also receive remedial instruction aimed at alleviating deficits (such as software designed to improve poor phonic skills). A student could use remedial reading software as well as listen to audio books. In fact, research has shown that AT can improve certain skill deficits (e.g., reading and spelling).

AT can increase a child's self-reliance and sense of independence. Kids who struggle in school are often overly dependent on parents, siblings, friends and teachers

for help with assignments. By using AT, kids can experience success with working independently.

Types of Learning Problems Does Assistive Technology Address

AT can address many types of learning difficulties. A student who has difficulty writing can compose a school report by dictating it and having it converted to text by special software. A child who struggles with math can use a hand-held calculator to keep score while playing a game with a friend. And a teenager with dyslexia may benefit from AT that will read aloud his employer's online training manual. There are AT tools to help students who struggle with:

- **Listening**

Certain assistive technology (AT) tools can help people who have difficulty processing and remembering spoken language. Such devices can be used in various settings (e.g., a class lecture, or a meeting with multiple speakers).

- **Math**

Assistive technology (AT) tools for math are designed to help people who struggle with computing, organizing, aligning, and copying math problems down on paper. With the help of visual and/or audio support, users can better set up and calculate basic math problems.

- **Organization and memory**

Assistive technology (AT) tools can help a person plan, organize, and keep track of his calendar, schedule, task list, contact information, and miscellaneous notes. These tools allow him to manage, store, and retrieve such information with the help of special software and hand-held devices.

- **Reading**

There is a wide range of assistive technology (AT) tools available to help individuals who struggle with reading. While each type of tool works a little differently, all of these tools help by presenting text as speech. These tools help facilitate decoding, reading fluency, and comprehension.

- **Writing**

There is a wide range of assistive technology (AT) tools available to help students who struggle with writing. Some of these tools help students circumvent the actual physical task of writing, while others facilitate proper spelling, punctuation, grammar, word usage, and organization.

Kinds of Assistive Technology Tools

The term "assistive technology" has usually been applied to computer hardware and software and electronic devices. However, many AT tools are now available on the Internet. AT tools that support kids with LD include:

- **Abbreviation expanders**

Used with word processing, these software programs allow a user to create, store, and re-use abbreviations for frequently-used words or phrases. This can save the user keystrokes and ensure proper spelling of words and phrases he has coded as abbreviations.

- **Alternative keyboards**

These programmable keyboards have special overlays that customize the appearance and function of a standard keyboard. Students who have LD or have trouble typing may benefit from customization that reduces input choices, groups keys by color/location, and adds graphics to aid comprehension.

- **Audio books and publications**

Recorded books allow users to listen to text and are available in a variety of formats, such as audiocassettes, CDs, and MP3 downloads. Special playback units allow users to and search and bookmark pages and chapters. Subscription services offer extensive electronic library collections.

- **Electronic math work sheets**

Electronic math worksheets are software programs that can help a user organize, align, and work through math problems on a computer screen. Numbers that appear onscreen can also be read aloud via a speech synthesizer. This may be helpful to people who have trouble aligning math problems with pencil and paper.

- **Freeform database software**

Used in conjunction with word processing or other software, this tool allows the user to create and store electronic notes by "jotting down" relevant information of any length and on any subject. He can later retrieve the information by typing any fragment of the original note.

- **Graphic organizers and outlining**

Graphic organizers and outlining programs help users who have trouble organizing and outlining information as they begin a writing project. This type of program lets a user "dump" information in an unstructured manner and later helps him organize the information into appropriate categories and order.

- **Information/data managers**

This type of tool helps a person plan, organize, store, and retrieve his calendar, task list, contact data, and other information in electronic form. Personal data managers may be portable, hand-held devices, computer software, or a combination of those tools working together by "sharing" data.

- **Optical character recognition**

This technology allows a user to scan printed material into a computer or handheld unit. The scanned text is then read aloud via a speech synthesis/screen reading system. Optical Character Recognition (OCR) is available as stand-alone units, computer software, and as portable, pocket-sized devices.

- **Personal FM listening systems**

A personal FM listening system transmits a speaker's voice directly to the user's ear. This may help the listener focus on what the speaker is saying. The unit consists of a wireless transmitter (with microphone) worn by the speaker and a receiver (with earphone) worn by the listener.

- **Portable word processors**

A portable word processor is lightweight device that is easy to transport (e.g., from classroom to home). It can be helpful to kids who may have trouble writing by hand and prefer to use a keyboard. Word processing allows the user to edit and correct his written work more efficiently than doing so by hand.

- **Proofreading programs**

Students who struggle with writing (e.g., spelling, grammar, punctuation, word usage, and sentence structure) may benefit from software programs (included in many word processing systems) that scan word processing documents and alert the user to possible errors.

- **Speech-recognition programs**

A speech recognition program works in conjunction with a word processor. The user "dictates" into a microphone, and his spoken words appear on the computer screen as text. This can help a user whose oral language ability is better than his writing skills.

- **Speech synthesizers/screen readers**

These systems can display and read aloud text on a computer screen, including text that has been typed by the user, scanned in from printed pages (e.g., books, letters), or text appearing on the Internet.

- **Talking calculators**

A talking calculator has a built-in speech synthesizer that reads aloud each number, symbol, or operation key a user presses; it also vocalizes the answer to the problem. This auditory feedback may help him check the accuracy of the keys he presses and verify the answer before he transfers it to paper.

- **Talking spell checkers and electronic dictionaries**

Talking spell checkers and electronic dictionaries can help a poor speller select or identify appropriate words and correct spelling errors during the process of writing and proofreading. Talking devices "read aloud" and display the selected words onscreen, so the user can see and hear the words.

- **Variable-speed tape recorders**

Tape recorders/players allow a user to listen to pre-recorded text or to capture spoken information (e.g., a classroom lecture) and play it back later. Variable speed control (VSC) tape recorders speed up or slow down the playback rate without distorting the "speaker's" voice.

- **Word-prediction programs**

Word prediction software can help a user during word processing by "predicting" a word the user intends to type. Predictions are based on spelling, syntax,

and frequent/recent use. This prompts kids who struggle with writing to use proper spelling, grammar, and word choices, with fewer keystrokes.

Conclusion

Assistive technology can be very beneficial because it can be used to help children with disabilities. Using the computers and other communication devices is a helpful way for the students that cannot communicate their thoughts clearly by traditional means. Assistive technology can be very effective in helping students improve their functional ability in the classroom. With the advancement of new technology, students with physical disabilities now have the opportunity to participate and be educated in the regular education setting. While each students need is different, an assessment must be completed to determine which device is best suited for that student. Educators and staff should be aware of the types of software devices available since technology is changing at a rapid pace.

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CRITICAL REVIEWS OF PWDS ACT-2005

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Abstract

According to the census, 2001, 2.19 crore (2.13%) of the total population of the country are persons with disability, and that 1.67% of the total population within tha age group 0-19 years are disabled. Three out of five disabled children in the age group 0-19 age groups. The disabled children living in poverty are among the most deprived in the world. The Act provides for both preventive and promotional aspects of rehabilitation like education, employment and vocational training, reservation, research and manpower development, creation of barrier-free environment, rehabilitation of persons with disability, unemployment and establishment of homes for persons with severe disability, etc.

Introduction

India has one of the more developed national policy frameworks for disability of developing countries, though there remains scope for improvement, in particular at the sub-national level. However, as in many areas of social policy, challenges of institutional capacity and coordination have contributed to implementation that frequently leaves much to be desired. Schools must try to meet the individual needs of each child with disabilities by providing special education and related services. The federal law that gives children with disabilities from birth to age 21 the right to a free and appropriate education is called the Individuals with Disabilities Education Act (IDEA). Appropriate means that the educational services must be individually designed to meet each child's unique needs.

The Act provides for both preventive and promotional aspects of rehabilitation like education, employment and vocational training, reservation, research and manpower development, creation of barrier-free environment, rehabilitation of persons with disability, unemployment and establishment of homes for persons with severe disability, etc.

Main Provisions of the Act

- Prevention and Early Detection of Disabilities
- Education
- Employment
- Non-discrimination
- Research and Manpower Development
- Affirmative Action
- Social Security
- Grievance Redressal.

Child Rights

Each child with a disability has the right to:

- a free, non-biased evaluation in the language he or she knows best
- an Individualized Education Plan (IEP) for children and youth ages 3-21 years or an Individualized Family Service Plan (IFSP) for children younger than 3 years
- receive special education and/or related services as described in the child's IEP or IFSP
- be evaluated and receive services within a pre-set timeframe
- participate in the general education curriculum and non-academic activities with non-disabled peers whenever possible
- be taught by highly qualified, or state certified, special education teachers
- free transportation to and from school
- be part of the decision-making process and to attend IEP or IFSP meetings, if appropriate
- not be suspended from school for more than 10 consecutive days, if the behavior is related to the child's disability
- attend private school, at public expense, if the student's educational needs cannot be met through the public school's special education program
- a longer school year, if the student would experience regression because of the summer break

Family Rights

Families of children with disabilities have the right to:

Families must:

- be fully informed by the school about their rights in the special education process
- be notified in writing before an evaluation, re-evaluation or change in their child's classification or placement
- give "informed consent" before an initial evaluation or placement
- attend and participate in any meetings in which their child's education is being discussed, including Individualized Education Plan (IEP) or Individualized Family Service Plan (IFSP) meetings
- invite others involved in the child's life to participate in the meetings
- tape record meetings
- request translations if English is not their primary language
- be kept informed of their child's progress at least as often as parents of non-disabled children
- Examine their child's educational records, have them explained, and request that information that is inaccurate or inappropriate be corrected.

Tamil Nadu State Schemes for Persons with Disabilities

State Disability Pension

The state is giving financial assistance to those people with disabilities who have multiple disabilities and come under severe disability. People with blindness are not eligible to avail this scheme.

Bus Concession

The state bus transport is providing facility of free travelling to the people having more than 100% of disability/sight loss as well as to the escort.

Educational Scholarship

The state provides educational scholarship to the person with disabilities. There are three categories of scholarships as per the classes which are given below:

- 1st to 5th std: Rs 500/- per anum
- 6th to 8th std: Rs 1500/- per anum
- 9th to 12th std: Rs 2000/- per anum
- Under graduate: Rs 3000/- per anum
- Post graduation and Professional courses : Rs 3500/- per anum

Unemployment allowance

The state is giving financial assistance to the educated unemployed people with disabilities. This scheme is applicable to all types of disabilities irrespective of their family income. There are three categories of assistance:

- Those who have completed secondary education/10th std: Amount is Rs 300/per month
- Those who have completed higher secondary/12th : Amount is Rs 350/- per month
- Above graduation : Rs 450/- per month

Incentive for marriage between disabled and non- disabled

This scheme is known as 'marriage assistance to normal persons marrying visually Handicapped'. There are two types of categories of assistance:

- If non-disabled married to a disabled, then amount is Rs 25,000/- one time assistance. They are also giving a gold coin worth of 4 grams.
- If one of the partner has completed his/her graduate degree, then lump-sum amount is Rs 50,000/- and a gold coin worth of 4 grams.

Conclusion

India as a welfare State is committed to promote overall development of its citizens including those who are differently abled in order to enable them to lead a life of dignity, equality, freedom and justice as mandated by the Constitution of India. For the persons with disabilities, the changing world offers more new opportunities owing to technological advancement, however, the actual limitation surfaces only when they

are not provided with equal opportunities. Therefore, bringing them in the society based on their capabilities is the need of the hour.

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TEACHERS FOR ALL: INCLUSIVE TEACHING FOR CHILDREN WITH DISABILITIES

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Abstract

There is a global shortage of teachers, particularly of teachers who are sufficiently trained and motivated to include children with disabilities in regular schools. Yet such inclusion is vital for achieving Education for All goals and bringing the millions of currently excluded children into education. In order to develop the skills, experience and confidence to be inclusive of all children, teachers need to learn about and practice inclusive education during pre-service and in-service training, and they need to be given opportunities for continuing professional development (which extends beyond simply attending training courses) throughout their careers. Every teacher needs to learn about inclusive education, from day one of their training. This should be achieved by embedding inclusion, rights and equality throughout all training and not simply covering these issues through standalone courses. Every teacher also needs opportunities for inclusive education practicum during their training, and to feel supported (for instance by specialist colleagues) to continue trying new ideas throughout their employment. There needs to be an effective balance of theoretical and practical learning for teachers at pre-service and in-service stages. Inclusive education training and continuous professional development need to be designed and delivered with inputs from diverse stakeholders, in particular community members and professionals with disabilities, to give a stronger sense of reality to teachers' learning experiences.

Introduction

Globally we need more well-trained and motivated teachers. Good teachers can help ensure that every child learns to their full potential from an early age and enters adult life well-equipped to be active citizens and support the development of their community and country. Many countries do not have enough teachers, let alone enough teachers who have received sufficiently high quality pre- and in-service training and access to continuing professional development. The lack of well-prepared and motivated teachers impacts on the enrolment, participation and achievement of all children – but can be particularly detrimental to the education of children from marginalized groups, who may need some extra encouragement or assistance to reach their educational potential. Teachers are often simply not trained or supported to teach children with disabilities, which makes these children among the most marginalized in terms of educational opportunity and attainment. An estimated 15% of the world's population has a disability. Globally, 93 million children are estimated to have moderate and severe disabilities – and many of these children are out of school. That means they are not being given the chance to become empowered as individuals and support their communities. The exclusion of children with disabilities from education and from fair life chances requires urgent and sustained attention. In particular, attention needs to be paid to preparing teachers who are capable of including children with disabilities in the

education process. This paper first provides more detail about the context and scale of the challenge. It then outlines five broad issues that need addressing if we are to prepare, recruit and support enough teachers, with appropriate skills, to educate every child – including those with disabilities.

The education of children with disabilities is an urgent issue

The number of children of primary school age who are out of school fell from 108 million in 1999 to 61 million in 2010, but progress has stalled in recent years. Although there are25% more children in secondary school today than in 1999, 71 million adolescents of lower secondary school age were out of school in 2010; as with primary education, progress has stagnated. Children with disabilities are disproportionately represented among those who are missing out on education. Research indicates that having a disability more than doubles the chance of never enrolling in school in some countries. Disability is often a moresignificant factor in relation to exclusion from education than gender or geographical location. Coming from a poor family and having a parent with a disability also increases the likelihood of a child being out of school. We also know that the quality of education for those attending school is unsatisfactory. For example, 'approximately 200 million children are currently in school but are learning very Little because of inefficient and inadequate education; between 25% and 75% of children in poor countries cannot read a single word even after several years in school'. As a consequence of these quality issues, children with disabilities who do access education often do not participate on equal terms with their non-disabled peers, or achieve to their full potential. This has enormous implications for their chances of finding decent work and playing an active role in their country's social, political and economic life. The international community has committed itself to achieving universal basic education through the Millennium Development Goals and Education for All goals. Yet these frameworks pay insufficient attention to marginalized groups such as children with disabilities– which is a major reason why they continue to miss out on quality education. Education goals, targets and indicators in the post-2015 development framework must be based on human rights principles and focused on eliminating inequalities faced by persons with disabilities (this in turn requires gathering of disaggregated data). Moreover, the education aspects of the new framework need to incentivize states to build and strengthen inclusive systems of education. One vital step that can be taken to this end is to pay greater attention to recruiting, training and supporting teachers to respond to the diverse needs of learners.

Preparing teachers to teach children with disabilities is essential

A fundamental reason for poor quality education is the severe lack of well-trained teachers who are adequately supported and managed throughout their careers. In India, for instance,'… there are just 1,059 trained teachers at lower secondary level for 1.4 million children'–that's 1,322 children for every trained teacher. Compare this

with a pupil to (trained) teacher ratio in the UK of approximately 16:1 in secondary education, and the massive shortage of trained teachers in developing countries like India becomes very obvious. The Global Campaign for Education argues: '...high quality education requires sufficient recruitment of teachers who are trained, supported, paid and managed as professionals'. An estimated 1.7 million more primary teaching positions need to be created in the period2010–2015. Policy-makers also need to better understand teacher attrition (the number of teachers leaving the profession) and work to reduce it. However, improving recruitment levels and reducing attrition must not lead to countries employing less qualified teachers or lowering national standards. Of 100 countries with data on primary education, 33 have less than 75%of teachers trained to the national standard. National standards for teacher training can vary considerably between countries, and are often inadequate. Teacher training for regular teachers also rarely prepares teachers for working in diverse classrooms, and in particular does not equip them with the confidence, Knowledge and skills to effectively support learners with disabilities. This is a key reason why so many children with disabilities remain out of school, or excluded from the learning process within school. If we are to reignite progress towards quality basic education (early childhood, primary and lower secondary schooling) for all, then regular teachers need to be prepared to meet the learning and participation needs of children with disabilities. To do this they need to be given appropriate initial training, ongoing training and professional development, and ongoing access to adequate high quality support and advice from specialist personnel.

The importance of donor support for fundamental improvements to teacher training

Bilateral and multilateral donors must work with developing countries in order to ensure the right to education for all children, particularly the most marginalized, such as children with disabilities. Donors need to:

- research the most effective approaches to training, supporting and managing teachers to include all children in different contexts. This will include piloting innovative projects, rigorously monitoring and evaluating all initiatives, and supporting efforts to scale-up, adapt and transfer successful pilots;
- develop the capacities of those responsible for organizing and providing training and ongoing support to teachers;
- document and share good practice in relation to training quality teachers who deliver effective learning and participation for diverse students in inclusive ways.

All of this must link to other 'building blocks' of the education system (i.e. policy and governance; financing; curriculum and assessment; equipment and materials; infrastructure; and management information systems) and ensure co-ordination with other sectors such as health and nutrition.

Donors can support the necessary improvements to teacher education by encouraging and developing inclusive education policies and targets for including the most marginalized. But this must be matched with more ambitious approaches to education financing, such as increasing aid and reducing debt in developing countries, and supporting governments to build fair and robust tax systems and to trade at regional and global levels. Donors further need to ensure that the International Monetary Fund does not undermine global education goals though enforcing cutbacks in education budgets, such as restricting increases to teachers' wages– because good quality, motivated teachers need fair and improving remuneration.

People with disabilities should be involved in teacher training and other aspects of education planning and management

Why do people with disabilities need to be involved in teacher training?

A key reason why teacher training often fails to address inclusive education – and in particular the inclusion of students with disabilities – is because those involved in planning and running teacher training do not have disabilities, and often have no direct experience of working with people with disabilities.

There is a growing movement towards community involvement in and management of schools. If this is to be successful it must include representation from diverse groups in the community, including people with disabilities. This needs to be further extended to ensure that teacher education, and the ongoing support and professional development of teachers, is done with the involvement of people with disabilities (and people from other marginalized groups too).

As we saw above, teachers/trainee teachers need their training to be practical and contextually relevant. This means training needs to be designed with input from a range of stakeholders living, working and studying in the communities in which the teachers will work– and this must include inputs from people with disabilities.

How can such involvement be facilitated?

Teachers often say that including learners with disabilities is the aspect of inclusive education that they find most challenging. Stakeholders with disabilities can play an active role in preparing teachers for this challenge in the following ways:

- Ministries of Education should seek the contribution of people with disabilities during policy discussions (at all levels) about teacher training structures, curricula, etc. (as well as during discussions about other education issues).
- Positive action should be taken to train, deploy and support teacher trainers who have disabilities, who can act as positive role models and provide 'first-hand' information about disability, inclusion and exclusion to the trainee teachers.
- Pre-service and in-service training programmes should be designed with the flexibility to feature guest trainers and speakers from among different stakeholder groups, including people with disabilities (e.g. academics and

researchers with disabilities, local role models with disabilities, parents of children with disabilities).

- Pre-service and in-service training and continuing professional development programmes should find ways to give teachers/trainee teachers 'exposure' to working with children and adults with disabilities and with their parents/cares (e.g. by having teachers work some voluntary hours with a sports club or other facility/event for children with disabilities).
- Local education authorities and schools should be enabling people with disabilities to be actively involved in school life, management committees and parent-teacher associations, so that serving teachers (and trainee teachers doing practicum) are meeting and working with (and can ask questions to) people with disabilities regularly and for different purposes.

Conclusion

The education authorities and teacher educators to develop a more in-depth and hands-on understanding of inclusive education, and a better sense of how to embed inclusive education principles throughout all pre- and in-service teacher training, and all continuing professional development. To support the development of improved teacher training systems that deliver a more effective balance of theory-based learning and hands-on practice, with a particular focus on teachers learning how to be child-centered and inclusive, and in particular how to teach children and adults with disabilities. The education authorities and teacher educators to develop mechanisms through which people with disabilities are consulted about teacher training, and are enabled to take an active role in designing and delivering teacher training.

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LEARNING DISABILITIES AND STRATEGIES FOR LEARNING DISABLED CHILDREN

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Abstract

Learning disabled children are those who suffer from serious learning disabilities. These children exhibit exceptionally inferior capacities in terms of learning and understanding in comparison to the normal children of their age and class. In fact, learning disability is nothing but a sort of handicap or helplessness that can be felt by the sufferer in terms of his academic performance. Each type of learning disability requires individual attention and unique remedial measure. By using proper strategies, systematic and well planned works learning disability can be overcome.

Meaning

Learning disability is a classification that includes several functioning in which a person has difficulty learning in a typical manner,Usually,caused by an unknown factor or factors.

Definition

According to Love Harold,"the child with learning disabilities is probably best described as one who manifests an educational discrepancy between his mental capacity for learning and his actual level of functioning".

Nature and characteristics of Learning Disabled

Researches in the fields of education and psychology have brought into notice a number of significant behavioural and personality characteristics as well children

1) Learning disabled children essentially suffer from serious learning problems or disorders for a number of reasons.
2) Their learning disability is not apparent in the physical appearance or not demonstrable through their IQ scores.They may have robust body,good vision,sound ears,and normal intelligence.

Causes of Learning Disabilities`

- ❖ General or heredity factors
- ❖ Organic or physiological factors
- ❖ Environmental factors

a)General or heredity factors

In some cases the genetic or heredity factor is found to the major

Cause for generating learning disabilities among the children.On the pattern"like begets like" it has been found that many characteristics commonly found in learning disabled are transmitted from generation to generation.

1) Nearly 20 to 25 percent of hyperactive or impulsive children have been found to have at least one parent of this nature.
2) Emotional imbalances, disorders of memory and thinking, speech and learning have been found to run in families.

b)Organic or physiological factors

Even then, it has been widely noticed that many of the learning disabled children suffer from neurological dysfunction, malfunctioning or dysfunction of their central nervous system consisting of brain, spinal cord and message carrying nerves, etc.Some professionals believe that all children with learning disabilities suffer from some types of brain injury or dysfunction of central nervous system.

1) Brain damage caused by an accident or by a lack of oxygen before,during or after birth resulting in neurological difficulties that may affect their ability to learn.
2) A number of medical problems suffered by the infants and young children like diabetes, meningitis, cardiac arrest, pediatric AIDS may prove a potent factor for the neurological dysfunction in the growing child.

c)Environmental factors

Although not labeled as primary or sole factor of learning disabilities in many cases, learning disabilities may be perpetuated and even generated by the improper and uncongenial conditions and factors present in an individual's physical, social, culture and educational environment.

1) Pre-mature delivery, uncongenial and improper environment settings at the time of birth or a defect in the central nervous system.
2) Imitation and the company of defective learning models present in one's culture, social and educational environment.

Identification and labeling as learning disabled

a)**Non-testing devices**

In non-testing devices we may include techniques like observation, rating scale, check list, interviews,etc.By employing these devices,we try to identify the learning disabled in relation to their general personality and behavioral characteristics.

We may also see the opinion of the teachers and other persons regarding the learning abilities, mental level scholastic potential, etc.Though such devices for the diagnosis and identification of learning disabilities of the children.

b)Testing devices

i.Ability tests or process tests

Learning disabled suffer from the inability or incapacity in their process of learning and understanding. The ability tests or process tests are so designed as o assess the degree of their ability or poor ability to understand and learn.

ii.Achievement tests

These tests are designed to assess the degree of achievement of the children in various knowledge, skill and performance process areas.These may be of two types, namely standardized achievement tests and teacher made tests.

iii.Daily assessment system

There can be a systematic, well planned regular daily assessment system in schools for recording the children's achievement on various specific knowledge, skill and performance areas.

Educational provision for the learning disabled

Let us think what can be done to the learning disabled children once we identify them as such.Their identification clearly reveals that they suffer from somewhat a severe learning inefficiency, deficiency or deficit resulting into a serious gap between their potential and actual educational achievement.

- Provision of specialized schools or classes.
- Provision of special remedial and educational programmes.
- Structuring and improving the existing environment set-up.

a)Provision of specialized schools or classes

This provision is based on the assumption that learning disabled children are quite distinct from other children of their schools or classes.hence there should be special schools or at least separate classes for them where they can be taught by specialized teachers through special methods and techniques essentially on the same curriculum with greater care and attention.

b)Provision of special remedial and educational programmes

This provision can work well in the existing schools and educational set-up.here the beginning can be made with the proper identification of the nature, type and amount of learning difficulties, deficiencies or deficits.

The Resources center of the colleges of education, DIETS, SCERT,NCERT, extension department of niversities and many other social and community organizations usually provide such educational service and thus we may obtain the necessary help from these centers simply on the institution to institution transaction basis.the remedial programmes,material and guidance available through such sourcesmay definitely help the cause of learning disabled.

c)Structuring and improving the existing environment set-up

Many of learning difficulties and deficiencies of the children are caused by the uncongenial, improper and negative factors present in their physical, social, cultural and

educational environment.therefore, attempts should be properly and sincerely made for the adequate structuring and improving the existing environmental set-up.it will definitely help in reducing the cases of learning disabled by providing them due assistance, care and guidance for rectification of their learning disabilities.

Remedial measures for specific learning deficiencies and problems

Handwriting problems and remedy

Handwriting problems is technologically known a dysgraphia.it is written language disorder related with the mechanical writing sill of an individual.

I. Since lack of proper motor control may be one of the causes for their poor handwriting, we must try to outcome it by adopting the following means:

a) Using manipulative exercise to strengthen.providing opportunities in writing letters by doing manipulative exercise like writing in sands, modeling through clay games,doing chalkboard practice etc.

- The paper should not be kept slant while writing
- The writing instrument should be held between thumb and middle finger with index finger applying pressure

II. The children should be given sufficient practice and help for writing in straight lines.use of lined paper or even graph paper can be recommended for providing them due practice.

III. They should not be any overwriting, cutting or overlapping in their manuscript.

Spelling problems and remedy

Many of learning disabled may suffer from difficulties in writing words with the correct spelling.to help them in this direction, start framing a list of words usually misspelt by a child and make the correct spelling.

a) Write the word with correct spelling on the chalkboard or paper.
b) (ask them to)spell again & again
c) Pronounce the word with correct spelling.
d) Write a text with particular word repeatedly for sufficient number of times.

Reading problems and remedy

Learning disabled children may exhibit their weakness and poor performance with regard to reading and comprehension of text material or manuscript.Their difficulties and deficiencies in respect of reading sill are quite varied and diversified.

For example

They may have problems with the phonology of the language,confusing letter, number and word with their mirror opposites.(b and d, p and q)

Remedial programme for bringing improvement in their reading skill must be in tune with their individual needs and abilities.

1) The children who can not pronounce a word, letter or sound correctly should receive phonetic guidance and drill to overcome their deficiency.
2) The difficult words, the meaning of which they do not known should be clarified to them.The meaning of these words or sentences should be explained to them by adopting a suitable learning situation.Sometimes oral explanation may not be sufficient and the teacher has to see the help of some picture, tell a story or narrate personal experience, etc.

Spoken language or oral communication problem

Spoken language problems may be broadly classified into two categories

a)Receptive language problems

b)Expressive language problems

a)Receptive language problems

- He may feel difficulty in auditory discrimination(ability to tell the difference between sounds)
- He may experience problem with syntax or grammar and as a result may make more grammatical errors.

b)Expressive language problems

- He may have dysnomia also known as "word finding problem"(e.g stumbling over words that can not remember at the moment) teach language in purposeful context .

Specialized approaches and techniques for helping the learning disabled

There are several specific and specialized techniques and approaches that have been evolved through long experiences and researches while workingwith the learning disabled children. Let as discuss some of themin brief.

a)Behavior modification of management approach

Modify or manage the behavior (particularly overt behavior) of the learning. Providing opportunities for modification or change in behaviour.

b)Psychoanalytic approach

Analyse the behavior. And find out the root cause or cause of his learning deficiency. Remedial programme is administered by establishing proper rapport with the disabled child.

c)Clinical or medical approach

This approach recommends medical treatment/medication as a method of solving the problem faced by the learning disabled children on the assumption that the problem is physiological and medication is the best treatment for its solution.

d)Technological approach

iAudio tape and tape recorder

Reading, speaking and conversation skills can be better developed with the help of audio tapes and tape recorders.

ii. Video-disc instruction

This type of remedial instruction provides high quality visual and auditory presentation.using motion pictures and simultaneously listen to the carefully prepared narration for providing useful instruction.

iii.Computer assisted instruction(CAI)

With the use of computer technology, we can arrange self-instructional or individualized instructional as well as group instructional remedial programmes to the learning disabled.

Conclusion

L.D should be identified at the right time and they can be abled by providing suitable provisions and exercises to overcome the problem.They should be paid enough attention the deficiency/difficulty to develop the skills for learning.

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B.Ed TRAINEES ATTITUDE TOWARDS TEACHING AND TRAINING PWDS

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Abstract

This study was undertaken to determine the B.Ed. Trainees attitude towards teaching and training people with disabilities. The major objective of the study is (i) to find out the level of B.Ed., trainees attitude towards teaching and training PWDs. (ii) to find out whether there is any significant difference between male and female B.Ed., trainees attitude towards teaching and training PWDs and (iii) to find out the significant difference if any between rural and urban B.Ed., trainees attitude towards teaching and training PWDs. 35 samples were taken from B.Ed. trainees from a college of education (B.Ed. College affiliated to Tamil Nadu Teacher Education University, Chennai, Tamil Nadu). The data were collected by self made questionnaire. Special attention was given to factors like gender, area of residence of the trainees. The data were analysed by using percentage analysis and 't' test. Results revealed that the level of B.Ed trainees attitude was moderate, there is no significant difference between (i) male and female and (ii) rural and urban area B.Ed. trainees attitude towards teaching and training PWDs.

***Key words**: Attitude, PWDs, B.Ed., trainees, Teaching, Training*

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Introduction

Globally we need more well-trained and motivated teachers. Good teachers can help ensure that every child learns to their full potential from an early age and enters adult life well-equipped to be active citizens and support the development of their community and country. Many countries do not have enough teachers, let alone enough teachers who have received sufficiently high quality pre and in-service training and access to continuing professional development. The lack of well-prepared and motivated teachers impacts on the enrolment, participation and achievement of all children – but can be particularly detrimental to the education of children from marginalised groups, who may need some extra encouragement or assistance to reach their educational potential. Teachers are often simply not trained or supported to teach children with disabilities, which makes these children among the most marginalised in terms of educational opportunity and attainment. An estimated 15% of the world's population has a disability. Globally, 93 million children are estimated to have moderate and severe disabilities – and many of these children are out of school. That means they are not being given the chance to become empowered as individuals and support their communities. The exclusion of children with disabilities from education and from fair life chances requires urgent and sustained attention. In particular, attention needs to be paid to preparing teachers who are capable of including children with disabilities in the education process. This paper provides detail about the teacher trainee's attitude towards teaching and training people with disabilities.

Review of related literature

Literature is filled with examples of scholarly writing emphasising regular classroom teachers' positive attitudes and acceptance of inclusive education programmes as cardinal to its successful implementation (McFarlane and Wolfson, 2013; Ross-Hill, 2009). It is, therefore, vital that the teachers are psychologically prepared to teach a class comprising of students with disabilities. The attitudes of teachers towards all students and the general climate they establish in the classroom have a major effect on the academic and social achievement of all students, especially those with disabilities. It is, therefore, not surprising that the fulcrum of success in including students with disabilities into regular classroom environment depends heavily on teachers' positive attitudes towards including these students and generally towards the policy of inclusive education. Research indicates that teachers who hold negative attitudes towards inclusion tend to employ less effective instructional strategies, which results in increasingly poor performance of students with disabilities included in regular education classrooms (Nutter, 2011). A number of researchers assert that due to this many students with special needs do not achieve their expected learning objectives (McFarlane and Wolfson, 2013). Even more importantly, negative attitudes of teachers towards students with disabilities adversely affect their self-esteem and self-concept. Furthermore, researchers also argue that negative attitudes held by teachers may be a significant barrier to the effective implementation of inclusive education (Glazzard, 2011). This claim originated from the social psychology literature, which explains the relationship between attitudes and behaviours. Attitudes are defined as an internal state of an individual that predisposes the person to make an evaluation along a continuum, which in turn influences subsequent behaviours enacted by the individual. The implications for inclusion are that transforming teacher attitudes in a positive manner will increase the inclusiveness for a large number of students with disabilities (Beacham and Rouse, 2012; Das, Gichuru and Singh, 2013; McFarlane and Wolfson, 2013).

Aim of the study

Issues regarding PWDs are huge. The dearth of research on attitude towards PWD's with respect to various persons in the society was studied. This study was therefore attempted to fill up the gap in the literature. It is also aimed to find out the B.Ed trainees attitude towards teaching and training PWDs.

Objectives

1. To find out the level of B.Ed., trainees attitude towards teaching and training PWDs
2. To find out whether there is any significant difference between male and female B.Ed., trainees attitude towards teaching and training PWDs.

3. To find out the significant difference if any between rural and urban B.Ed., trainees attitude towards teaching and training PWDs.

Hypothesis

1. There is no significant difference between male and female B.Ed., trainees attitude towards teaching and training PWDs.
2. There is no significant difference between rural and urban B.Ed., trainees attitude towards teaching and training PWDs.

Method & tools

The investigator has adopted the survey method of research to study the B.Ed., trainees attitude towards teaching and training PWDs. Stratified random sampling techniques of 35 B.Ed., trainees were taken for this investigation. The above samples were taken from the B.Ed., trainees affiliated to Tamilnadu teachers Education University. Special attention was given to gender and area of residence of B.Ed., trainees. The Attitude scale is developed and validated by the investigator was used to collect the data. The data were analysed using percentage analysis and 't' test.

Analysis and inference

The level of B.Ed., trainees attitude towards teaching and training PWDs is presented in the table 1

Table 1: Level of B.Ed., trainees attitude towards teaching and training PWDs

Low		Moderate		High	
No	**%**	**No**	**%**	**No**	**%**
6	17.1	21	60	8	22.8

It is inferred from the above table that 17.1% of B.Ed., trainees have low, 60% of them have moderate and 22.8% of them have high level of attitude towards teaching and training PWDs

Hypothesis 1

There is no significant difference between male and female B.Ed., trainees attitude towards teaching and training PWDs

Table 2: Difference between male and female B.Ed., trainees attitude towards teaching and training PWDs

Variable	N	Mean	SD	calculated 't' value	Remark at 5% level
Male	10	8.16	1.71	1.124	NS
Female	25	8.41	1.69		

It is inferred from the above table that there is no significant difference between male and female B.Ed., trainees attitude towards teaching and training PWDs. The mean value of female B.Ed., trainees are high when compared to male B.Ed., trainees

Hypothesis 2

There is no significant difference between rural and urban B.Ed., trainees attitude towards teaching and training PWDs.

Table 2: Difference between rural and urban B.Ed., trainees attitude towards teaching and training PWDs

Variable	N	Mean	SD	calculated 't' value	Remark at 5% level
Rural	25	7.66	2.38	1.578	NS
Urban	10	7.12	1.68		

It is inferred from the above table that there is no significant difference between rural and urban B.Ed., trainees attitude towards teaching and training PWDs. The mean value of rural B.Ed., trainees are high when compared to urban B.Ed., trainees

Findings

1. 60% of B.Ed., trainees have moderate attitude towards teaching and training PWDs. This may be due to that B.Ed., trainees are teacher trainees who wish to teach and train all the students especially PWDs effectively.
2. There is no significant difference between male and female B.Ed., trainees attitude towards teaching and training PWDs. This may be due to that teaching is a profession were all are equal and the mind set of all are also same.
3. There is no significant difference between rural and urban B.Ed., trainees attitude towards teaching and training PWDs. This may be due to that whether the B.Ed., trainee is from rural or urban area, their attitude of handling the students whether normal or PWDs does not change.

Conclusion

The providers of education for trainee teachers around the world are still largely operating from a teacher-centred pedagogy and have little recent and relevant experience. They do not teach inclusive education principles. When children with disabilities are covered it is in discrete courses based upon the old deficit medical model approach. Trainee teachers and their educators have little practical experience in handling PWDs settings. Teacher educators have low status and little scrutiny of what they are doing and how effective it is. There is a reticence amongst the more progressive academics to use categorical approaches to impairment for fear of regressing into

segregate medical model approaches. A growing number of teacher educators are realising their courses must include regular encounters with disabled peoples' organisations and Disability Equality Studies

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TEACHING AND TRAINING TO PWDS THROUGH MULTI DEVICES

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Abstract

Master Trainers' Training module may be developed and distributed to school levels. Teacher's training module that developed should be distributed in all the schools. The module guides the teachers in classroom transaction and in changing their attitude towards the disabled children. In addition, the content of the module enables the teachers to design co-curricular activities, content-based teaching methods to suit the needs of children with various disabilities, use of literature in TLM and use of special aids.

Introduction

Under Article 21-A of the Constitution and the RTE, the right to free and compulsory education is available to children between the ages of 6 and 14 only. However, the PWD Act extends this right until the age of 18 years. There is the issue of classification of CWSN, the PWD Act places a benchmark that a person with disability means a person suffering from at least 40% of the listed disabilities. Children who do not fall under the definition of a 'person with disabilities' will have to be educated as per the RTE. The provisions under the PWD Act and Rules are not binding on mainstream schools which are not considered special schools.

Under SSA, efforts are made to give quality education to children with special needs. Some kind of liaison with parents of such children is extremely essential. Parent Councils were formed and regular meetings held on creating awareness on various disabilities. Parents were urged to hold a positive attitude and have faith in the abilities of disabled children. The Council has provided the platform to discuss family, social, education, rehabilitation issues and various psychological barriers related to disabilities.

Training Strategy

In cascade mode, training may be imparted to project staff at district, block and village levels. Class teachers dealing with disabled child is given specific training of the concerned disability at DRG level by qualified and experienced Resource Teachers. Class teachers of disabled children are oriented on classroom management, attitudinal aspects of teachers, classmates and schoolmates, curricular and co-curricular activities, supplementary literature, use of specific aids and appliances to address the problems of concerned disability of children. All other teachers of a school with a disabled child are trained on classroom management, attitudinal aspects of teachers, classmate and school mates and co-curricular and curricular activities.

What are some types of assistive devices & how are they used?

Some examples of assistive technologies are:

- People with physical disabilities that affect movement can use mobility aids, such as wheelchairs, scooters, walkers, canes, crutches, prosthetic devices, and orthotic devices, to enhance their mobility.
- Hearing aids can improve hearing ability in persons with hearing problems.
- Cognitive assistance, including computer or electrical assistive devices, can help people function following brain injury.
- Computer software and hardware, such as voice recognition programs, screen readers, and screen enlargement applications, help people with mobility and sensory impairments use computer technology.
- In the classroom and elsewhere, assistive devices, such as automatic page-turners, book holders, and adapted pencil grips, allow learners with disabilities to participate in educational activities.
- Lightweight, high-performance wheelchairs have been designed for organized sports, such as basketball, tennis, and racing.

Assistive Technology Devices

The following are some examples of different types of assistive technology devices:

Access and Environmental Controls

Devices that allow increased control of the environment or that open up access to things in the environment. This includes electronic controls like switches, special keyboards or mice, and remote controls as well as things that help people get around the community, like ramps, automatic door openers, and Braille signs.

Aids to Daily Living

Special tools for daily activities, like brushing teeth, dressing or eating. This includes adapted utensils, plates and cups, non-skid surfaces, and specially designed toilet seats and shower stalls.

Assistive Listening

Supports that help a student who is either deaf or has a hearing loss. This includes hearing aids, amplifiers, captions on TV, and typing telephones.

Augmentative/Alternative Communication

Supports that allow a child who cannot speak, or whose speech is not understood by others, to communicate. This includes picture boards, voice output communication devices, communication software and computers.

Computer-Based Instruction

Software to help students with learning difficulties in reading, writing, math and other subject areas.

Mobility

Equipment that allows a student with a physical or visual disability to move independently and safely through the community. This includes wheelchairs, walkers, and adapted bicycles.

Positioning

Any support that helps a student with a physical disability remains in a good position for learning without becoming tired. This includes adjustable chairs, tables, standers, wedges and straps.

Visual Aids

Supports that give a student with visual difficulties access to information. This includes large-print books, books on tape, magnifiers, talking computer software, and Braillers.

Differently-Abled Students in Higher Education

The following information was given by the Union Human Resource Development Minister, Smt. Smriti Irani on 23-April, 2015. There is increase in the enrolment of persons with disability (PwDs) students in higher education, as per the All India Survey on Higher Education, MHRD. The following schemes/facilities have been launched to enhance the representation of the differently-abled students in Higher Education:-

1. **Upgradation of existing Polytechnics to integrate the Persons with Disabilities (PWD):** The objective of the scheme is to promote education and training of persons with disabilities by integrating them in the mainstream of technical and vocational education and skill development programmes through formal and non-formal programme.
2. Higher Education for Persons with Special Needs (HEPSN) – The scheme, implemented by UGC, has the following three components:
   a. **Establishment of Enabling Units for PWDs.** Resource Units are established in colleges to facilitate admissions, provide guidance and counseling, to create awareness about the needs of differently abled persons and to assist PWD graduates to get the employment.
   b. **Providing Access to PWDs:** Under this component, accessibility are addressed by the college relating to issues as per the stipulations of the Persons with Disability (PWD) Act, 1995.
   c. **Providing Special Equipment to augment Educational Services for PWDs:** The colleges are provided one time grant upto Rs.1.5 lakh to procure devices to help PwD students enrolled for Higher Education
3. Teacher preparation in Special Education Scheme (TEPSE): The scheme, implemented by UGC, provides financial assistance to offer B.Ed. and M.Ed. degree course with specialization in one of the disability areas.
4. Financial Assistance to Visually Challenges Teachers (FAVCT): The objective of the scheme, implemented by UGC, is to provide facility to help visually

challenged permanent teachers to achieve self-dependence by using various aids for teaching, learning and research.

5. UGC also provides relaxations to PWDs in the National Eligibility Test.
6. Saksham Scholarship Scheme: The Scheme is implemented by All India Council of Technical Education **t**he objective of the scheme is to provide encouragement and support to 1000 differently abled students to pursue technical education in a year, fulfilling the eligibility criteria mentioned in the scheme.
7. Reservation in admissions: UGC has issued instructions to all universities and colleges for providing 3% reservation (horizontally) in admissions for PWD students.
8. Facilitating PWD students under Centrally Sponsored Scheme for Integrating PWDs in the mainstream of Technical and Vocational Education.
9. The Ministry has also directed all Centrally Funded Educational Institutions/Autonomous organizations/attached offices in Ministry to ensure providing barrier free environment in the buildings, which would include provisions of ramps, rails, lifts, adaption of toilets for wheel users, brail signages and auditory signals, tactile flooring etc. to PWDs, as envisaged in PwD Act.
10. Expert Committee constituted to identify the courses according to the categories of disabilities.

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