
UNIT 10 DEVELOPMENT OF ADOPTIVE SKILLS (DAS), ASSISTIVE DEVICE (AS), SPECIAL THERAPIES (ST)



Notes

Structure

10.0 Introduction

10.1 Learning Objectives

10.2 Adaptive skills

10.2.1 Meaning of adaptive skills

10.2.2 Adaptive skills for Hearing impairment, Speech impairment

10.2.3 Adaptive skills for Multiple disability/Cerebral palsy

10.2.4 Adaptations for learning disability

10.2.5 Adaptations for intellectual disability

10.2.6 Adaptations for visual impairment

10.2.7 Adaptations for locomotor disability

10.2.8 Role of teachers

10.2.9 Exercise

10.3 Assistive devices

10.3.1 Meaning of assistive devices

10.3.2 Assistive devices (table) for different Impairments and disabilities

10.3.3 Role of teacher in classroom

10.3.4 Assistive devices for persons with: multiple disabilities(include Cerebral palsy, loco motor disability)

10.3.5 Visual impairment

10.3.6 Learning difficulty

10.3.7 Hearing impaired

10.3.8 Speech impairment

10.4 Special methods

10.5 Let Us Sum Up

10.6 Answer to Check Your Progress

10.7 Suggested Readings and References

10.8 Unit-End Exercises



10.0 INTRODUCTION

In the previous chapters, you have learnt the basic nature, needs, types and different causes of abnormalities and the educational needs of children affected with different disabilities. Early disability, whether it is physical, sensory, cognitive interferes with the normal process of teaching and learning. Teaching should be designed to help students to achieve appropriate learning outcomes. Children with disabilities need adaptive skills, assistive devices and special methods in both their school and social environments. This unit makes an attempt to discuss these issues

10.1 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- Explain the meaning of adaptive skills
- List the various adaptive skills for different disabilities
- Describe the role of teacher in assisting children with disabilities
- Explain the meaning of support devices
- Explain the uses of support devices in the environment of children
- Explain the usage of special methods for better functioning

10.2 ADAPTIVE SKILLS

Children with disabilities have various non capabilities. They are not able to lead the same level of lifestyle as other children due to their disabilities. Their disabilities become problems to their personal and intellectual growth.

Hence, these children need to adapt/ learn new skills which will make up for their disabilities. These adaptive skills will help children in their school and day to day activities. Daily activities demand these children to substitute normal procedures with newly acquired procedures. Accessibility is yet another question, open source is the answer. These adaptations differ from people to people. Adaptations for children with intellectual disability. A teacher for children with ID should have competencies

10.2.1 MEANING OF ADAPTIVE SKILLS

Adaptations are the easier methods made by parents, teachers to acquire competencies and developing skills in persons with disabilities (PWD). Children should be able to apply the adaptations in learning skills in natural settings. Adaptations lead them to independent living. These include **Reading, writing and arithmetic (3 Rs)**. In adaptations, skills are divided into simpler tasks so that they learn easily.



10.2.2 ADAPTIVE SKILLS FOR CHILDREN WITH HEARING AND SPEECH IMPAIRMENT

Here these children are normal and have no problem in comprehension. Psychological attributes are to be corrected firstly for adaptation and can normally learn other important skills. To enable the hearing, pitch and loudness are corrected through loud conversation. Normally, HI children acquire speech during their early years of life. Communication is very important a acquiring speech without hearing will be different. Two ways of communication are non-verbal and verbal.

Here the non-verbal is the only way where they can communicate. Sign languages are ASL-American Sign Language, BSL- British Sign Language, gestures and talking boards. The main idea is not to teach signs but language through the use of signs supported by speech reading and aided listening. Lip reading and following facial movements by standing in front of the mirror will also help to a great extent.

10.2.3 ADAPTATIONS FOR MULTIPLE DISABILITY/ CEREBRAL PALSY (CP)

Cerebral palsy is caused due to malfunctioning of brain. As age advances the person might have motor and spasticity(tightness of muscle) problem. A person having 2 or 3 disabilities is called multiple disabled and needs educational method in a special way. Hence curriculum adaptation is required. These children will have problems in retaining information in short and long term memory. They have trouble with abstract thinking. Each child has his/her temperament, experiences and disability.

The team approach should be to use design and implement a comprehensive programme for each individual. The team should be composed of a variety of professionals, family members and care takers. The multi-disciplinary team may consist of:

- Special educator
- Physiotherapist
- Occupational therapist
- Psychologists
- Social workers
- Family members



10.2.4 ADAPTATIONS FOR LEARNING DIFFICULTIES (LD)

Adaptations made in the general curriculum helps the learning disabled children. Sometimes, they are mistaken for slow learners. There are many kinds of LD.

- Dyslexia(problem in reading): the child while reading may omit, substitute or reverse letters or words
- Disgraphia(problem in writing):the child is unable to write constantly. His handwriting is clumsy and spaced improperly.
- Dyscalculia(problem in calculating): the child may have difficulty in making normal calculations.
- Attention Deficit Hyperactive Disorder(ADHD)(problem in paying attention): in this condition the span of attention is very limited and the child is restless. He is inclined to pay attention to irrelevant stimuli and shows considerable amount of hyperactivity. The child cannot sit at one place even for a moment.
- Dysphasia(language disorder): there are 2 types of dysphasia. Either the child is unable to use the language meaningfully or is unable to understand spoken words. Main method of dealing with such children is task analysis.

Task analysis:

- Teacher should choose a learning task
- It has to be stated in behavioral terms
- Teaching a skill by cutting down the main task into simpler ones
- Teaching step by step
- Other name for this ‘shaping’
- Each step is reinforced
- Acquiring first step will motivate the pupil to acquire second one
- Structural lesson presentation

10.2.5 ADAPTIVE SKILLS FOR PERSONS WITH

1) Intellectual disability

One of the objectives of Adaptation in Special Education is to train children with Intellectual Disability to look after their personal needs; eating, drinking, toileting, brushing, bathing, dressing & grooming when required in different environments in different ways.

For example, we eat & drink at home, schools & hotels. Many times parents/



family members may not take children with intellectual disability to these places & functions due to lack of appropriate eating skills or any other skills, teaching manners

- # analyse each task
- # use task analysis; teaching each skill in smaller & easier steps
- # use teaching material appropriate to the task
- # follow reinforcers (rewards) after each step the child learns

This procedure can be done while teaching Reading (Sight Words - TOILET, POISON, DANGER), writing (DOTS, LINES, ACTUAL ALPHABETS) & Arithmetic (simple to complex procedure as to be adapted)

This way, we can teach the Intellectually deficient children using adaptations in their learning process

10.2.6 Visual Impairment

For these visually impaired children, we could have

- # Braille writing
- # More optical devices
 - Lens - Low vision can be corrected to a certain extent
 - Special spectacles which enlarges the alphabets & facilitates in reading
 - Large print books
 - Good illumination to identify the object
 - Retinal operation to correct the sight
 - Cataract & other temporary problems can also be corrected

10.2.7 Locomotor disability

These people have problems such as movement, loss of limb, pain & tightness in their limbs

Main adaptations for these people will be

- Massaging & regaining the muscle power in the weak muscles
- Strengthening of normal muscles
- Providing splint or calipers for support
- Thorough surgery - a sort of support is given using a steel rod & this is the permanent adaptation by the locomotor disability person for walking



These people will have pain which is not quantifiable or measurable.

It is nature's warning that there is damage to the body. The relief in pain can be either achieved by pain killer or by use of heat or cold package at the spot. Locomotor disabled people will have pressure sores (ulcers). Applying boric powder & changing bed sheets & hygienic conditions can avoid these problems.

10.2.8 Role of Teachers

A Child with any form of disability faces two problems. One- he/she is not able to carry out his/her daily activities like other children. Two -faces challenges in pursuing education due to disability. The school authorities should be able to understand child's problem & to help the child. Teacher is the mediator between the child & knowledge given in the books & hence should be well trained in recognizing the disability faced by the child

An example illustrates the above; in the popular movie, "*Taare Zameen Par*", the child's teacher does not understand the child's problem; dyslexia, a learning disorder & punished him because he was not able to score marks & for being inattentive in class.

A teacher must be educated in recognizing these disabilities & should be in a position to adopt new methods to encourage & help the child to shed his/her inhibitions. The teacher must help the child in attaining education in spite of his/her disabilities. A teacher can help the child in many ways. The first step is to understand & learn about the disability, encourage the child, helping the child in studies by devoting extra time to teach, making adequate seating arrangements in case of loco motor disability or cerebral palsy or adapting new methods of teaching etc.

Check Your Progress

Exercise-I

Answer the following questions in 1/2 sentences:

1. What do you mean by adaptive skills?
2. List the adaptive skills for persons with:
 - Locomotor disability
 - Cerebral palsy
 - Hearing impairment
 - Visual impairment

Exercise-II

Write short notes on:

1. What does by Assistival devices?
2. List the assistive devices for persons with.
3. Role of teacher.



4. Adaptive skills for persons with locomotor disability and cerebral palsy
5. Adaptive skills for persons with hearing impairment and learning disability

10.3 ASSISTIVE DEVICES

Children with disabilities find it difficult to perform many functions, especially daily activities. Hence, they lag behind others. We need to make them self-sufficient or fit enough to function among other children as equals. Assistive devices are those devices which help these children in their daily activities. They are of 2 types: Those which can be used by the concerned person and those which have to be used by the disabled person with the help of others.

AD have to be in such a way that the disabled person should get the maximum benefit out of using it. For example, a person with loco motor disability will have to use a wheel chair or crutch. This device substitutes for his disabled legs. Or, a person with hearing disability will use hearing aid in order to listen to others and will therefore be able to converse with others, listen to lectures, music etc

10.3.1 MEANING OF ASSISTIVE DEVICES

Assistive devices are any devices that directly help persons with disabilities in undertaking activities of daily living (ADL), pursuing education, acquiring access to information, enjoying freedom of movement in the built environment, and working and engaging in leisure activities to improve physical performance. Assistive devices should also enable person with disabilities to fulfill their aspirations. Using assistive devices one can prevent further disability and also train the person with residual abilities to achieve independent living.

10.3.2 ASSISTIVE DEVICES FOR IMPAIRED AND DISABILITY

Type of Impairment / disability	Devices
Locomotor disability	Standing frame, splinters
Cerebral palsy	Walking aid, wheel chair
Visual impairment	Abacus, Braille, arithmetic frames
Hearing impairment	Hearing aid, communication aids, communication boards, talking boards
Speech impairment	Lip reading, speech model, observation of lip movement through mirror usage
Learning disability	Big and attractive alphabets, matching pictures and objects
Multiple disability	Ramps, good seating arrangement, crutches, walker, wheelchair
Intellectual disability	This accompanied by any form of disability like hearing impairment, visual impairment requires assistive devices. Otherwise, there is no need.



10.3.3 ROLE OF TEACHER IN THE CLASSROOM

The assistive devices are different for children with different disabilities

The first role is to accommodate them in the class room. In case of intellectually disabled children, it is U or Y Shaped seating arrangement. Lots of big, colorful & attractive Teaching learning materials have to be used. Charts, beads, flash cards are very useful. Individual teaching helps these children. Multiple disabled & Cerebral palsy children have only mobility problem

Barrier free environment & good seating arrangement will help these children to learn better in the classroom. Hearing impaired children will be in a classroom with the sound amplification system & hearing aids will aid in the learning process. Visually impaired children with white cane & Braille material will aid them to learn better. A special teacher has to have training in managing 2 or 3 disabilities. The combined efforts of teachers in a special school will act as a facilitating factor in learning process of disabled children

10.3.3 ASSISTIVE DEVICES FOR PERSONS WITH DISABILITIES WITH MULTIPLE DISABILITIES (INCLUDE PERSONS WITH CEREBRAL PALSY , LOCO MOTOR DISABILITY)

Having more than one disability is called as multiple disability. The person can be intellectually disabled plus visually impaired. Another person can have hearing impairment and physical handicap. These people due tom conditions associated have problems in understanding, mobility, learning and physical deformity. Hence these are unable to function independently. The following are assistive devices for such people:

- # Potty Chairs (sitting comfortably at Toilet)
- # Wheel Chairs, Walkers, Crutches, Ramps, Tricycles etc. for free movement
- # CP Children should hold adapted tooth brush, thick pens etc. for good grasp
- # western type of toilets
- # Should be cost effective, repairable & easily available at NGOs or under Government schemes free of cost
- # light weight below knee braces
- # walking frames may help in learning to walk
- # caliper
- # corner chair suitable for children who are not able to use ordinary chair



Notes

10.3.4 VISUAL IMPAIRMENT

A blind person is a person so blind that he/she is unable to perform any task for which eyesight is essential. On the other hand, many people with visual impairments have some residual vision, which can be effectively utilized by the provision of an appropriate assistive device. Vision will be partial or it might not be possible for the person to see anything. Following are the assistive devices for such people:

- # White cane for free & safe movement
- # ABACUS (Beads Frame) for counting
- # Arithmetic Frames – to solve mathematical problems
- # BRAILLE – dot system for blind children (learn at slow pace)
- # Talking thermometer
- # Talking watch
- # Talking mobile

10.3.5 LEARNING DISABILITY

Learning disability affects people's ability in either interpreting what they see and hear or in linking information from different parts of the brain. Such difficulties extend to school work and can impede (affect) learning to read, write or do math. More than any assistive device, assistance can be given at class room. They are as follows:

- To improve eye-hand coordination
- To improve sequential memory
- Position of the letters
- Space/ forms to be identified easily ie reversed, inverted or rotated
- Matching pictures to the actual objects
- Use of auditory facts in writing
- Copying group figures

10.3.6 HEARING IMPAIRED

Some children have hearing impairment, a difficulty to hear, detect and interpret sounds. The natural process of acquisition of language and speech is therefore prevented. Unless this problem is resolved, the long-term consequences are severe and wide- ranging.



Notes

Development of Adoptive Skills (DAS), Assistive Device (AS), Special Therapies (ST)

- # Hearing Aids
- # Listening devices such as tape recorder, overhead projector
- # Talk pad – enhances voice
- # Computers
- # Teaching the child spelling words via overhead projector
- # have normal intelligence

10.3.7 SPEECH IMPAIRMENT

Speech has always been the primary medium of use of language for communication. Signs and gestures to words are used to communicate. There are many sign languages- American Sign Language(ASL), British Sign Language(BSL), Indian Sign Language(ISL).Following are the assistive devices for such people:

- # communication board
- # finger signals
- # talking boards
- # Flash cards
- # charts
- # sight words such as “toilet”, “danger”, “exit”, “enter”, “poison”

10.4 SPECIAL METHODS

Some of the methods have impact on persons with disabilities and can also lead to their smooth functioning in the environment. Medical treatment has to be provided in case of severe disability.

- Family counseling: it is very important to educate the person’s family about his/ her condition. This helps in providing the needed emotional support to the person with disability.
- Correction of problem behavior: This helps in rectifying negative behavior.
- Correction through play method: play way method will reduce tension, body spasticity and will also act as leisure and pass time
- Yoga: it helps in making the concerned person fit and reducing the disability upto an extent
- Correction of speech problem: this leads the concerned person to express himself/herself more freely



- Physical and mental stimulation : physical well being and information storing is enhanced
- Method of exercise: it reduces mental and physical strain
- Improving age- appropriate activities: age appropriate activities will be the first step towards proper understanding and treatment of a disability
- Correct positioning and carrying method: correct postures can do wonders for people with physical disabilities

10.5 LET US SUM UP

In this chapter, you have studied the various techniques in which a child with disability can be helped in his/ her education and daily life. While adaptive skills help the child in resorting/ taking up different techniques to undertake different activities , assistive devices act s substitutes for normal conditions and help the child to lead a comfortable life.

Special methods are essential for persons with disability. Methods such as yoga, play, family counseling, physical and mental stimulation among others can have an impact on the persons with disability and also lead to their smooth functioning in their environment. This will also help their parents in taking good care of them.

The role of the teacher is also inevitable in the education of children with disabilities. Teachers should be knowledgeable on the different disabilities affecting children and should take up methods through which they can help the child with disability to acquire knowledge like other children.

There are different adaptive skills and assistive devices for different disabilities. These have to be properly implemented to reap maximum benefits.

10.6 ANSWER TO CHECK YOUR PROGRESS

EXERCISE 1:

1. Adaptive skills are skills that have been adapted according to the needs of the disability. These vary from disability to disability. It plays a powerful role in persons acquiring activities of daily living, reading, writing, environmental adjustment.
2.
 - a) Locomotor disability: adaptive skills can be regular method of teaching or task analysis if the child is associated with less IQ. IEP, lesson planning
 - b) Cerepalsy : if not having associated conditions, regular methods of teaching can be used. No adaptations can be made. Improving eye-hand co-ordination .



Notes

Development of Adoptive Skills (DAS), Assistive Device (AS), Special Therapies (ST)

- c) Hearing improvement : regular methods of teaching need to have special method if associated with MR, epilepsy, teaching individual skills
- d) Visual improvement : teaching by Braille, IEP, plus curriculum, abacus and special facilities in the classroom, barrier-free environment.

EXERCISE 2:

1. Assistive devices are those devices which help these children in their day to day activities. These devices act as supplements. These are of 2 types: those which can be used by the concerned person and the other, with the help of others.
2.
 - a) Intellectual Disability: clutches ,corner seats, hearing aids, parallel bars, white cane etc
 - b) Speech impairment: lip reading trainer, audiology method, hearing aids, talking boards, sign languages.
 - c) Learning disability: big and attractive alphabets, matching pictures and objects
 - d) Multiple disability: Ramps, good seating arrangement, crutches, walker, wheelchair
 - e) Visual impairment: lesson plan using plus curriculum, white cane, special spectacles, scribe for writing examination, tailor frame, abacus, Braille trainer .
3. Role of teacher: a special teacher should understand the child's problem. Teacher is the mediator. He/she must be educated to recognize the needs of the child. Teacher should encourage and help the child to shed his/her inhibitions. A teacher can help the child in many ways.

EXERCISE 3:

2. Special methods: some of the methods have impact on persons with disabilities and can also lead to their smooth functioning in the environment.
 - a) family counseling
 - b) play method
 - c) yoga
 - d) exercise
 - e) correct positioning and carrying
 - f) medical treatment for severe disabilities



10.7 SUGGESTED READINGS AND REFERENCES

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10.8 UNIT END EXERCISE

Write a short note of special methods.