



Certificate Course

Capacity Building and Professional development of Teachers and teacher Educators for Successful Implementation of Inclusiveness

Block - II

DIVERSE LEARNERS AND THEIR SPECIAL NEEDS



Inclusive Education...

NETAJI SUBHAS OPEN UNIVERSITY
School of Education, Kolkata
&
Commonwealth Educational Media
Centre for Asia, New Delhi

Certificate Course

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Teachers and teacher Educators for Successful
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THEIR SPECIAL NEEDS**



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Preface

Equity and access to quality education is a serious challenge and to face this challenge the role of teachers, the role of University and process of learning are required to be completely overhauled. The advent of new technology in the domain of information and communication has enabled us to provide quality education to the mass overcoming the distance barrier at a minimum course fee. Accordingly, the Institutions are working together to make this happen in near future.

The present endeavour of Netaji Subhas Open University (NSOU) and Commonwealth Educational Media Centre for Asia (CEMCA) is also a part of such initiative. The competent minds of these two organizations came together to start such collaborative work taking help and inputs from experts with vast experience and exposures in their respective areas of specialisation. As a platform of new initiative, both the organizations resolved to launch this academic programme with special emphasis on Inclusive Education, as this area of academic deliberation is prioritised both at the national and international levels to make the society truly inclusive in all dimensions.

The study materials, as prepared for the above Course, are segmented in blocks and units, each representing a coherent concept. It provides opportunity to break away from the 'one size fits all' system of education. Thus, the course has been made more customized, flexible and acceptable to the learners.

I sincerely believe that the Course which have been designed so meticulously will be appreciated by the learners. Hope the learners will imbibe the discourses in this innovative platform so that critical thinking and reflective ideas can be encouraged and addressed.

I take this opportunity to proffer my sincere thanks to the authorities of CEMCA for their generous financial assistance in this endeavour.

With best wishes,

Dt. June 15, 2017

Subha Sankar Sarkar
Vice-Chancellor

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We must concede the contribution of all content writers, editors and background minds at the SoE. NSOU for their respective efforts, expertise and untiring work in compiling the SLMs abreast with the contemporary issues and challenges in implementation of inclusiveness.



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BLOCK – II
DIVERSE LEARNERS AND THEIR
SPECIAL NEEDS

UNIT - 1 LEARNERS FROM DIVERSE BACKGROUNDS

UNIT – 2 STUDENTS WITH SENSORY DISABILITIES

**UNIT – 3 LEARNERS WITH INTELLECTUAL AND
LEARNERS DISABILITIES**

UNIT – 4 STUDENTS WITH OTHER DISABILITIES



BLOCK – II

DIVERSE LEARNERS AND THEIR SPECIAL NEEDS

Broad Objectives:

After the completion of this module, you will be able to –

- identify the learners from diverse backgrounds and abilities including children having sensory and developmental disabilities;
- assess the learning characteristics of children from diverse abilities and backgrounds;
- classify their specific needs in school with respect to their learning characteristics
- use specific strategies to meet out the specific needs and compensate their difficulties.

BLOCK – II

DIVERSE LEARNERS AND THEIR SPECIAL NEEDS

INTRODUCTION

Learners,

Through this Block-II of the course, you are introduced to diverse students and their special needs. Also acquainting you to assess the learning characteristics, identify their specific needs in school with respect to their learning characteristics and use specific strategies to meet out the specific needs and compensate their difficulties.

The block comprises of four Units.

- The first unit focuses on the identification and abilities of the learners from diverse backgrounds and their abilities.
- The second unit aims in identification and abilities of the learners with sensory disabilities.
- The third unit encompasses learners with intellectual and learning disabilities.
- The fourth unit delineates learners with other disabilities.

UNIT - 1: LEARNERS FROM DIVERSE BACKGROUNDS

Structure

- 1.0 Introduction
- 1.1 Objectives
- 1.2 Deprived and Marginalized Learners in the School
 - 1.2.1 Learners from Different Socio-economic Background
 - 1.2.2 Learners from Different Family Background
 - 1.2.3 Learners from Different Cultural and Linguistic Backgrounds
 - 1.2.4 Learners from Conflicting and War Affected Areas
- 1.3 Barriers to the Education of Deprived and Marginalized Learners
- 1.4 Identification and Assessment of Specific Needs of Deprived and Marginalized Learners
- 1.5 Meeting the Needs of Deprived and Marginalized Learners in the School
 - 1.5.1 Development of Whole School Approach to Support Deprived and Marginalized Students
 - 1.5.2 School Based Intervention for Deprived and Marginalized Students
 - 1.5.3 Guidance and Counseling Services
- 1.6 Let Us Sum Up
- 1.7 Answers to Self-Assessment Questions (SAQ)
- 1.8 References
- 1.9 Unit End Exercises

1.0 Introduction

You must agree that education plays a vital role in a person's life to achieve a greater degree of social justice and it is the educational institutions which can develop a child to the best of his/her ability for securing meaningful place in the society thereby helping to create a developed society from all angles. However, a large number of children are still not getting the light of education, so they cannot participate in the developmental process of our country in the field of economic, social, political and cultural activities.

After developing knowledge in diversity in learners, different types of disability in learners, barriers in learning and inclusive practices in education in Block 1, in this unit of Block 2, you will develop knowledge about learners from marginalized groups in terms of socio-economic status, linguistic background and so on, their specific needs, and specific strategies to fulfil their needs in the school.

1.1 Objectives

Upon Completion of the unit, you will be able to -

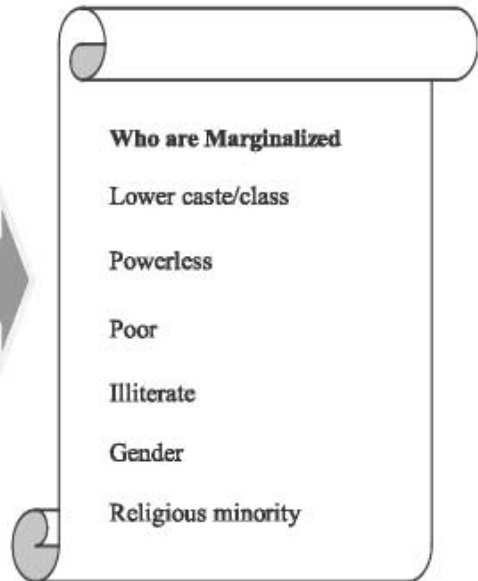
- ❖ identify the learners from diverse backgrounds such as from marginalized groups in terms of socio-economic status, linguistic background, conflicting and war affected areas;
- ❖ explain their difficulties and their specific needs in school with respect to their learning characteristics; and
- ❖ describes specific strategies to meet out their needs in the school.

1.2 Deprived and Marginalized Learners in the School

Deprived and marginalized learners are those disadvantaged learners who are socially, economically, politically and legally ignored, excluded and neglected. They are those who are struggling to gain access to the resources and availing full participation in social life. Marginality is demeaning for economic wellbeing, for human dignity as well as for physical security.

In the classroom

(Mishra,M.K.,2013)



Types of Deprived and Marginalized Learners:

Marginalization at the individual level results in an individual's exclusion from meaningful participation in society.(Wikipedia,2017)

In a broad aspect deprived or marginalized groups have been identified as socially, politically and economically backward learners. But in the classroom situation, types of marginalized learners mean mix-up of varieties of learners with different cultural background.

For better understanding,you may go through the following case studies:

Case Study-1

Let us meet Raghu

Raghu is a 10-year-old boy. He reads in class IV. He is very shy and always tries to maintain distance from his peer group. He feels inferior because his father is a rickshawala. He likes mathematics and his good performance attracts his teacher. So his mathematics teacher also loves him very much and tries to make him understand that quality, effort, good performance, sincerity, discipline are the pillars of success in life and it does not matter where he is coming from (poor family background).

Case Study-2

Let us meet Rekha

Rekha is a 7 years old girl. When she was three years she lost her parents in an accident. She lived in an orphanage. She wants education and is interested in learning. She is very indifferent and cannot concentrate in her studies because of her chaotic environment in her orphanage. That is why the teacher needs to pay special attention to her in the class.

Case Study-3

Let us meet Fatima

A 13 years old girl Fatima reads in class VIII. She is unmindful most of the time because her father has died in an accident and her mother has to work to support the family. The impact of this loss made her very unhappy and depressed. She failed to pay attention to her studies. The teacher needs to lead her the way so that she can overcome her sorrows. The teacher may tell her that death is reality of life and she needs to be strong to face the reality with the help of education, strength and courage.

In the above case studies, it has been observed that there may be different types of learners in the classroom.

In the following sub-sections, we will discuss about various types of marginalized learner:

1.2.1 Learners from Different Socio-economic Background

In this sub-section we will discuss about learners from schedule caste, schedule tribes, religious minorities, and poor or low socio-economic status.

Socioeconomic status is the social standing or class of an individual or group. It is often measured as a combination of education, income and occupation. (Wikipedia,2017)

In India there are some places which are in remote areas. Some areas still follow tribal culture and custom. They are economically poor too. The Indian constitution has

included such backward and minority groups in its schedule as castes and tribes for special emphasis.

1.2.2 Learners from Different Family Background

In this sub-section, we will discuss about orphan or single parent, conflicting family situations, and discriminating girl students.

A Child's learning starts from the family and parents are the first teachers. Parent means both the father & mother. Both have an equal role in child's learning. If one is absent, the role of both has to be played by the single parent. There may be orphans, single parents, conflicting family and families discriminating girl child. There are also different families suffering from different kinds of awkward situations like addicted father beating up the mother.

An orphan child is one, who not crossed 18 years, lost both the parents. So they have no legal guardian at all.

When either the mother or father raises a child single handedly then it is called a single parent family. Consequent upon of the parents has died or live separately or are divorced. There may also be cases of single parenthood due to intentional artificial insemination, adoption, unwed motherhood or so.

When family members have different views or beliefs, leading to disturbance in family relationships like verbal and physical abuse then it is called a conflicting family.

Being a patriarchal society discrimination of gender is very common in India. From early age till now girls are in many cases neglected and provide less scope for studies.

1.2.3 Learners from Different Cultural and Linguistic Backgrounds

In this sub-section we will discuss about tribal learners and learners with different mother tongue and culture.

India is a vast country with multiple languages, culture, religion and customs. There are various castes and tribes with specific language, mores and culture and socio-cultural background. Some learners come from different cultural and linguistic backgrounds. There are 23 languages recognized in Indian constitution. These consist of English plus 22 Indian languages: Assamese, Bengali, Bodo, Dogri, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Maithili, Malayalam, Meitei, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Santali, Sindhi, Tamil, Telugu and Urdu among which Tamil and Sanskrit are the two official languages. In the classroom there are students from various backgrounds making up a heterogeneous group. So they have different needs which are to be looked into.(New World Encyclopedia, 2009)

1.2.4 Learners from Conflicting and War Affected areas

The world is going through unrest. There are wars and insurgencies in some countries, and an increase in terrorist activities. There are also problems of refugee infiltrations from neighboring countries. Children from such families feel insecure economically, socially and culturally. In most cases they do not have sufficient opportunity for education. Even when they do get an opportunity they feel left out or rejected due to non-acceptance by main stream society, school and peer group. At times they do not get the opportunity to go to school as they have to earn for their existence as child laborers.

Loss of trust

As a consequence of conflict, children and young people can lose their confidence and trust in others. They may be at a loss and they may get depressed and disillusioned about their future. Thus they feel often become anxious, depressed and withdrawn, or rebellious and aggressive.

Protective environment

Growing up in a protective environment is essential for children and young people to develop to their full potential. War stricken Children's support services should include measures so that children and young people regain their confidence and build positive

relationships with their peers, families and wider communities. They can play and have fun together, learn and develop with a positive outlook; children and young people can shape their own future and contribute to a peaceful future for their communities.

1.3 Barriers to the Education of Deprived and Marginalized Learners

Good education for the mass is hard to find in India. The deprived and marginalized learners have lots of obstacles like Community Level Obstacles, School and Education System Level Obstacles, Poverty Level Obstacles, Attitudinal Obstacles etc.

Community: Barriers due to physical and social environment, economic constraints, lack of parental involvement and community participation. Sometimes learners are compelled to participate in community decided activities like child labour, child marriage etc.

School and Education System: Proper school, trained teachers, flexible system of education, is not available in many places of India. There is also lack of gender friendly school environment.

Poverty Level: The challenge of poverty associated with disability is the major barrier for deprived and marginalized learners.

Other obstacles (Saksena, 2014)

- ❖ A major barrier in the social integration of the persons with disabilities is the attitude of nondisabled persons
- ❖ The majority of key personnel in schools of India who design and implement educational programs for students with disabilities are not always trained.
- ❖ Poorly designed and equipped schools for meeting the unique needs of students with disabilities is another hurdle.
- ❖ In some cases, lack of disability friendly transportation services and accessible building are considered to be a far greater problem.

1.4 Identification and Assessment of Specific Needs of Deprived and Marginalized Learners

In the past decade India has demonstrated considerable progress in improving access, infrastructure, pupil - teacher ratios, and learning enrolment in primary schools. In spite of it student learning levels are disturbingly low. Implementation of the RTE Act 2009 has not been completely able to bring the country out of its crisis.

In this context it is said that identification and assessment are the most important part for the marginalized learners as it is also important to know their actual needs. So how will they be identified and assessed?

Deprived and Marginalized learners may be identified through:

- A. Admission Form
- B. Parent Teacher Interaction
- C. Psychological Assessment Reports
- D. Specific Assessment Report for the Disabled (as per requirement)

A. Admission form

From the Admission Form we get to know the following about a learner -

- i) Caste
- ii) Religion
- iii) Gender
- iv) Socio-economic status
- v) Parental educational background

B. Parent Teacher Interaction

Parent Teacher interaction can help in revealing characteristics of the learner. In the interaction, both the parent and teacher can exchange their observations in order to know more about the learners' interest, attitude, aptitude, problems etc. Such interactions can

help the parents and the teachers to work together as a group to help the learner in overcoming his/her problems.

C. Psychological Assessment Report

This is one of the most important assessment tools for screening the students mind, behavioral pattern etc.

Needs [LEARN (Learning in Education through Applied Reinforcement as per Need), 2014]

From the school record it may be known as to how many marginalized learners are there in the school. There are various types of marginalized learners in different classes, however, they have nearly the same needs and may be addressed as follows:

- i) Having schools that look into the requirements of the child
- ii) Change in attitude of teachers and peers
- iii) Flexible curriculum and evaluation techniques
- iv) Modification of instructional technique and mode of communication
- v) Physical and psychological barrier free environment
- vi) Creating an inclusive ambience
- vii) Regular training of teachers and staff

India is a democratic country and national integration for the learners plays a very vital role in the field of education. In this context Co-curricular activities, creating interest for language study etc. are the important needs for the learners.

Self-assessment question–I

Please answer the following questions (Multiple Choice)

1. What are the barriers to the education of marginalized learners?

- a) physical and social environment
- b) lack of designed and equipped school

c) attitude of teacher

d) Ial of them

2. Which information is known about the marginalized learners from Parent teacher Interaction?

a) Intelligent quotient level

b) Personal characteristics

c) Future prospect

d) Interaction with the teachers and peers

Please check your answers with the answers given at the end of unit.

1.5 Meeting the Needs of Deprived and Marginalized Learners in the School

India aims to provide quality education for all. However, infrastructure and many other hurdles are there which are hindering education to all. In order to reach the goal following points(Maheshwari, 2012, Sahu, 2014) are to be looked into.

Creation of schools with proper educational facilities trained and qualified teachers and staff, learning materials/aids and support.

Active role of Government in providing attractive funding and support along with local involvement.

Mother Teachers' Association (M.T.A) and Parent Teachers' Association (P.T.A) are necessary for persuading the parents to send the children to school. Such associations and regular involvement of parents in educational committees are also needed for empowerment of the stakeholders for student welfare and a better education.

In every village panchayat residential schools may be introduced. For attracting the learners each school should have proper infrastructure like boundary wall, lavatory, playground, drinking water facility etc.

In tribal areas, in order to reduce the dropout rate, awareness campaigning for the parents is very much necessary, along with timely supply of text books, learning materials and school uniforms. Besides this midday meal and health check-up should continue on regular basis.

Rigid Curriculum acts as one of the greatest obstacles in the development of inclusive system of education. Curriculum, in many cases, is extensive and demanding or centrally designed or rigid due to which it gives less scope and flexibility for the teachers to experiment and tryout any new system.

For developing a desire to go to school learning in the schools must be joyful, meaningful and interesting in underdeveloped and remote areas. Culture friendly and child friendly materials like the folk stories, tribal dance and festivals, stories of successful local leaders in the core curriculum to make learning enjoyable and help to create interest. Every school should include a period for local games and adopt various joyful methods of teaching to enhance the attendance in the school and reduce dropout.

For a nation's growth an initiative for skill development is imperative. At present the education system is not fulfilling its role of building skilled manpower. This is resulting in mismatch between the skill requirement of market and skill base of the employment seekers. For this reason, many educated people are remaining unemployed. To address this problem, it is needed to refurbish the system of vocational education and training especially for marginalized learners of the country.

There is a greater need to provide capacity building programs to upgrade the professional skills of teachers. It can be done through providing motivational and leadership training to teachers. Vocational training programs should be mandatory for teachers who are

serving in tribal areas. As far as practicable the teachers should be trained in local tribal language or dialect to amplify intensive interaction with tribal students.

In tribal areas there are some children who cannot afford school education due to economic backwardness. In order to earn a livelihood, they are forced to remain at home or go to earn outside the home. But they also need education for a better life. For these out of school tribal children, mobile school facilities should be launched to provide education. The training of these children should be fixed by considering their leisure hours.

1.5.1 Development of Whole School Approach to Support Deprived and Marginalized Learners

Education plays a vital role in preparing learners for the self-reliance market and making them active citizens both nationally and globally. Schools mainly provide this education. You may refer Section 1.2 of Unit I of Block IV for more details on Whole School Approach.

1.5.2 School Based Intervention for Deprived and Marginalized Learners

School-based prevention and intervention measures both directly or indirectly aim at reducing early school leaving.

School-based intervention would have the following objectives:

1. Initial identification of beneficiaries
2. Capacity building of teachers
3. Monitoring of learners' performance in school

This improving the performance and preventing dropouts -

- i) First of all, the weak learners are to be identified and action to be taken at the earliest possible moment. For this monitoring of attendance, performance and involvement of student's school activities are to be done.
- ii) Good career guidance and career counseling as well as making curriculum more flexible and diverse, will be helpful for the at-risk learners.

- iii) The learners may be encouraged to stay at school and be in touch with education if additional learning supports at the end of the secondary school are arranged.

Self-Assessment Question-II

Please answer the following questions (Multiple Choice)

3. Which is the most important for improving the performance and preventing dropouts

- a) identify the learner's problems
- b) capacity building of teachers
- c) meeting the parents
- d) counseling the learner's

4. For quality education ----- is very much important.

- a) learner's good behavior
- b) learner's motivation
- c) trained teachers and staffs
- d) guardians' involvement

Please check your answers with the answers given at the end of unit

Role of ICT for Marginalized Learners[Estrada,I. (n.d.)]

ICT enabled education has the potential to transform the system of education and help in realization of its vision. It has been revolutionizing the lives of the children to unleash their utmost potential and accelerate their retention and learning in schools.

ICT model Smart Lab is one of the best structures for the marginalized learners. This model aims to provide for digitized way of teaching and learning in subjects like Science and mathematics.

In modern society ICT is ever-present, with over three billion people having access to the Internet. With approximately 8 out of 10 Internet users owning a smartphone, information and data are increasing by leaps and bounds. This rapid growth, especially in developing countries, has led ICT to become a keystone of everyday life, in which life without some facet of technology renders most of clerical, work and routine tasks dysfunctional. [Wikipedia, January (2017)]

The principles of an ICT friendly school thus essentially entailed the following ideologies: -

- i. ICT is not a method to replace the teachers but exist to supplement the teachers and how technology can help in further help in explaining the concept.
- ii. It is to be integrated to build interactive, fear free and child friendly environment;
- iii. It inculcated a scientific and creative temperament in the children way of learning;
- iv. It brought the children closer to the world of digitization and equipped them with right to information

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Estrada. I. (n.d.) Source: www.sardindia.org, www.sard.org.in

1.5.3 Guidance and Counseling Services

What is the meaning of Guidance and Counseling?

Guidance and counseling, or guidance counseling, means to help the learners all-round development (personal, social, emotional, educational etc.). Many psychologists define guidance and counseling in different dimensions. But it is true that Guidance and counseling suggest the learners to resolve the problems that arise in his/her life.

Importance of Guidance and Counseling

Basic educational and career guidance services are the key instruments which can help in preventing stagnation and dropout of marginalized learners. Vocational Counseling and guidance can be useful as a strategic element in the development of human resources.

These points are important regarding the nature and scope of Guidance and Counseling:
Bénédicte Gendron, 2006

- i) Guidance is one of the school's primary functions. It is an educational activity which target to support pupil throughout his or her school career to make reasoned educational and vocational choices.
- ii) When vocational guidance and counseling services are integrated into the schooling system, they shoulder the additional load of responsibility for educational selection processes. The pupils learn to give a judgment about his/her personal and social worth which is based on their formal educational assessment.
- iii) An efficient guidance system should develop a scope for multiple choices for the learners.
- iv) The implementation of a real guidance policy would allow a smoother interaction between the different providers of information and guidance among the different educator teams in each school.

In this context it is realized that Guidance and Counseling is very important for marginalized learners. Because of their socio-economic background they may need guidance for the avenues open for them and that suits their own abilities. Guidance and counseling can show them aware and confident of their abilities and also help them to reduce their weakness.

1.6 Let Us Sum Up

Marginalized people are the people who are socially, economically, politically and legally ignored, excluded or neglected. Socioeconomic background depends on income, education and occupation of an individual and it plays a vital role in some learners' life. Learners like orphans, single parent child; child from conflicting family faces hurdles in studies. Orphan means children aged less than 18 years of age who have lost both parents. Girls are also neglected in many cases and thus get less scope to study. In the Indian context, the marginalized also include the scheduled cast, scheduled tribe, denoted

tribes, nomadic tribes and other backward classes who are coming from different socio-economic and cultural backgrounds. Marginalized learners face different types of obstacles such as community levels obstacles, school and education level obstacles, poverty level obstacles etc. It is noticed that current strategies and programmes are insufficient with regard to cater to the needs of the marginalized learners. Improvement in the field of teaching staff with adequate teaching aids, funds and support of Govt. formation of MTA and PTA in school may help to reduce these hindrances. Moreover, development of whole school approach is also required to improve the situation. Guidance and counseling is also very much important for marginalized learners because of their background.

1.7 Answers to Self-Assessment Questions (SAQ)

1. d) All of them
2. b) Learner's personal characteristics
3. a) Identify the learner's problems
4. c) Trained teachers and staffs

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1.9 Unit End Exercises

1. What do you mean by marginalized learners?
2. Discuss the various barriers in education that the marginalized and deprived learners face.

3. What should be done for improving the performance of learners and preventing dropout?
4. Describe why guidance and counseling is important for marginalized.
5. Discuss briefly the needs of Deprived and Marginalized learners in the School.
6. Narrate the scope of guidance and counseling for the Marginalized Learners.
7. Classify Marginalized learners.
8. What do you mean by learners from the Conflicting and War Affected areas?
9. Write a short note on Psychological Assessment Report.
10. Describe briefly the learners from the Different Cultural and Linguistic Backgrounds.

UNIT - 2: STUDENTS WITH SENSORY DISABILITIES

Structure

- 2.0 Introduction
- 2.1 Objectives
- 2.2 Students with Visual Impairment and Low Vision
 - 2.2.1 Nature of Disability
 - 2.2.2 Assessment of Students with Visual Impairment and Low Vision
 - 2.2.3 Supporting Learning of Students with Visual Impairment and Low Vision
 - 2.2.4 Use of Assistive Device/Assistive Technology
- 2.3 Students with Hearing Impairment (HI)
 - 2.3.1 Nature of Disability
 - 2.3.2 Assessment of Students with Hearing Impairment
 - 2.3.3 Supporting Learning of Students with Hearing Impairment
- 2.4 Students Who are Deaf Blind
 - 2.4.1 Nature of Disability
 - 2.4.2 Assessment of Students Who are Deaf Blind
 - 2.4.3 Supporting Learning of Students Who are Deaf Blind
 - 2.2.4 Use of Assistive Device/Assistive Technology
- 2.5 Let Us Sum Up
- 2.6 Answers to Self-Assessment Questions (SAQ)
- 2.7 References
- 2.8 Unit End Exercise

2.0 Introduction

In this unit, we will discuss some of the important characteristics of different types of sensory disabilities, assessment of students with sensory disabilities and how you may support learning of students with different sensory disabilities.

When the senses such as sight, hearing, smell, touch, taste and spatial awareness of a person is impaired, then he/she may be called a person with Sensory Disability or Sensory Impairment. The term sensory impairment is mainly used here to refer to the people with either hearing impairment or visual impairment or both, extent of which may vary from person to person. A person need not to have full loss of sense to be sensory impaired.

Sensory impairment encompasses hearing loss (including whole range), visual loss (including blindness and partial sight) and multisensory impairment. Multisensory impairment means having diagnosed visual and hearing impairment with at least mild loss in each modality or deaf blindness. Students suffering from these types of disabilities are called students with sensory disabilities.

2.1 Objectives

Upon Completion of the unit, you will be able to -

- ❖ identify the various types of sensory disabilities;
- ❖ discuss how to assess the performance of the various types of students with sensory disability;
- ❖ describe the needs of the students with respect their learning characteristics; and
- ❖ explain specific strategies to meet their needs in the school.

2.2 Students with Visual Impairment and Low Vision

You have already learned the definition and types of VI and low vision Section 2.3 of Unit 2 of block I.

2.2.1 Nature of Disability

Congenital (vision loss which is present at birth) and Adventitious (vision loss later in life as a result of illness or accident) comes under Visual impairment. The age of onset and level of development before sight loss occurs are critical factors in the student's ability to acquire skills and concepts. Two children with visual impairment may function and learn in very different ways although they may be assessed as having the same visual acuity. Due to vision fatigue, lighting and/or glare, Vision may fluctuate or may be temporarily influenced. Generalizations about the student's visual functioning cannot be made solely on the basis of the diagnosed eye condition, although an understanding of the type of vision impairment is certainly important.

Learning characteristics according to severity of visual loss

(Developmental Disorders Series, Visual Impairment,2008)

Mild	Can read relatively larger characters. No difficulty in identifying shapes, colours and brightness contrast
Moderate	Can tell shapes and colours of objects and can distinguish between brightness and darkness Can only read characters with larger size and broader strokes
Severe	Can only distinguish more obvious changes in brightness and darkness May not see anything(completely blind)

Needs of learners with visual impairment and Low Vision

Learners with visual impairments have unique educational needs. To fulfill the needs, learners require specialized services, like books and materials in appropriate media (including Braille), as well as specialized equipment and technology to assure equal access. Specialized curricula is also required to enable them to most effectively compete with their peers in school and ultimately in society.

There are some educational needs for a visual impairment if the learners have any type of visual problems. If the learners have vision loss his/ her all round development may be disturbed. So, at first it is very much essential to give proper attention. Secondly select and use the appropriate learning medium. Thirdly prepared plan programmes for training in reading and writing skills. Fourthly carefully handled the appropriate assistive devices and Lastly acquired the techniques of orientation and mobility training. [DSE(V.I) Manual, 2014]

2.2.2 Assessment of Students with Visual Impairment and Low Vision

Assessing the learner's strengths and weaknesses is one of the most important prerequisites in planning a learner's educational program. Following are the main three areas of assessment:

Assistive Technology Assessments

Functional Vision Assessment

Learning Media Assessments

Assistive Technology Assessments and Learning Media Assessments are the two major areas discussed in details on Block IV. So we will discuss about the Functional Vision Assessment here.

Functional Vision Assessments

A variety of evaluation techniques which test the child's use of vision and visual efficiency in daily activities are called functional vision assessment. The assessment is made over a number of sessions to determine how the child accesses his/her visual environment, such as what is the distance to be maintained from the chalkboard or what print size s/he is able to see. Contribution from the child's Orientation and Mobility instructor is helpful. A certified teacher of the students with visual impairments also needs the assessment.

Need for Assessment of Functional Vision

This assessment provides information regarding a learner's ability to use his/ her vision within the learning environment. It includes acuity, colour, fields and environmental accommodations. It will include a list of recommendations for modification and adaptations of instructional materials. The clinical evaluation of a learner with visual impairment does not always reflect the learner's true visual abilities. It is the responsibility of teachers of visually impaired to gather assessment data of a learner's use of vision in realistic settings. When assessing a learner's functional vision, it is recommended that materials be used with which the learner is already familiar and which are at the learner's current level of functioning. The activities used for the functional vision assessment should be drawn from a variety of tasks, i.e., academic, non-academic, extracurricular, and social context.

[DSE(V.I) Manual,2014]

Self-Assessment Question- I

Please answers the following Questions (Multiple Choice)

1. Sensory Impairment means
 - a) not able to smell
 - b) not able to touch
 - c) not able to test
 - d)not able to hear & sight
2. According to severity of visual loss one of the characteristics in severe visual loss learners is
 - a)no difficulty in identifying shapes, colours and brightness contrast
 - b) can only read characters with larger size and broader strokes
 - c) can only distinguish more obvious changes in brightness and darkness
 - d) all of them

Please check your answers with the answers given at the end of Unit

2.2.3 Supporting Learning of Students with Visual Impairment and Low Vision

The following sub-units deal with the ways of making teaching learning more effective for VI and Low Vision learners.

Specific Teaching Strategies

There are two main functional categories of visual impairments:

Low Vision and

Blind.

Low vision students usually use print. Some may require special equipment and materials.

Following are the main strategies to be followed by the teacher having visually impaired learners.(Srivastava,2011)

- a) Be more verbal. Verbal description will help the child interpret what is going on in the classroom. Such as
 - i. Use names when calling on children.
 - ii. Provide precise verbal description in place of vague statements and/or motions when modeling an action. “Fold the paper lengthwise” instead of “fold the paper like this.”
 - iii. Verbalize what is writing on the board or on overheads, spell out words when appropriate.
 - iv. When referring to objects, think about attributes other than colour, such as shape, weight, texture, size and location.
 - v. Use normal language such as ‘look’ and ‘see’
- b) Help the child learn the workings of the classroom. Blind children in the early grades, like all children, have much to learn about classroom routine .It may need to teach the child
 - i. to focus on the teacher;

- ii. to respond quickly to instructions;
 - iii. how to respond(raising the hand, answering aloud, answering in unison, etc.);
 - iv. when and where to move in the classroom;
 - v. how to determine what others in the room are doing;
- c) Organize the child’s desk area and materials storage area for maximum independence.
- d) Provide hands-on opportunities. These will make experiences more meaningful for the blind child.
- e) Adapt materials or parts of the lesson when necessary. Offer information instead of help. Instead of getting an object for the child, for example, give the child a chance to find it by describing its size, shape and location. Then give the child enough time to explore and correct mistakes before teacher give more prompts.
- f) Understand and respect the skills of blindness. Learn the general sequence of the skills; provide opportunities in the class for the child is working toward mastery.
- i. Braille reading and writing is the equivalent of print reading and writing.
 - ii. Information can be reliably perceived through the sense of touch.
 - iii. The blind child should be moving about more and more independently as time goes on using orientation and mobility skills.
 - iv. The child will learn to use sound, memory, mental mapping and various special tools and will learn to ask for information when needed.

Class Room Management [DSE(V.I.)Manual,2014]

i) Lighting:

- Natural and artificial lighting.
- Good natural light is comfortable
- More lighting is required in some cases. e. g. Retinitis Pigmentosa.
- Dim or appropriate light is required in some cases e.g. Albinism.
- The light should come behind and to one side of the person.

ii) Seating Arrangement:

- The children can be placed in the middle of the front row.
- Not all low vision children prefer the front row.
- Children with tunnel vision will be comfortable when they sit a little back and on the sides depending on the dominant eye.
- The children can sit where light comes more- near the window or door to use light.

iii) Blackboard:

- The blackboard should be cleaned regularly.
- Writing should be clear, large and uncluttered.
- White or yellow chalks provide the best contrast.

iv) Writing:

- Writing can be a tiring activity.
- Short breaks during writing activities reduce fatigue.
- Felt pens or nylon or metal tipped pens provide good contrast.
- The children can be allowed to use Black ink to get good contrast.

v) Reading:

- Low vision services is more than deciding the child's reading medium-Print or Braille.
- Some children may read normal print-textbook.
- Some can read large print.
- Some low vision children can read only Braille but they can use vision for other purposes.
- Some can read large print but they are not able to write.
- Some children can write but not for longer hours.Those children can be allowed to use scribe for their exams.

vi) Time Modifications:

Low vision children will often experience fatigue due to:

- Shorter working distance

- Postural problems
- The need to use a variety of low vision aids

vii) Others:

- All the furniture should have blunt ends
- The electrical switch board /panels should have easy accessibility

2.2.4 Use of Assistive Device/Assistive Technology

For visually impaired individuals Technology has removed many barriers to education and employment'. Learners with visual impairments can complete homework, do research, take tests, and read books along with their sighted classmates. Thanks to advances in technology. In detail discussion of Assistive Devices see Unit II of Block IV.

2.3 Students with Hearing Impairment (HI)

You have already learned the definition and types of VI and low vision Section 2.3 of Unit 2 of block I.

2.3.1 Nature of Disability

Hearing is the ability to perceive sound. A person suffering from hearing impairment has difficulty in perceiving or identifying sound clearly due to auditory problems. So it is said that a hearing impairment is a hearing loss that prevents a person from receiving total sounds through the ear. The impairment may be unilateral or bilateral. If the loss is mild, the person has difficulty hearing faint or distant speech. A person with this degree of hearing impairment may use a hearing aid to amplify sounds.

Learning characteristics according to severity of Hearing loss

[CAS, Department of Health, HKSAR (2008)]

Mild	Difficult to identify soft sound such as whispering.
Moderate	Unable to hear clearly what others are saying during conversation. Hearing aids are necessary.
Moderately -severe	Unable to clearly hear loud noises and such as telephone ring.
Severe	Can only hear very loud noises and sounds such as shouting or vacuum cleaner noise.
Profound	Difficult to perceive any sound.

Needs of Learners with Hearing impairment

Hearing impairment (HI) learners have mainly learning needs, educational needs & vocational needs. For any type of needs hearing aids play an important role in HI learners. Hearing aids amplify existing sounds around the wearer. They work by making sounds easier to understand and can provide sound filtering to make existing sounds easier to hear.

Hearing impaired children cover the whole range of ability. Given the right levels of support they have the same potential to attain and achieve as any other child. To make the same progress as other pupils of a similar age and cognitive ability, HI children are likely to need extra support.

To have the best access to education, learners with a hearing impaired may require accommodations and assistive devices. Accommodations may be as simple as preferential seating or as complex as wireless assistive listening devices in the classroom. Each learner with a hearing loss should be assessed individually and accommodations should be implemented based on the unique needs of each student.

2.3.2 Assessment of Students with Hearing Impairment

Audio logical assessment is necessary to correctly identify, diagnose and remediate hearing loss in children. Audio logical assessment in children should be characterized by TEST BATTERY APPROACH that is more than one test should be carried out to confirm the detection and diagnosis of hearing loss. (NSOU.B.Ed.Spl.Ed.SLM.2016). The test results should be cross-checked and validated.

Parents may need to be advised that the pediatric hearing examination is an ongoing, age-specific activity, so that as the child grows older, more accurate hearing results may be obtained. The various tests used for audio logical assessment in children can be classified as shown in the flow chart below:

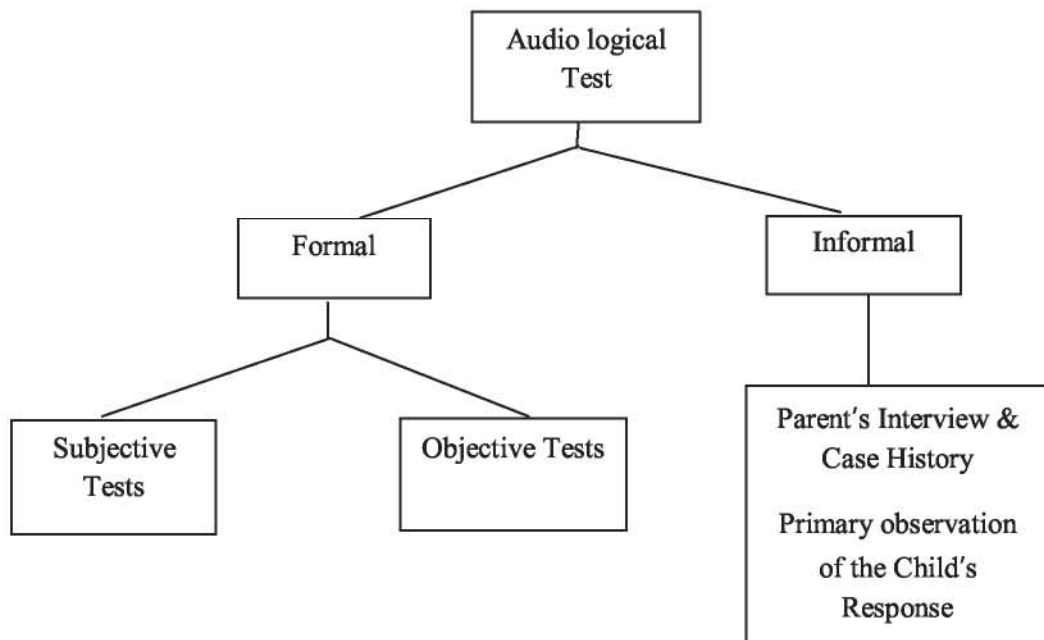


Fig: Audio logical Assessment Test (NSOU.B.Ed. Spl. Ed. SLM.2016)

Auditory Assessment

Auditory assessment is the main area of assessment of listening levels of students with hearing loss, who use hearing devices and who follow an oral communications approach. So for knowing the child's listening ability assessed the child first. It has four stages:

i. Detection:

At this stage, the teacher checks to see if child is able to distinguish between presence and absence of sound in his/her environment. Ability to detect phonemes, words, phrases or sentences through listening alone is assessed.

ii. Discrimination:

The second stage assesses the student's ability to discriminate between different sounds. Again the student needs to be assessed at level of phonological awareness, word, phrases and sentences.

iii. Identification:

This means checking if the student is able to identify the particular sound, phoneme, word, phrase or sentence.

iv. Comprehension:

This is the highest stage of achievement. Once the child is able to identify, the child's ability to understand the meaning of the message heard needs to be assessed.

Formal Hearing Tests

All the formal tests make use of instruments which can vary from simple to most sophisticated ones. The tests are characterized by presentation of a sound stimulus such as pure tones, speech, warble tones and noise. The tests are performed by an audiologist (Tester) on subjects with or without hearing loss. The tests give a result, which is again interpreted by the tester. The ultimate goal of each test is to establish the auditory/hearing threshold, which is the minimum stimulus level that elicits a response consistently. The instrument used for basic tests are audiometer, emittance audiometer, instrument for electrophysiological tests such as ABR (Auditory Brainstem

Response)(with software and other accessories), and OAE (Otoacoustic Emimisions) instrument. These tests can be used for screening, diagnostic purposes and school screening programs.[DSE(H.I) Manual, RCI]

Subjective Tests

As the name suggests these tests need participation of the subject. The participation can be active or passive. In these tests the response is recorded after the presentation of a stimulus. The response can be a predefined active one, e.g. raising hand in response to a sound stimulus, or it can be a change in behaviour of the child, e.g. searching for the sound stimulus which can be noted by the tester.

Objective Tests

These tests need no active participation from the child. The child's state of arousal, cognitive level or vocabulary does not affect the results of these tests. These tests are time effective and also provide an important tool in the test battery approach. They also help to cross check the results obtained from subjective tests. The use of these tests gives information about functioning of the hearing structures, beyond cochlea. These tests give information about type and degree of hearing loss. Many of these are also used for screening purposes in neonatal stage. Moreover, these tests are very important for difficult to test population e.g. children with intellectual impairment, non-cooperative child.

Self- Assessment Question-II

Please answers the following Questions (Multiple Choice)

3. Which one is the moderate category hearing loss
 - a)Unable to hear clearly what others are saying during conversation
 - b) Unable to clearly hear loud noises
 - c) Difficult to perceive any sound
 - d) Can only hear very loud noises and sounds
4. How many steps are involved in Auditory Assessment?
 - a) Two
 - b) Three

c) Four

d) Five

Please check your answers with the answers given at the end of Unit

2.3.3 Supporting Learning of Students with Hearing Impairment

The following sub-units deal with the ways of making teaching learning more effective for Hearing Impairment learners.

Specific Teaching strategies

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.(Sharma, 2012)

- i) Combined visual presentation with oral materials. Audio –visual method is very effective teaching method for them.
- ii) Use handouts for these children has marvelous effect on them.
- iii) When necessary multisensory approach is well applicable.
- iv) Pupil’s attention should be prior factor.
- v) Major portion of the lesson should be completed.
- vi) Presentation of each point should clear to them.
- vii) Using transition sentences helps them to learn.
- viii) Short and clear verbalization means a lot to them.
- ix) Asking questions again and again help them to check comprehension and
- x) Explaining and repeating things number of times makes them easy to learn.

Classroom management(Sharma, 2012)

Accommodations and modifications in the classroom can help the child with hearing loss learn his or her best. These include teaching strategies specific to the child's needs, as well as simple physical accommodations-like seating placement and keeping the classroom door closed to minimize extraneous noise. Importantly, other audio

technologies to supplement and/or work in conjunction with the child's hearing aids can be extremely beneficial in enabling greater communication ease for the child.

Effective communication is vital with a hearing impaired student to ensure student success. Since many hard of hearing students rely on lip-reading, at least partially, it is important to keep a few points in mind when teaching.

- i) Arranging the seats in the front row of the room. Preferably on one side, so that they obtain a better view of both the teacher and the classmate.
- ii) Keep the auditory and visual distracters to a minimum. Always remembered that environmental noises are also a problem for the child with a hearing aid, since all noises are amplified for the child.
- iii) Checking the hearing aids regularly.
- iv) To optimize the child's opportunities to speech-read, the teacher should try to maintain a distance of about six feet between teacher and child.
- v) Speaking naturally and follow other principles of speech reading and auditory training.
- vi) Attempt to standstill when talking, because excessive movement adds to the difficulty of speech reading.
- vii) Should be careful not to turn the teacher's back to the class and talk while writing on the blackboard.
- viii) New vocabulary should be introduced both orally and writing.
- ix) Always try to make every effort to use visual aids in the instructional process.
- x) Should give opportunity to the hearing –impaired child to participate in various co-curricular activities in the class depending on child's abilities and interest.

Use of Assistive Devices / Assistive Technology

Hearing Assistive Technology Systems (HATS) are devices that can help the hearing impaired to communicate with others. It may also hear them called assistive listening devices. HATS can be used with or without hearing aids or cochlear implants to make it easier to hear. A detail discussion of Assistive Devices is in Block IV.

2.4 Students who are Deaf blind

Do you hear the name of Helen Keller?

The full name of the lady is Helen Adams Keller (June 27, 1880 - June 1, 1968). She was an American author, political activist, and lecturer. She was the first deaf-blind person to earn a Bachelor of Arts degree.

You are already learned the definition and main characteristics of deaf-blind in Section 2.3 of Block I of Unit II.

2.4.1 Nature of Disability

It is the combination of both hearing and sight impairment. It is not necessarily a total loss of both senses - indeed the majority of dual sensory impaired people do have some degree of sight and/or hearing. Those with a less severe degree of both sight and hearing impairment may also be referred to as having a dual sensory impairment or loss. The words dual sensory impaired and deaf-blind are generally accepted as inter-changeable words.

Deaf-blindness is a unique and extremely complex disability that often requires specialist communication methods and systems being introduced to the person and those around them to enable communication to take place.

Deaf-blindness has adverse effects on all areas of development, in particular the language acquisition process, conceptual development, motor development, behaviour and personality of a person.

Three combinations are possible in Deaf-blindness [Das & Mishra, (n.d.)]:

- a) Individuals who are born blind and later develop a hearing impairment.
- b) Individuals who are born deaf and later develop vision impairment.
- c) Individuals who are born sighted and hearing, but later develop a vision and hearing impairment.

Every deaf -blind person is an individual and may not fit neatly into any of the above categories, or use the suggested means of communication. Their situation may be complicated by the existence of other factors such as physical and/or learning disabilities etc,

Learning characteristics according to severity of Deaf- blind

Their characteristics are a combination of both VI and HI. It depends on the severity of one over the other learner.

Needs of learners with Deaf-blind

Individuals with deaf-blindness have unique life-long support needs that must be addressed in order for them to function in a world driven by sight and sound. Consistent with this, deaf-blind learners have unique educational needs which are most effectively met using a team approach of professionals, parents and students. In order to meet their unique needs, students must have specialized services, books and materials in appropriate media (including Braille), as well as specialized equipment and technology to assure equal access to the core and specialized curricula, and to enable them to most effectively compete with their peers in school and ultimately in society. Following are the basic needs to be looked into the Deaf-blind learners-

- i. School building with proper approach and accessibility
- ii. Proper and well equipped classroom
- iii. Appropriate curricula
- iv. Well trained teachers and staff
- v. Suitable learning style
- vi. Proper use of audio material
- vii. Proper use of visual material

Screening and Identification

Screening is a service in which learners who are identified. It reduces the risk of developing further complications through early identification; at the same time, it is not a guarantee of prevention, or of diagnosis and cure.

Why screening?

Screening is necessary because deaf-blind people remains invisible and hidden from everyone, and are often misdiagnosed as mentally challenged or hearing impaired with vision problem, screening helps in identifying from the number of population with individuals. Only screening for VI or HI is not effective for them. Both are to be tried for proper identification.

Functional Assessment

For planning of educational services Functional Assessment is a process using observation, screening test, and test analysis to determine an individual's strength and weaknesses. It should be set in the context of the clinical information including an etiology, visual acuity and hearing thresholds, and the assessor should integrate the whole information to provide a commentary of the child's needs and provide useful recommendations about strategies to meet them. A proper assessment requires family participation and a trans-disciplinary teams.

Components of assessment:

The assessment format must contain questions relating to the child's social and communication domain, sensory/motor domain, functional vision domain, and functional hearing domain.

Tools for assessment are:

Learning through doing: This tool was developed by National Institute for the Visually Handicapped (NIVH) and Blind Peoples association, Ahmedabad in 2002. It is an assessment tool as well as a programme manual.

Screening checklist for sensory impairment developed by National Institute for the Mentally Handicapped (NIMH).

Callier-Azusa Scale is a developmental scale specially designed to aid in the assessment of deaf-blind children. This is composed of 18 sub-scales in five areas. These are motor development, perceptual development, daily living skills, cognition, communication and language, and social development.

Functional assessment for vision and hearing problem in children developed by Sense International (India). Now this format is used for assessment in camps and community, and in special schools.

2.4.3 Supporting Learning of Students who are Deaf Blind

For Deaf-blind learners varieties types of technological support may be given for their learning. Such as

- i) Aids for Daily leaving should be provided to the Deaf-blind learners.
- ii) Mobility aids is also very important for these Deaf-blind learners.
- iii) Visual aids are one of the necessary criteria of learning students.
- iv) Academic and learning aids are part and parcel of their teaching aids.

A detail discussion of Assistive Devices is in Block IV.

The following sub-units deal with the ways of making teaching learning more effective for Deaf-blind learners.

Specific Teaching Strategies[NSOU. B.Ed. Spl Ed. SLM. (2016)]

Instructional strategies

Instructional strategies for learners with deaf-blindness mean intervention into their world of "invisible silence". The strategies to be taken are:

Creation of effective environment that helps in acquiring maximum learning is the prime thing that an educator needs to act upon in a systematic way.

- Adaptations to the physical environment, e.g. Arrangement of the room, lighting, noise level, location of materials and resources, accessibility to other rooms, etc. are all considerations for environmental modifications.
- Adaptations in the class programme include
- Allowing more time for the task
- Pacing the lesson differently
- Ensuring a variety of ways of processing information
- Setting up structures that enable achieving smaller steps to the goal
- Checking more frequently than usual for understanding
- Giving more frequent feedback
- Simplifying questions/instructions

Modifications to resources and materials

Materials have to be adapted to allow the learners to access the information or demonstrate their understanding. This can be done by simplifying resources and materials, using different materials, enlarging print, using Braille prints and provision of support personnel. Despite the adaptations and modifications, some children or adults need higher levels of assistance from the educator/caregiver.

Self- Assessment Question-III

Please answers the following Questions (Multiple Choice)

5. The Deaf-blind lady Helen Adams Keller was
 - a) An Author
 - b) An Educationist
 - c) A Painter
 - d) A Psychologist
6. Callier-Azusa Scale are covered how many areas in the assessment of deaf-blind children?
 - a) Two areas
 - b) Three areas
 - c) Four areas
 - d) Five areas

Please check your answers with the answers given at the end of Unit

Components of Teaching Strategies[NSOU. B.Ed.Spl Ed. SLM. (2016)].

Stability: It refers to the orderly approaches that would help the child to predict about the environment. Structured environment supports structured learning and helps in confidence building.

Routine to create stability: Routines allow the child to experiment with more confidence in a predictable situation.

Role of Motivation: Activity has to be planned in a way to motivate the child to act and enjoy with the educator. Think of reward to maintain the enthusiasm in the child.

Small Steps (task analysis) in implementing the goal: Before introducing the whole activity to the learner, it should be broken down into small steps. Small steps build confidence in the learner.

Pace of learning: It refers to the time required and taken by the learner in learning any task. Based on the individual needs, each learner has his/her own learning pace.

Repetitions of the task: Learners with deaf-blindness may need more repetitions of an activity due to restricted or limited input from the senses.

Presentation of the task: The task has to be designed in such a way that it is of maximum use. The Teaching Learning Materials (TLM), selected on the basis of the needs as well as strengths/limitations of the learner, should be easily seen, heard or explored tactually.

Prompts: Prompts are cues/indications given to the learner to perform the task. It requires high level of prompting at the initial stage, and reduced gradually.

Working hand over hand: A rapport with the learner has to be built to make the learner feel secured before working hand over hand. The educator generally places his/her hand over the learner's hands gently to show him/her to perform a task.

Classroom Management

Accommodations and modifications in the classroom that can help the Sensory disabled learner learn at his or her best which are: (Das & Mishra, (n. d.))

- **Acknowledge your presence**
Teacher's presence ought to be acknowledged.
- **Address children directly**
Children's should be addressed through and through.
- **Always encourage and motivate.**
Praising and encouraging children always motivate them to learn.
- **Avoid too much help**
It is not necessary to be too much cautious about them.
- **Community based instruction**
Community based instructions should warn to them.
- **Describe things to them**
To make them acquainted with the classroom accessories.
- **Integration with non-disabled peers**

It is very necessary to integrate with non-disabled peers

➤ **Keep positive attitude and patience**

Teacher should always keep in mind that their positive attitude and patience is very influential while taking their care.

Use of assistive device / assistive technology

Equipment and assistive devices can enable Learner to lead an independent lifestyle. A detailed discussion of Assistive Devices is in Block IV.

2.5 Let Us Sum Up:

This unit significantly dealt with the meaning, characteristics and educational intervention of learners with sensory disabilities. The discourse also reflected the emerging roles of assistive devices and technology in general. Various appropriate technological supports can be synergized with other teaching-learning strategies to meet the need and learning styles of such learners. Also the classroom management can be tailored to accommodate these learners in particular. In spite of sensorial disability learners can learn effectively when properly screened or diagnosed and accommodations made in the classroom. Proper assistive devices and technology can enhance their learning. However, there is no blanket rule for all sorts of sensory disability. Variations in type and degree of disability determine the kind of assistance and methodology to be used.

2.6 Answers of Self-Assessment Questions (SAQ)

- 1.d) Not able to hear & sight
- 2.c) Can only distinguish more obvious changes in brightness and darkness
3. a) Unable to hear clearly what others are saying during conversation
4. c) Four
- 5.a) An Author
6. d) Five areas

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2.8 Unit End Exercise:

1. What is the meaning of Sensory Impairment?
2. Write the learning characteristics of Visual Impairment?
3. Discuss the specific teaching strategies of Hearing Impairment?
4. What are the learning needs of learners of Visual Impairment?
5. Discuss how accommodations and modifications in the classroom can help the deaf-blind learners to learn.
6. What needs to be done if it is detected that child has an excessive tearing, redness and eye deviation?
7. Do you know any name of assessment tool for Deaf-blind?
8. Think to say what the significant features of instructional strategies are for learners with deaf-blindness.
9. 'More repetitions of the task may be needed for the learners with deaf-blindness'-Do you agree of this statement? Write some points in justification of your view.
10. Do you think screening is necessary for the deaf-blind?

Reflective Exercises

1. Why is functional assessment necessary? Write two or three points.
2. Single out the main functional categories of visual impairments?
Do you think it is necessary to speak loudly to people with visual impairments?
3. Do you know why every deaf-blind person is unique?
4. What types of resources are required by the deaf-blind learners?

UNIT - 3: LEARNERS WITH INTELLECTUAL AND LEARNING DISABILITIES

Structure:

- 3.0 Introduction
- 3.1 Objectives
- 3.2 Learners with Intellectual Disability
 - 3.2.1 Nature of Disability
 - 3.2.2 Assessment of Learners with Intellectual Disability
 - 3.2.3 Supporting Learning of Learners with Intellectual Disability
- 3.3 Learners with Specific Learning Disabilities
 - 3.3.1 Nature of Disability
 - 3.3.2 Assessment of Learners with Specific Learning Disability
 - 3.3.3 Supporting Learning of Learners with Specific Learning Disability
- 3.4 Let Us Sum Up
- 3.5 Answers to Self-Assessment Questions (SAQ)
- 3.6 References
- 3.7 Unit End Exercise

3.0 Introduction

Every child with special needs is a distinct individual with diverse learning styles and should not be homogenized into disability categories. Each child with Intellectual Disability or Specific Learning Disability will be different with unique strengths and needs. The teacher has to be sensitive in recognizing these needs and be equipped to provide each child an engaging, meaningful and joyful learning environment.

In this unit, our purpose is to discuss about learners with intellectual and learning disabilities, how to assess their performance and use specific strategies to meet their needs.

3.1 Objectives

Upon Completion of the unit, you will be able to -

- ❖ identify and differentiate the learners with intellectual and learning disabilities;
- ❖ discuss how to assess the performance of the learners with intellectual and learning disabilities in the school;
- ❖ identify difficulties with respect to their learning characteristics; and
- ❖ explain how to use specific strategies to meet their needs in the school.

3.2 Learners with Intellectual Disability

3.2.1 Nature of Disability

An intellectual disability (also commonly referred to as a developmental disability among other terms) is, simply stated, a disability that significantly affects one's ability to learn and use information. It is a disability that is present during childhood and continues throughout one's life. A person who has an intellectual disability is capable of participating effectively in all aspects of daily life, but sometimes requires more assistance than others in learning a task, adapting to changes in tasks and routines, and

addressing the many barriers to participation that result from the complexity of our society. (NSOU, B.Ed. Special Education SLM, 2016).

What Is Intellectual Disability?

Internationally the definition of Mental Retardation has moved away from medical model to rehabilitative model. Current trend is to describe the condition by using functional and educational terms rather than clinical terms.

We have already discussed the definition and types of children with Intellectual Disability (ID) in Section 2.3.2 of Unit 2 of Block I.

Characteristics of Children with Intellectual Disabilities

- i. Delays in oral language development
- ii. Deficits in memory skills
- iii. Difficulty learning social rules
- iv. Difficulty with problem solving skills
- v. Delays in the development of adaptive behaviours such as self-help or self-care skills
- vi. Lack of social inhibitors

3.2.2 Assessment of Learners with Intellectual Disability

The selection of assessment tools and methods vary depending on the purpose for which the assessment is to be carried out and the type of the data that has to be gathered. Educational Placement depends on the assessment results obtained through various tools and methods. Assessment involves collection of information relevant to educational need of the children. This includes personal data, educational performance, the resources, the family involvement in training, and voluntary supports that could be gained for training mentally retarded student.

In Educational Assessment, the same tool can be used for diagnostic, prescriptive and evaluation purposes. Assessment includes monitoring student understanding during a

lesson, checking student progress during specific programme implementation and evaluating student achievement at the end of training programme. In the first two instances, the assessments are called Formative Evaluation; in the latter instance, it is Summative Evaluation (NSOU, B.Ed. Special Education SLM, 2016).

List of Assessment Tools (In Indian Context)

- i. Madras Developmental Programming System (MDPS)
- ii. NIMH - Vocational Assessment and Programming System for Persons with Mental Retardation (NIMH-VAPS)
- iii. Behavioural Assessment Scale for Indian Children with Mental Retardation (BASIC-MR)
- iv. Functional Assessment Checklist for Programming (FACP-NIMH)
- v. Upanayan - A programme of Developmental Training for Children with Mental Retardation
- vi. Portage Guide to Early Education

3.2.3 Supporting Learning of Learners with Intellectual Disability

The following sub-paragraphs deal with the ways of making teaching- learning process more effective for learners with ID (Peshawaria, 1992):

Specific Teaching Strategies

To make teaching and learning effective for Learners with Intellectual Disability, an Individualized Education Programme (IEP) is prepared to meet the individual need of the child as every child is unique and needs are specific.

Different teaching strategies are discussed below:

Sl. No.	Teaching Strategies	Description
1	Task Analysis	It is a teaching strategy where a task is broken down into simple teaching components and arranged into sequential order. It is a blueprint for instruction or teaching for the teacher by which the learners proceeds to achieve the target goals. It doesn't however say, how to go about teaching the various steps.
2	Reinforcement	It is the critical component of pragmatic attempt to teach new behaviour and to increase occurrence of existing behaviour. At the same time, it is helpful in maintaining appropriate level of the behaviour. e.g. rewarding a child by saying "very good", 'well done etc if s/he does a task correctly.
3	Modelling	Modelling is an instructional strategy in which the teacher demonstrates a new concept or approach to learning and students learn by observing. In natural environment most behaviour are acquired through modelling and imitation. Children learnt by observing adults or peers in the natural environment. Imitation ability is a skill to learn skills which are major tool in the hands of teacher. Modelling is teaching through demonstration. It is equally useful for teaching both new behaviour and to correct already learnt behaviour. e.g. Teaching of Dance through Modelling.

Some other Teaching Strategies (Schwartz and Budd,1983).

Teaching Functional Academics

Functional academics is merely academics made functional, designed to teach skills which allow each student to succeed in real-life situations at home, school, work and in

the community. The functional academics curriculum includes Functional Reading, Functional Writing and Functional Arithmetic.

Teaching Functional Reading: Functional Reading is defined as a student's actions or responses resulting from reading printed words. Functional term is related to application of learnt skills in real community settings. Hence words selected for reading must be such that allows the reader to become independent in community living.

Teaching Functional Writing: One of the important mode of communication is written expression. This demands eye - hand co-ordination, motor co-ordination, sense of direction and recognition of symbols (pictures/letters/ numbers/words/punctuation etc). Some writing tasks require "left to right" orientation in horizontal direction (for writing words), whereas some tasks require vertical orientation (for writing numbers in arithmetic problems as in addition or subtraction).

Teaching Functional Arithmetic: Numbers play an important role in our lives. Our communication involves reference to negotiating quantities. Functional Mathematics define as "use of mathematics needed for vocational, consumer, social, recreational and home making activities".

Social Skills Training

Appropriate social behaviours are necessary for any person to be an acceptable member of the society. In case of persons with mental retardation, intensive training is needed to cultivate appropriate social behaviours. Instead of keeping them away from the society, giving them chances to mix in the society from the childhood itself will lead them towards gaining social competency. The training should be started very early in life. The family, the relatives, neighbours, friends, and the society at large are responsible for the social skills training of the persons with mental retardation (Peshawaria, 1995).

The following social skills need to be taught(NSOU, B.Ed. Special Education SLM, 2016):

- i. Waiting for needs to be fulfilled
- ii. Playing with peers
- iii. Sharing objects
- iv. Greeting others
- v. Obeying Commands
- vi. Saying 'Please', 'Thank you', 'Sorry' appropriately
- vii. Helping parents in household tasks
- viii. Asking permission
- ix. Taking turn
- x. Participating appropriately at meal time
- xi. Dressing in a way appropriate to the situation
- xii. Visiting relatives and friends
- xiii. Participating in social functions
- xiv. Behaving appropriately with the opposite sex
- xv. Returning borrowed materials
- xvi. Identify human service provider and community helpers

Classroom Management

Classroom management refers to the steps and procedure necessary to establish and maintain an environment in which instruction and learning occurs. Effective classroom management is the ability to establish, maintain and (when necessary) restore the classroom as an effective environment for teaching and learning.

Some effective classroom management techniques are discussed here(Myreddi and Narayan, 1998):

- I. Seating Arrangement:** Children with special needs are easily distracted, so their desks should be kept away from the windows, doors and activity centres in the

classroom. The desks may be set in rows rather than using circular seating around large tables, if possible. Learners with autism need their own space. The student with ADHD is easily distracted, so a seat close to the teacher, facing forward works best.

- II. Instructions should be simple:** Verbal prompts to be given frequently, and instructions should be easy to understand. Repetition of instructions will be required if the student does not seem to comprehend what is being said.
- III. Using of visual aids such as charts, graphs, and pictures.**
- IV. Peers as role models:** Pairing compatible children together when working on projects or participating in classroom activities. This can give many children the opportunity to be a peer role model to the special needs student and can also reduce student stress.
- V. Predictable schedule:** Advance warning is required if the daily schedule is to be changed.
- VI. Teaching social skills,** such as hand raising, taking turns and sharing as part of the learning curriculum. All learners will benefit when reminders are given. Children with autism often engage in self-stimulating behaviours such as hand flapping, rocking or even slapping themselves in the face.
- VII. Intervening Activities:** Most children with ID have short attention span. So one has to be aware of the signs that they may need a short break. During the break, activities like Reading a story, playing a short game, stand up and stretching or casual conversations can be done. Sometimes an opportunity to get out of his seat and walk around the room can be very calming for the child with short attention span.
- VIII. Focusing on learner strengths:** Learners strengths are to be appreciated openly as such stance will boost learners to act further.
- IX. Environmental Distractors:** Loud noises, bright lights, and hot or cold temperatures can disrupt a child's thinking pattern and cause an unnecessary classroom outburst. These need to be eliminated whenever possible.

X. Using computer based programs.

Use of Assistive Technology

Assistive technology is the term used to describe devices used by people with intellectual disabilities and/or other disabilities that help compensate for functional limitations and increase learning, independence, mobility, communication, environmental control and choice. Different Assistive Technology Devices are used to support specific needs of the learners.

How can Assistive Technology (AT) benefit people with Intellectual Disabilities?

Assistive Technology (AT) can help people with Intellectual Disabilities overcome barriers towards independence and inclusion. Technology can compensate for a person's functional limitations. People with intellectual disabilities should be introduced to assistive technology as early as possible.

For more information on Definition and Types of Assistive Devices, you may refer Section 2.2 of Unit 2 of Block IV.

Self-Assessment Question 1

Answer the following questions. Check your answer with the one given at the end of the unit (Time 3 minutes).

1. Which of the following criteria can be used to define Intellectual Disabilities?
 - a) Significantly below averages intellectual functioning
 - b) Impairments in adaptive functioning generally
 - c) These deficits should be manifest before the age of 18-years
 - d) All of the above
2. In DSM-IV-TR intellectual disabilities are divided into a number of degrees of severity, depending primarily on the range of IQ score provided by the sufferer. One of these is Severe Mental Retardation, represented by an IQ score between:

- a) 5-10 to 15-20
 - b) 30-35 to 45-50
 - c) 10-15 to 20-25
 - d) 20-25 to 35-40
3. Which of the following would be an important social skill for a person with an intellectual disability?
- a) Knowing multiplication table
 - b) Learn to wait for his turn to come
 - c) Learn to use microwave
 - d) Write a paragraph
4. Adaptive skill areas include all of the following **except**
- a) Home living
 - b) Functional academics
 - c) Communication
 - d) Intelligence

Please check your answers with the answers given at the end of this unit.

3.3 Learners with Specific Learning Disabilities

3.3.1 Nature of Disability

The term "Specific Learning Disability" (SLD) means a disorder in one or more of the psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. Learners with Specific Learning Disabilities (SLD) exhibit a disorder in one or more of the basic, psychological processes involved in understanding or in using spoken or written languages. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They

include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc (Rehabilitation Council of India, n.d).

You have already learned about the definition and types of children with Specific Learning Disabilities (SLD) in Section 2.3.2 of Unit 2 of Block I.

3.3.2 Assessment of Learners with SLD

An ideal assessment for SLD is a long process requiring several sessions with a qualified educational psychologist. Apart from administering a battery of tests, the psychologist also gathers relevant information about the child from the teachers and school records. The child must be assessed in all areas related to the suspected disability such as health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities.

For learning disabled student, we may use some of tools (NSOU, SLM, 2016) for the assessment i.e.

- I. Reading Achievement – Swarup Mehata.
- II. NIMHANS BATTERY TEST
- III. Visual Motor Perceptual Measure (Gestalt Test) Screening Check - List of LD
- IV. Auditory Skill Test - Wood Cock
- V. Psycho Educational Battery - Wood Cock & Johnson.
- VI. Grade Level Assessment Device for Children with Learning Problems in Schools (GLAD) - Jayanti Narayan, NIMH, Secunderabad

3.3.3 Supporting Learning of Learners with Learning Disability

The following paragraphs deal with the ways of making teaching- learning process more effective for learners with SLD:

Specific Teaching Strategies

The following strategies are suggested to enhance the accessibility of course instruction, materials, and activities(Sun Francisco State University, n.d).

They are general strategies designed to support individualized reasonable accommodations for which a student is eligible:

- i. Instructions to be brief and as simple as possible.
- ii. Allowing the student to tape-record lectures.
- iii. Clearly defining course requirements, the dates of exams, and when assignments are due; providing advance notice of any changes.
- iv. Providing handouts and visual aids.
- v. When appropriate, teaming a reader with a non-reading student during in-class assignments.
- vi. Using more than one way to demonstrate or explain information. Having copies of the syllabus ready three to five weeks prior to the beginning of classes so textbooks are available for taping.
- vii. When possible, breaking information into small steps when teaching many new tasks in one lesson (state objectives, review previous lesson, summarize periodically).
- viii. Allowing time for clarification of directions and essential information.
- ix. Providing study guides or review sheets for exams.
- x. Providing alternative ways for the learners to do tasks, such as dictations or oral presentations.
- xi. Allowing the use of spell-check and grammar-assisted devices. When in doubt about how to assist the student, ask him or her. Allowing the student, the same anonymity as other learners (i.e., avoid pointing out the student or the alternative arrangements to the rest of the class).

Self-Assessment Question 2

Answer the following questions. Check your answer with the one given at the end of the unit (Time 3 minutes).

5. Which of the following is an example of a Specific Learning Disability?
 - a) Mental Retardation
 - b) Cerebral Palsy
 - c) Dysgraphia
 - d) Autism
6. A child with dyslexia but with no other difficulties would be classified as having:
 - a) ADHD
 - b) A learning difficulty.
 - c) Autism.
 - d) A specific learning difficulty.
7. In learning disabilities, the name for mathematical disorder is:
 - a) Dyspraxia
 - b) Dyslexia
 - c) Dyscalculia
 - d) Dysphasia
8. Learning disabilities:
 - a) are disorders that impede academic progress of people who are NOT mentally retarded or emotionally disturbed.
 - b) occur in children with low IQ's
 - c) include mental retardation
 - d) none of the above

Please check your answers with the answers given at the end of this unit.

Classroom Management of Learners with SLD

Whether in a general, special education, or inclusive classroom, teaching is a challenge. Handling approximately 40 different kids with individual needs-and varying attention spans-can confound even the best teachers. However, teachers can help their learners with SLD to create a well-managed, structured classroom environment.

Tips for the Teachers:

Break learning into small steps;

Administer probes;

Supply regular, quality feedback;

Use diagrams, graphics and pictures to augment what they say in words;

Provide ample independent, well-designed intensive practice;

Model instructional practices that they want learners to follow and

Provide prompts of strategies to use

Use of Assistive Technology

Assistive technology (AT) is available to help individuals with many types of disabilities - from cognitive problems to physical impairment. The use of technology to enhance learning is an effective approach for many children. Additionally, learners 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.

What is assistive technology for SLD?

AT for kids with SLD 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 SLD. 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.

For more details on Assistive Technology, you may go through Unit 2 of Block IV.

3.4 Let us Sum Up

An intellectual disability is a disability that significantly affects one's ability to learn and use information. It is a disability that is present during childhood and continues throughout one's life.

There are four types of Intellectual Disabilities viz. Mild, Moderate, Severe and Profound.

General Characteristics of Children with Intellectual Disability are:

Delays in oral language development

Deficits in memory skills

Difficulty learning social rules

Difficulty with problem solving skills

Delays in the development of adaptive behaviours such as self-help or self-care skills

Lack of social inhibitors

Tools Available for Special Educational Assessments in Indian Context are:

- i. Madras Developmental Programming System (MDPS)
 - ii. NIMH - Vocational Assessment and Programming System for Persons with Mental Retardation (NIMH-VAPS)
 - iii. Behavioural Assessment Scale for Indian Children with Mental Retardation (BASIC-MR)
 - iv. Functional Assessment Checklist for Programming (FACP-NIMH)
 - v. Upanayan - A programme of Developmental Training for Children with Mental Retardation
 - vi. Portage Guide to Early Education
- ❖ To make teaching and learning effective for Learners with Intellectual Disability, an Individualized Education Program (IEP) is prepared to meet the individual need of the child as every child is unique and needs are specific.
 - ❖ Some effective classroom management techniques are discussed.
 - ❖ The term "Specific Learning Disability" (SLD) means a disorder in one or more of the psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations.
 - ❖ An ideal assessment for SLD is a long process requiring several sessions with a qualified Educational Psychologist. Apart from administering a battery of tests, the psychologist also gathers relevant information about the child from the teachers and school records.
 - ❖ Some strategies are suggested to enhance the accessibility of course instruction, materials, and activities. They are general strategies designed to support individualized reasonable accommodations for which a student is eligible.

3.5 Answers to Self-Assessment Questions

1. d
2. d
3. b
4. d
5. c
6. d
7. c
8. a

3.6 References

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3. 7 Unit End Exercises

- 1) Define Intellectual Disability.
- 2) Briefly discuss the types and characteristics of Intellectual Disabilities.
- 3) Make a list of different assessment tools available in Indian context to assess the children with Intellectual Disabilities.
- 4) What are the promotional procedures of FACP?
- 5) Mention 5 social skills, which are to be taught at primary and secondary levels.
- 6) What is Learning Disability?
- 7) What is the characteristic of Learning Disability (L.D.)?
- 8) What are the types of L. D.
- 9) Discuss about Curriculum adaptation for L.D. learners.
- 10) What is Functional Academics?

Reflective Exercises

- 1) Write Task Analysis for teaching "Unbuttoning Shirt".
- 2) Discuss some Instructional Strategies to teach learners with SLD.
- 3) What are the assistive devices used to teach children with Specific Learning Disability (S.L.D.)?

UNIT - 4: LEARNERS WITH OTHER DISABILITIES

Structure

4.0 Introduction

4.1 Objectives

4.2 Learners with Locomotor Disabilities

4.2.1 Nature of Disability

4.2.2 Assessment of Learners with Locomotor Disabilities

4.2.3 Supporting of Learners with Locomotor Disabilities in the Classroom/
School

4.3 Learners with Cerebral Palsy

4.3.1 Nature of Disability

4.3.2 Assessment of Learners with Cerebral Palsy

4.3.3 Supporting Learners with Cerebral Palsy in classroom/ School

4.4 Learners with Autism Spectrum Disorders

4.4.1 Nature of Disability

4.4.2 Assessment of Learners with Autism Spectrum Disorders

4.4.3 Supporting Learners with Autism Spectrum Disorders in Classroom/
School

4.5 Learners with Multiple Disabilities

4.5.1 Nature of Disability

4.5.2 Assessment of Learners with Multiple Disabilities

4.5.3 Supporting Learners with Multiple Disabilities in Classroom/ School

4.6 Let Us Sum Up

4.7 Answers to Self-Assessment Questions (SAQ)

4.8. References

4.9. Unit End Exercise

4.0 Introduction

An inclusive classroom is one in which all students are welcomed and differing learning needs are supported in a meaningful and responsive learning environment. A key aspect of moving beyond enrolment to ensuring full participation of children with special needs is by positively affecting teacher beliefs and attitudes towards students with disabilities.

Each unit discussed in this block helped you understand that children with disabilities are not a homogeneous group where "one solution fits all". It is very important for teachers to try out different strategies to find those that work best for them, and for the child in his/her classrooms.

In this unit, we will discuss about the learners with locomotor disabilities, cerebral palsy, autism spectrum disorders and multiple disabilities as well.

4.1 Objectives

Upon Completion of the unit, you will be able to -

- ❖ identify the learners with Locomotor Impairment, Cerebral Palsy, Autism Spectrum conditions and Multiple Disabilities;
- ❖ discuss how to assess their performance in school, and identify difficulties with respect to their learning characteristics; and
- ❖ explain specific strategies to meet out their needs in school.

4.2 Learners with Locomotor Disabilities and Cerebral Palsy

4.2.1 Nature of Disability

A person's inability to execute distinctive activities associated with moving, both personally and objects, from place to place, and such inability resulting from afflictions of musculoskeletal and/ or nervous system, has been defined as the Locomotor Disability.

In Section 2.2 of Unit 2 of Block I you have already learned about the Definition and Types of Locomotor disabilities.

4.2.2 Assessment of Learners with Locomotor Disabilities

If locomotor disability has occurred then in spite of preventive measures, early identification becomes important.

Early identification of the locomotor disabled person can be done at hospitals, health centres, at schools and even at homes. Some important signals which will help in identification of locomotor disability in a child or an adult are:

- I. Any deviation or delay in a child's developmental milestones.
- II. Excessive stiffness or floppiness of child.
- III. Use of limbs of only one side of the body.
- IV. Difficulty or abnormality observed when the person is asked to do the following:
 - a. Lift arm overhead
 - b. Pick a small object lying in front of him/ her
 - c. Pick a stone from the ground
 - d. Walk a few steps
 - e. Run a short distance
- V. Difficulty in standing up from sitting position.
- VI. Range of motion of joint decreased or excessively increased.
- VII. Absence of limb in part or full.
- VIII. Use of appliances e.g. sticks crutches, wheelchair, and tricycle.

In addition, early detection of locomotor disabling diseases based on early biochemical, morphological and functional changes that precede the occurrence of manifest signs and symptoms is of particular importance in chronic diseases.

4.2.3 Supporting of Learners with Locomotor Disabilities in Classroom/ School

The majority of children with locomotor impairment do not require special education. They can participate and profit from general education given in regular schools. The following provisions should be made available in a regular school to make it accessible to all (RCI Status Report- 2000):

- i. The school needs to be made barrier free.
- ii. Class rooms should be located on the ground floor, so that children can alight from the school bus and reach their classrooms with minimum of difficulty. If that is not feasible, the school should have ample elevator service and/ or inclined ramps, especially for children who use wheel chairs for their mobility,
- iii. The school should have ramps, elevators, handrails, larger toilet cubicles, adequate wide paths, doors, entrances, etc. Specially designed desks and chairs to accommodate all
- iv. In addition to a special teacher, one or more attendants should be provided to help those needing additional assistance.
- v. In addition to specially designed classrooms, specially designed instructional equipment should be provided.

4.3 Learners with Cerebral Palsy

4.3.1 Nature of Disability

Cerebral palsy (CP) is a group of permanent movement disorders that appear in early childhood. It is a persistent but not unchanging disorder of movement and posture due to a defect or lesion of a developing brain.

Cerebral = "of the brain", Palsy = "Lack of muscle control". It occurs in about 2 in 1000 live births. It may be the most common paediatric' problem. (Wikipedia, 2017)

Signs and symptoms vary among people. Often, symptoms include:

- Poor coordination,
- Stiff muscles,
- Weak muscles, and
- Tremors

There may be problems with sensation, vision, hearing, swallowing, and speaking. Often babies with cerebral palsy do not roll over, sit, crawl, or walk as early as other children of their age. Difficulty with the ability to think or reason and seizures each occurs in about one third of people with CP. While the symptoms may get more noticeable over the first few years of life, the underlying problems do not worsen over time.

Learning Characteristics of Learners with CP May:

- a) have learning disabilities, visual impairments, hearing problems, speech problems, drooling issues, and behaviour problems;
- b) need braces, crutches, or a wheelchair to get around;
- c) need help moving around in class or reaching things;
- d) need assistive devices for writing and speaking;
- e) have difficulty sitting still in classroom and have uncontrolled movements;
- f) have difficulty with bladder and bowel control and may need to use a bathroom frequently;
- g) have seizures and
- h) need occupational therapy (OT), physical therapy (PT), and speech therapy during the school day.

4.3.2 Assessment of Learners with Cerebral Palsy

When assessing children with cerebral palsy, their character can be an important factor. Children with Cerebral Palsy may not be able to walk, talk, eat or play in the same ways as most other kids, but with the proper diagnosis by a team of healthcare professionals

they can be helped to lead a life without complete family dependence on other members of the family. When assessing children with cerebral palsy, many factors must be taken into consideration. With cerebral palsy covering such a varying spectrum of conditions and degrees of severity, each case is as unique as the individual affected.

Assessing children with cerebral palsy can sometimes be difficult. Some people with cerebral palsy have trouble controlling their movement and facial expressions, but their mental abilities are not impaired. Some have higher than average intelligence while others have moderate or severe Learning Disabilities. Most diagnosed with cerebral palsy are of average intelligence, just like those without cerebral palsy. While there is no cure for cerebral palsy, assessing children with cerebral palsy can provide correct treatment from the early stages of diagnosis, and ease the effects of cerebral palsy.

Possible Physical Problems (Blencowe, S.M. (1969))

- i. Unable to lift head when lying or held in sitting position.
- ii. Unable to move to change position.
- iii. Unable to use hands for support or movement or for function Unable to function, protect or reach out with arms while sitting independently.
- iv. Unable to get in and out of sitting position.
- v. Unable to lean forwards or backwards while sitting independently.
- vi. Poor balance reactions in standing (unable to protect effectively when falling).
- vii. Unable to transfer weight forward, backward or sideways in the standing position
- viii. Unable to get into or get out of standing position.

Self-Assessment Question 1

Answer the following questions. Check your answer with the one given at the end of the unit (Time 2 minutes).

1. What is Cerebral Palsy?
 - a) Trouble with hearing
 - b) Trouble with seeing

- c) Trouble with movement
 - d) Trouble with paying attention
2. What is the most common therapy/strategy to help CP?
- a) Occupational Therapy
 - b) Music Therapy
 - c) Play Therapy
 - d) Physical Therapy

Please check your answers with the answers given at the end of this unit.

4.3.3 Supporting Learners with Cerebral Palsy in Classroom/ School

Learners with Cerebral Palsy may need some physical modifications in the classroom and technological support to provide alternatives to writing.

Tips for Teachers:

Arrange for student sitting position as per need (floor/ chair with casters/ wheel chairs etc.).

Have sufficient space for moving of wheel chair.

Communication Board to be kept within reach of the child.

Cut out table of appropriate size, as per need.

Some suggestions regarding seating position of the children with Cerebral Palsy are listed below(NSOU B.Ed. Special Education -ODL SLM, 2016):

Recommended Positions for Mealtimes

Feeding or Eating to be done in sitting position using Floor seat with a floor table or cut-out table in front

Sitting on a Chair or wheelchair with a cut-out tray in front

(Please note you may need to support the head with your hand) Play

Sitting on floor seat

Sitting on chair with cut-out tray

Standing with support (wearing gaiters)

Toileting

The child/ learner must be well secured on plastic or wooden potty chair

For more information on Teaching Strategies and Assistive Devices relevant to children with CP, you may refer Section 3.3 of Unit 3 of Block III and Section 2.2 of Unit 2 of Block IV.

4.4 Learners with Autism Spectrum Disorders

AUTISM

Alone

Unusual play

Twaddle and twirl object

Isolated

Socialization problem

Mute

Case Study

Rahul lives in his own world, playing with his fingers and shaking involuntarily, sometimes throwing temper tantrums and other times destroying whatever comes in his hand. I see him playing with a string alone in classroom. His teacher asks him to stop playing and he folds the string and stuffs it into his pocket, but only momentarily and then, he again, starts playing with it over and over again. He shows no interest in the class activities and will respond only when his instructor gives him a personal attention. His teacher says that he is very cooperative only when given 'one-to-one' attention and he is quite independent in his self-care activities. He can paint, draw and display pre-vocational skills. He is able to follow instructions and is able to ape the actions if given individual help, but for most part

of the day, he is hyperactive and lives in a world of his own.

Rahul is an Autistic child.

4.4.1 Nature of Disability

Autism is a brain development disorder characterized by impaired social interaction and communication, and by restricted and repetitive behaviour. Autism means a developmental disability.

The characteristics of Children with Autism are discussed below for better understanding:

Characteristics of Children with Autism(Autism- Triad of Impairments, n. d)

According to DSM IV, Autism is such a developmental disorder under Pervasive Developmental Disorder (P.D.D), that includes three qualitative deficits-

- a. Lack of Socialization
- b. Lack of Communication
- c. Lack of Imagination

These three together are commonly known as Autism: Triad of Impairment or 'AUTISTIC TRIAD

Each of the above terms are discussed below:

Impairment in Imagination

- i. Deficits in flexible thinking regarding interests, routines, perspectives, and rules
- ii. Does not understand other people's points of view or feelings Agitated by changes in routine
- iii. Cannot generalize information
- iv. Takes everything literally

Impairments in Socialization/ Social Relationships - Deficits in understanding how to behave and interact with other people

- i. Inappropriate touching of other people
- ii. Difficulty understanding and using nonverbal behaviour, e.g. eye contact, facial expression, gesture stands too close to people
- iii. Unaware of the different ways to interact with friends, staff, strangers, etc.
- iv. Has desire to have friends and relationships but struggles to initiate and maintain these.

Impairments in Communication - Deficits in ability to communicate effectively with other people

- i. Asks repetitive questions
- ii. Cannot 'read between the lines' of what people mean
- iii. Talks about own interests regardless of the listener's response
- iv. Makes factual comments inappropriate to the context
- v. Absence of desire to communicate
- vi. Communicates for own needs, rather than for 'social' engagement.

Additional Difficulties - For example, sensory difficulties, mental health difficulties, physical difficulties, etc.

- i. Cannot bear loud noises
- ii. Maybe hyper or hypo sensitive to touch, clothes, pressure
- iii. Mood disturbances e.g. anxiety, aggression, or depression
- iv. Motor difficulties, e.g. walking on tip-toes, clumsiness
- v. Attention difficulties, e.g. easily distractible.

4.4.2 Assessment of Learners with Autism Spectrum Disorders

There are many areas to assess of children with ADS. Some important diagnostic tools for ASD are mentioned here as (NSOU B.Ed. Special Education -ODL SLM, 2016)

TYPES OF ASSESSMENT

Types of Assessment	Behavioural Assessment	Observational Assessment	Educational Assessment
<p>CARS Rating system (Childhood Autism Rating Scale) developed by Eric Schopler in the early 1970s.</p> <p>Autism Diagnostic Check-List (ADCL) Autism Diagnostic Check-List (Banerjee, 2007) is a 60 items (with six sub-scales) check list in both English and Bengali version. The test diagnoses and help assessing the impairment in Specific area/s for planning of management programmed.</p> <p>Indian Scale for Assessment of Autism (ISAA) Developed by NIMH, ISAA is a 45 itemed scale (6 subscales) to diagnose and assess autism.</p>	<p>The process of Understanding the Complex behavior in simpler forms based on 'ABC' model.</p>	<p>Systematic observation of behavior helps in monitoring teaching methodologies. It has two steps-Formal and Informal.</p>	<p>Selection of tests depends on the purpose for which the assessment to be carried. Like as-N.R.T, C.R.T.</p>

4.4.3 Supporting Learners with Autism Spectrum Disorders in Classroom/School

Some well-established Intervention Techniques to teach Learners with ASD are discussed here (Singhania R, 2005):

- a) **TEACCH** (Treatment and Education of Autistic and Communication related Handicapped Children)- It is an evidence-based service, training, and research program for individuals of all ages and skill levels with autism spectrum disorders. At the core of TEACCH is the idea of Structured Teaching i.e. an array

of teaching or treatment principles and strategies based on the learning characteristics of individuals with ASD, including strengths in visual information processing, and difficulties with social communication, attention, and executive function. In response to this profile of strengths and challenges, Structured Teaching includes:

External organizational supports to address challenges with attention and executive function.

Visual and/or written information to supplement verbal communication.
Structured support for social communication.

- b) **PECS-** The Picture Exchange Communication System, or PECS, allows children with autism who have little or no communication abilities, a means of communicating non-verbally. Children using PECS are taught to approach another person and give them a picture of a desired item in exchange for that item. The Picture Exchange Communication System (PECS) is used to rapidly teach communication skills to those with limited functional speech. PECS promotes communication within a social context, without lengthy prerequisite training.
- c) **Behavioural Interventions** - Research suggests that early, intensive behavioural interventions may improve outcomes for children with autism and help the children achieve their maximum potential.
- d) **Sensory Integration** - Integration and interpretation of sensory stimulation from the environment enhances cognition.
- e) **Diet:** People with autism are more susceptible to allergies and food sensitivities than the average person. The most common food sensitivity in children with autism is to gluten and casein.
- f) **Vitamin Therapy:** Parents have reported that they have tried B6/ magnesium and/or DMG, often with good or even spectacular results.

Self-Assessment Question II

Answer the following questions. Check your answer with the one given at the end of the unit (Time 4 minutes).

3. Autism is characterised by impairments in which of the following areas:
 - a) Patterns of behaviour.
 - b) Social interaction.
 - c) Communication.
 - d) All of the above.
4. Diagnostic tool for ASD:
 - a) MDPS
 - b) CARS Rating Scale
 - c) FACP
 - d) VAPS
5. Autism:
 - a) affects verbal and nonverbal communication and manifests itself before the age of 3.
 - b) is the same as mental retardation
 - c) results in visual and hearing impairment
 - d) affects height and stature before the age of 6.
6. Intervention techniques to teach learners with ASD:
 - a) Sensory Integration
 - b) PECS
 - c) TEACCH
 - d) All of the above

Please check your answers with the answers given at the end of this unit.

TIPS FOR THE TEACHERS(ISD, 2000):

For a teacher approaching the education of pupil with autism, there are three basic rules to follow:

Understand the nature and implications of autism

Structure and order the learning environment as far as possible so that it guides the pupil towards meeting expectations

Teach visually as far as possible

For more information on Teaching Strategies and Assistive Devices relevant to children with ASD, you may refer Section 3.3 of Unit 3 of Block III and Section 2.2 of Unit 2 of Block IV.

4.5 Learners with Multiple Disabilities (MD)

4.5.1 Nature of Disability

Case Study

Riya, a 10-year-old girl is diagnosed with cerebral palsy and multiple severe disabilities, for example:

Speech and communication: Riya does not speak and only shows her feelings by laughing or crying. So it is very difficult to know how she really feels or why she is crying. She also only responds to her name if the person calling her is right by her side.

Motor functions: Riya is disabled in nearly every aspect, so she is not able to walk. She is very hypotonic and often cannot control her head.

Cognition: Her cognitive capabilities are also limited. For example, she has trouble to follow simple instructions.

Multiple Disabilities (MD) means a person with several disabilities, such as a sensory disability associated with a motor disability. Depending on the definition, a severe intellectual disability may be included in the term "multiple disabilities". Individual usually has more than one significant disability, such as movement difficulties, sensory loss, and/or a behaviour or emotional disorder. (Wikipedia, 2017)

We can say that just as every child is different, similarly every child with MD is different. However, there are certain things that this group of children have in common.

All-round development of the child is affected.

Communication with the world around is most severely affected

Opportunities to interact with the environment becomes very limited

Ability to move around in the environment is restricted.

Need regular help in simple day-to-day activities such as wearing a shirt, opening a door, finding a chair to sit down and so on.

A highly structured educational / rehabilitation programme helps in their training.

4.5.2 Assessment of Learners with Multiple Disabilities

Assessment of Learners with Multiple Disabilities shall include the following(AASEP, n.d):

Assessment, following the procedures for each disability;

Determination of eligibility based on the definition and standards for two or more disabilities;

The nature of the combination of the learner's disabilities require significant developmental and educational programming that cannot be accommodated with special education programs by addressing any one of the identified disabilities; and

Documentation, including observation and/or assessment, of how multiple disabilities adversely impact the child's educational performance in his/her environment.

4.5.3 Supporting Learners with Multiple Disabilities in Classroom/ School

There is no one-size-fits-all approach to teaching learners with multiple disabilities. Their needs are so varied that great care is required when choosing the best strategy for support. Teacher's job is to realistically assess their condition and decide on the most beneficial course of action. Supporting these learners is definitely a team effort. Consult with the other professionals working with the learner, communicate with the parents and support agencies, and, together, deciding on the educational plan or programme accordingly.

Points to be noted for Effective Educational Programme:

(NSOU B.Ed. Special Education- ODL SLM, 2016)

- I. Independence is the goal: No matter how small or big the task is the child should learn to use it to make life easy and simpler for him.
- II. Teaching skills that are functional and meaningful with the limited opportunities available to the child, it is wise to teach him things that are directly related to his environment and those that he has high chances of doing throughout the day.
- III. Teaching skills in natural settings: The child is able to remember things that he learns while going through his/her day to day routines. This helps him to learn better and remember.
- IV. Providing assistance as needed: Encourage the child in every attempt.
- V. Taking advantage of the teachable moment: Sometimes teacher may not plan to teach an activity, but the child shows curiosity to explore a particular object. Teacher should use this time to teach him more about that object.
- VI. Providing repeated opportunities to practice: This will help the child to get opportunities to try out the activity again and again.
- VII. Using real/ concrete objects: When experience to know about the world is so limited it is better to use objects that he sees and uses everyday rather than expensive and unusual things.

- VIII. Developing routines/ activity schedule: Having a fixed timetable for the day with the child. This helps him to have more control over his life and to anticipate what is going to happen with him next. This also helps to encourage communication attempts by the child immensely.
- IX. Multi-sensory approach: It is best to make use of all remaining sensory abilities of the child- like seeing, hearing, touching, smelling and movements. All should form a part of the teaching moments for the child.
- X. Planning inclusive activities: With highly individualized activities being planned for the child, there is always a risk that either the parent or one caregiver is constantly trying to teach the child. It is important that the child should know what others enjoy doing and for him to be part of that too.
- XI. Making use of resource persons from the community: It is important that the best advantage is taken from the resource persons from the community as teachers.

Accommodations/Supports

- I. A multi-disciplinary team consisting of the learner's parents, educational specialists, and medical specialists in the areas in which the individual demonstrates problems, should work together to plan and coordinate necessary services.
- II. Involvement of the appropriate professionals (E.g. occupational therapists, speech/language therapist etc.) required.
- III. Accessibility of School Building and Classroom.
- IV. Having a buddy system that ensures their needs are heard and that they get aid when needed.
- V. Simple, Specific and Systematic instructions to be given.
- VI. Using appropriate aids when communicating with the child.
- VII. Engage the child regularly in oral language activities.

For more information on Teaching Strategies and Assistive Devices relevant to children with CP, you may refer Section 3.3 of Unit 3 of Block III and Section 2.2 of Unit 2 of Block IV.

4.6 Let Us Sum Up

A person's inability to execute distinctive activities associated with moving, both personally and objects, from place to place, and such inability resulting from afflictions of musculoskeletal and, or nervous system, has been defined as the Locomotor Disability.

Early identification of the locomotor disabled person can be done at hospitals, health centres, at schools and even at homes. The majority of children with locomotor impairment do not require special education. They can participate and profit from general education given in regular schools provided it should be barrier free and accessible to all.

Cerebral palsy (CP) is a group of permanent movement disorders that appear in early childhood. It is a persistent but not unchanging disorder of movement and posture due to a defect or lesion of a developing brain.

Most diagnosed with cerebral palsy are of average intelligence, just like those without cerebral palsy. While there is no cure for cerebral palsy, assessing children with cerebral palsy can provide correct treatment from the early stages of diagnosis, and ease the effects of cerebral palsy.

Autism generally means a developmental disability. Now Autism is called a Neuro-biological disorder, significantly affecting verbal and non-verbal communication and social interaction, generally evident before age 3. It adversely affects a child's educational performance. Other characteristics often associated with Autism are-engagement in repetitive activities, stereotyped motor movements, unusual responses to sensory experiences and resistance to environmental changes. In characteristics of Autism according to DSM IV, Autism is such a developmental disorder under P.D.D.,

that includes three qualitative deficits- Lack of Socialization, Lack of Communication and Lack of Flexibility. These three are together called 'Autistic Triad' The Assessment of ASD are Clinical Assessment, Behavioural Assessment, Observational Assessment Educational Assessment, Functional Assessment.

Learners with severe and multiple disabilities are identified at birth or in the early stages of life, or after a traumatic accident or illness. These children are identified by medical professionals. Assessments performed on these learners are to primarily help teachers understand the learner's needs and how they can motivate and provide the best possible services to the learner.

Functional assessment for a child with Multiple Disabilities involves two basic steps. The first is to gather information about the child by talking to the people who know the child well, by examining medical reports and by actually observing the child engaged in typical activities.

Support services like physical access, resource rooms at cluster level, special equipment, reading material, special educational techniques, remedial teaching, curricular adaptation or adapted teaching strategies should be provided.

4.7 Answers to Self-Assessment Questions

1. c
2. d
3. d
4. b
5. a
6. d

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4.9 Unit End Exercise

- 1) Define Cerebral Palsy.
- 2) What is Spasticity?
- 3) What are the possible physical problems of CP?
- 4) Plan a classroom adaptation for a child with cerebral palsy?
- 5) What is ASD? Define Autistic Triad.
- 6) Write full form of TEACCH and PECS.
- 7) Mention three major characteristics of learners with Multiple Disabilities.
- 8) What are the possible combinations of multiple disabilities?
- 9) What are the educational opportunities for children with multiple disabilities?
- 10) Discuss about the classroom management for children with multiple disabilities.

Reflective Exercises

- 1) What measures would you suggest to make a School Barrier Free?
- 2) Which type of difficulties are encountered by the learners with Locomotor Disabilities?
- 3) What problems do children with CP encounter in comparison to normal children of same age in terms of learning forwards and backwards?
- 4) List some common characteristics of children with autism which shows impairment in socialization.
- 5) How can a teacher make the classroom inclusive for an autistic child?
- 6) Define Multiple Disabilities. Write down some effective ways of handling learners with Multiple Disabilities.

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