

NETAJI SUBHAS OPEN UNIVERSITY

B.Ed. Spl. Ed. (M.R./H.I./V.I.)-ODL

**CURRICULUM DESIGNING
ADAPTATION AND
EVALUATION**

C-13 (MR)

**B. Ed. Spl. Ed. (M. R. / H. I. / V. I)-
ODL Programme**

AREA - C

**C - 13 (MR) : CURRICULUM DESIGNING,
ADAPTATION AND EVALUATION**



**A COLLABORATIVE PROGRAMME OF
NETAJI SUBHAS OPEN UNIVERSITY
AND
REHABILITATION COUNCIL OF INDIA**



AREA - C
DISABILITY SPECIALIZATION
COURSE CODE - C-13 (MR)
CURRICULUM DESIGNING, ADAPTATION AND EVALUATION

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The Self Instructional Material (SIM) is prepared keeping conformity with the B.Ed.Spl. Edn.(MR/HI/VI) Programme as prepared and circulated by the Rehabilitation Council of India, New Delhi and adopted by NSOU on and from the 2015-2017 academic session.

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Mohan Kumar Chattopadhyay
Registrar



Netaji Subhas Open University

From the Vice-Chancellor's Desk

Dear Students, from this Academic Session (2015-17) the Curriculum and Course Structure of B. Ed.- Special Education have been thoroughly revised as per the stipulations which featured in the Memorandum of Understanding (MoU) between the Rehabilitation Council of India (RCI) and the National Council for Teacher Education (NCTE). The newly designed course structure and syllabus is comprehensive and futuristic has, therefore, been contextualized and adopted by NSOU from the present academic session, following the directives of the aforesaid national statutory authorities.

Consequent upon the introduction of new syllabus the revision of Self Instructional Material (SIM) becomes imperative. The new syllabus was circulated by RCI for introduction in the month of June, 2015 while the new session begins in the month of July. So the difficulties of preparing the SIMs within such a short time can easily be understood. However, the School of Education of NSOU took up the challenge and put the best minds together in preparing SIM without compromising the standard and quality of such an academic package. It required many rigorous steps before printing and circulation of the entire academic package to our dear learners. Every intervening step was meticulously and methodically followed for ensuring quality in such a time bound manner.

The SIMs are prepared by eminent subject experts and edited by the senior members of the faculty specializing in the discipline concerned. Printing of the SIMs has been done with utmost care and attention. Students are the primary beneficiaries of these materials so developed. Therefore, you must go through the contents seriously and take your queries, if any, to the Counselors during Personal Contact Programs (PCPs) for clarifications. In comparison to F2F mode, the onus is on the learners in the ODL mode. So please change your mind accordingly and shrug off your old mindset of teacher dependence and spoon feeding habits immediately.

I would further urge you to go for other Open Educational Resources (OERs) - available on websites, for better understanding and gaining comprehensive mastery over the subject. From this year NSOU is also providing ICT enabled support services to the students enrolled under this University. So, in addition to the printed SIMs, the e-contents are also provided to the students to facilitate the usage and ensure more flexibility at the user end. The other ICT based support systems will be there for the benefit of the learners.

So please make the most of it and do your best in the examinations. However, any suggestion or constructive criticism regarding the SIMs and its improvement is welcome. I must acknowledge the contribution of all the content writers, editors and background minds at the SoE, NSOU for their respective efforts, expertise and hard work in producing the SIMs within a very short time.



Professor (Dr.) Subha Sankar Sarkar
Vice-Chancellor, NSOU

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**Netaji Subhas Open
University**

**AREA - C
C-13 (MR) : CURRICULUM
DESIGNING, ADAPTATION
AND EVALUATION**

C-13 (MR) □ Curriculum Designing, Adaptation and Evaluation

UNIT - 1 : CURRICULUM DESIGNING	9-41
UNIT - 2 : CURRICULUM AT PRE-SCHOOL AND PRIMARY SCHOOL LEVEL	42-61
UNIT - 3 : CURRICULUM AT SECONDARY, PRE-VOCATIONAL AND VOCATIONAL LEVEL	62-83
UNIT - 4 : CURRICULUM ADAPTATIONS	84-108
UNIT - 5 : CURRICULUM EVALUATION	109-132

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Unit - 1 □ Curriculum Designing

Structure

- 1.1 Introduction**
- 1.2 Objectives**
- 1.3 Meaning, Definition, Concept and Principles of Curriculum**
- 1.4 Types and approaches of Curriculum Designing**
 - 1.4.1 Types of Curriculum**
 - 1.4.2 Approaches to Curriculum Designing**
- 1.5 Curriculum Domains – Personal, Social, Academics, Recreational and Community living**
 - 1.5.1 Personal Skills**
 - 1.5.2 Social Skills**
 - 1.5.3 Academics**
 - 1.5.4 Occupational Skills**
 - 1.5.5 Recreational Skills**
- 1.6 Steps in developing curriculum, challenges of developing curriculum for inclusion**
 - 1.6.1 Steps in developing curriculum**
 - 1.6.2 Challenges of developing curriculum for inclusion**
- 1.7 Curriculum evaluation, Implementation in inclusion**
 - 1.7.1 Curriculum evaluation**
 - 1.7.2 Implementation in inclusion**
- 1.8 Let Us Sum Up**
- 1.9 Check Your Progress**
- 1.10 References**

1.1 Introduction

You may be aware that curriculum includes all the necessary activities that are required to prepare the students to lead a successful life in the society.

The word curriculum is derived from the Latin root 'Currus' which means a chariot or runway. It has the same meaning as word 'Curse' in English, it also closely resembles the term 'Karyakram' used in Sanskrit for any programme undertaken to be completed by individual or a group. Hence, curriculum is a programme of various activities of learning or studies taken up by a student over a period of time to achieve a goal in view. This unit is intended to discuss the basic concept about curriculum development, its principles, procedures and changing trends in curriculum development of persons with mental retardation in inclusive set up.

1.2 Objective

- Explain meaning, definition, concept and principles of curriculum.
- Narrate types and approaches of curriculum designing.
- Demonstrate different curriculum domains.
- Explain steps, challenges of developing curriculum for inclusion.
- Discuss about curriculum evaluation and implementation in inclusive set up.

1.3 Meaning, Definition, Concept and Principles of Curriculum

Meaning :

Neasly and Evans (1967) state that curriculum includes all the planned experiences provided by the school to assist the pupils in attaining the designated learning outcomes to the best of their abilities.

The Key words here are 'planned experience' and 'designated learning outcome'. The provider is the special school or special educator in the context and receiver is the pupil the disabled child here. It is also essential as noted above that a good curriculum should assist in achieving the best of the students abilities. While keeping in mind the general curriculum principles, the special education curriculum should consider certain specific aspects.

Definition :

Curriculum is the heart and soul of any educational process. It is the sum total of all that rendered by an educational institution in bringing out the required changes in the child. The activities range from class room to play ground or beyond. As you may have experienced, every society prepares the children in social competencies through the process of adjustment with the environment in which they live. The curriculum is an instrument to fulfill such objectives. Curriculum is defined by many experts. The common definitions are given below :

Kerr notes that “All the learning which is planned and guided by the teacher is carried out in group for individual inside or outside the school.”

According to Cunningham, “The curriculum is a tool in the hand of an artist (teacher) to mould his materials (students) according to his ideas in his studio (class room).”

“Curriculum includes the totality of experiences that a pupil receives through the manifold activities that go on in the school in the class room, library, laboratory, workshop, play ground and in numerous informal context between teacher and pupil. In this case the whole of the school becomes the curriculum which can touch the lives of the students at all points and help in the evolution of balanced personality” (Secondary education commission 1952).

“Curriculum can refer to the total structure of ideas and activities developed by an educational institution to meet the needs of students to achieve desired educational aims.” (Dictionary of Education 1981).

Concept :

Simply put, curriculum is the **content** to be taught and instruction is the **process of teaching**. In other words curriculum is ‘**what to teach**’ and instruction is ‘how to teach’. Curriculum is not limited to the courses of study, but, includes what ever learning that takes place within and outside the class room and school; even planned social learning is included in the curriculum.

Therefore, the curriculum can be content or subject matter taught to the students, pre planned programme, course offered in the school, intended learning outcomes, cultural presentation and cultural reproduction, planned learning experience and social reconstruction.

Principles of Curriculum Development :

The curriculum is a dynamic process of teaching-learning. In this modern age of science and technology, it is a programme which cannot remain static because, the

quantum of knowledge in all field is increasing rapidly and so is the quality of techniques and tools of instruction. The curriculum is ever changing. It has to be planned, implemented, revised and reoriented from time to time.

Hence, there are a few principle that are to be followed if the carriculum for any group of learners is to be conducted, and implemented.

Goal-oriented

Unless there are clear goals in view, the curriculum cannot be developed and implemented for any group. For example, if a programme is meant for a child without durability, the goal will be to give him knowledge and competency on various subjects based on the norms. Therefore, the curriculum is subject-centered. If the programme is to be made for a child with mental retardation, the goal will be to develop specific behaviors or skills and therefore, the curriculum has to be skill-oriented and activity-centered. The goal determines the direction in which cerriculum is to be shaped.

Age appropriate

The content of the curriculum should focus on the age of the learners. The contents selected for teaching in the kindergarten class will not appropriate for children of primary classes. It is because the ability, attitude and interest of a child of higher age group will not match with lower age group. Similarly the curriculum set for a higher level cannot be used for children at a lower level. Keeping in mind the Piagetian stages of cognitive development and the developmental task pertaining to each stage, the curriculum must be planned according to the age and ability level of the child.

Need based

As every learner has defferent needs and abilities, the curriculim has to provide a variety of experiences in the class room focusing on personal, social vocational and recreational needs. This principle is more relevant for children with mental retardation who have special needs as individuals. Each child with mental retardation is trained through planning an individualized Educational Programme (IEP) after considering their potentials and individual needs. Children with mental retardation can benefit little from common carriculum with academic activities provided in group situation, as done for non-disabled children in regular schools. Though inclusive education measures are in progress, careful adaptation in content, process and evaluation are imperative for successful inclusion.

Level appropriate

The pattern of the curriculum has to match the grade level of the learners. In a regular school, the content in any subject taught to children is based on the grade in which they are placed. For example, mathematics at primary level must be easier than that in secondary or higher secondary level. This principle is most relevant for the children with mental retardation whose current level is to be determined before the IEP can be devised.

Up to date

In this modern age, many changes and innovations are taking place in the field of education and special education, based on the research or experimentation. The curriculum should be revised and re-oriented periodically to incorporate the latest content, methods materials and techniques of the training and Curriculum enrichment should be a continuous process.

Creative

All children should get an opportunity to be creative and innovative. The curriculum must motivate children to solve problems, develop new ideas and meet challenges of life. Children should be encouraged to do experiment in classroom situation. This is also relevant for children with mental retardation who also show creativity when they are properly motivated and guided. The current trend of Activity Based Learning (ABL) provides ample opportunities for encouraging children to become creative.

Integrated

At all levels, the Curriculum must be integrated and Cohesive and learning experiences are to be organized in a sequential order. Besides, it must relate to the activities of daily life (ADL) of children with special needs. This also means that the programme should be pragmatic and functional for learners. It should provide insights for successful practical life leading towards habilitation and rehabilitation in case of Children with intellectual disability.

Comprehensive

Curriculum has to be comprehensive enough to cover various co-curricular activities like arts, crafts, music, yoga, exercises, field trips, visits, concerts and cultural functions. This principle is also applicable for children with intellectual disability who enjoy and participate in such activities more readily than in academic activities involving

abstract concepts. Theme teaching is a good example of comprehensive approach which cuts across various academic areas through selected themes.

1.4 Types and Approaches of Curriculum Designing

1.4.1. Types of Curriculum

The special educator will have to be aware of the following five factors that act as guide in curriculum planning:

1. What is the main goal or focus of curriculum? (Child, activity or situation as a whole?)
2. What are the specific objectives that lead to achieve the goal?
3. What are the methods of instruction that are relevant in achieving the Goal?
4. What are the learning experiences/contents to be taught to achieve the goal?
5. What are the materials needed to achieve the goal.

Based on the above considerations, curriculum for special needs children have been evolved.

- child centered curriculum.
- activity centered curriculum
- holistic curriculum.

Child Centered Curriculum (CCC)

In this, the child is in the centre of the Curriculum in the teaching and learning process. The Child's ability, aptitude and interest are to be identified before a programme planned and executed. The child as an individual is valued and hence this kind of curriculum is child focused. This approach is very apt for children with mental retardation.

The main characteristic of the CCC are as follows:

Basis

CCC plan is based on the philosophy that each child is unique, each child is different and each child is an individual. Each one should learn according to his ability aptitude and interest. The learner is the focus for whom the content and proceed decision will be made.

Aim

The objective of CCC plan is to help each child to develop his skills, based on his abilities. It is to make him to realize his best self and to achieve an optimum level of functioning.

Contents

Learning experience should be provided according to the needs and abilities of the child.

Method

The teacher will devise those technique of teaching and learning which will be suitable to the ability, aptitude and interest of each child. If the child is interested in play, the teacher will use the play way method of teaching and the objective will be entirely individualized and specific to the child.

Materials

The teacher will select/develop the aids for learning suited to the age, ability and aptitude of each child. Pictures, charts, models and kits will be prepared with the special needs of the child in view.

Activity–Centered Curriculum (ACC)

In this plan, the activity or task is given more importance than the learner and his limitations. Many a time it can be seen that the regular school curricula are activity centered as they are preplanned and the teacher is to focus on ‘completing syllabus’ rather than considering the pace of learning by the students. In the context of mental retardation the important task or activities are identified for the benefit of the child and they are taught repeatedly through verbal, visual and real experiences in the class or out side. The child has to repeat the task or practice the skill frequently to achieve maintain and generatize the learnt skill.

The main characteristics of the ACC Plan are as follows:

Basis

ACC plan is based on the philosophy that task and skills are very important and the child must learn them through repeated programme in class and with frequent reinforcement by the teacher.

Aim

The objective of ACC plan is to help the child to develop certain skills so that he is able to improve his level of functioning.

Contents

The learning experience are related to task and skills which will be planned in advance. They are to be listed in sequential order and a detailed task analysis is to be done for implementing the programme in class.

Method

The teacher has to use all available techniques to make the task easy and interesting. The techniques like task analysis, chanting, modeling, shaping and reinforcing and so on will used for teaching.

Materials

The teacher has to prepare adequate teaching material in view of task or skill, he is teaching the child. He has to use a blackboard, charts, pictures, models, flash cards, audio visual aids, and field trips to make the task a meaningful learning experience.

Holistic Curriculum (HC)

A holistic curriculum is an eclectic model blending the needs of the child and the existing curriculum the right combination of what is expected from the child. The main characteristic of HC plan are as follows:

Basis

HC plan is based on the philosophy that the life of a child is integrated with his total environment. He should trained in a manners to master a few skills, so that he can become independent as far as possible.

Aim

The objective of HC plan is to help the child to achieve competence and confidence in life as an effective and productive member of the community.

Contents

The learning experience as widely selected to expose the child to his full development and total adjustments within his social, economical, and vocational environment in

life so that when he grows as an adult he will be a contributing member of the society. Therefore, emphasis will be on different kinds of functional activities, skills and experiences that make the child a successful person.

Method

The teacher has to use a variety of methods of teaching. Class room techniques alone will not be adequate. So the teacher has to organize visit, field trips, demonstrations, projects, exhibitions to give the children sufficient exposure to the world outside. It will help them to gain confidence and become competent in life.

Materials

The teacher will have to use a wide variety of teaching materials in the classroom as well as out side the classroom. The materials can be pictures, charts, models, objects, tools, audio-visuals, films, filmstrips, flash cards and even visits and field trips outside the class-room.

1.4.2. Approaches to Curriculum Designing

There are varied approaches to development of curriculum. Some are common in both general and special education while some are more suitable for children with special needs. It is the responsibility of the teacher to select a suitable approach or a combination of more than one approach with the aim to reach the student with the most suited curriculum and instructional process. Some of the commonly used approaches include.

- Developmental approach
- Functional approach
- Ecological approach
- Unit approach

Development approach

Developmental approach pertains to integration of academic learning and developmental tasks aiming at accomplishing the ultimate goal of individual potentials, and the global needs and motives. The curriculum includes, instructions for achieving maximum possible personal enhancement and social competence.

Development approach of the curriculum focuses on the learner's growth (Physical and mental) activities, aptitudes and interests. The programme should be related closely to each child as an individual, his development in term of capacities and limitations, keeping in mind, the developmental norms and the tasks that he is expected to perform in that age. The aim is to help the individual to grow up and to lead a productive adult life. The teacher has to diagnose the special needs, deficit skills and unique talents of each child and then develop a programme as a personal package with all the necessary content, materials and techniques of training and management.

Functional approach

Ideally in special education as in regular education, the curriculum should be derived from an analysis of the needs of the individual and the role he is expected to perform in the society. Therefore, a good curriculum should be focus on imparting social competencies to children with intellectual disability so the they live as independently as possible in the community. With the trend toward inclusive education, the curriculum for children with mental retardation is generally an adaptation of the regular education curriculum with a focus on vocational education. This training allows for appropriate job placement of the child when he is ready for it. Such a curriculum includes functional reading, writing, arithmetics, time, travel, money and other related skills. Generalization or transfer of classroom learning to application of skills in natural environment is an important aspect of this curriculum. Curriculum used with children who are moderately and severely retarded emphasize training as on functional activities. The content of the curriculum are chosen from various tasks that have a high probability of beings required in day-to-day living. These tasks include personal, social, occupational and recreational activities. Academic skills are incorporated where the children have ability to learn. Considering the unique needs of the child, the content, process and materials are planned to achieve independent functioning level.

A functional approach to the curriculum designing means the programmes should be planned and implemented with view to improve functional competencies of children in activities of daily living (ADL) such as brushing, dressing, eating, drinking, toileting, communicating and so on. These activities make the child competent in performing day-to-day tasks and attain an independent level of functioning. Functional academics is incorporated when the children have required ability.

Ecological approach

Wallace and Larsen (1978) have pointed that if a child is to be assessed, it is essential

that various environmental factors should be taken into consideration to determine their influence in either imitating or maintaining a skill or behavior. For instance, a child with mild mental retardation in an urban environment becomes a cause of concern to parents as early as at pre-school (LKG / UKG) level, when the parents find him to be subnormal in school. On the other hand, “in a rural area even with mild mental retardation might be well accepted without any problem. He might be performing the major work output expected of him in the rural area, which may be agriculture, dairy or poultry farming which his fellow men do. An ecological orientation to a curriculum means the programmes should be planned and implemented, keeping in view the environmental factors that influence a child’s life. Ecology includes all the factors affecting a child such as natural geographical, urban, rural, social, cultural and vocational factors. The curriculum has to help each child to be productive and effective members of community when grows up. It is more relevant if it include all the environmental factors or situations in which the child lives at present. In other words, the curriculum should incorporate instructions in those situations which are closely related to his natural environments viz, personal, social, school, recreational and vocational settings while planning the curriculum the teacher assesses the student’s present and future environment and then, compares the environmental details to the child’s abilities. This generate a picture of discrepancy between the environmental demand on him and the child’s current abilities. Then the teacher will follow accordingly curriculum to fill the gap.

Unit approach/ thematic approach

It is based on teaching concepts through themes. For example, if transport is taken as a theme, reading, writing, math, environmental science—all will be taught through the theme of transport. The content will be level appropriate. A pre-primary curriculum may talk of modes of transport while a prevocational curriculum may include the professions related to transport systems and various skills needed to learn while traveling in each of the modes, such as money, time, measurement skills (distance) and so on. As this approach is activity oriented and based on the concrete experience, this is suitable for children with mental retardation at all levels and can be taught in group situations also.

It should be kept in mind that it needs prior preparation, resources, systematic planning, implementation and evaluation systems.

1.5 Curriculum Domains–Personal, Social, Academics, Recreational and Community Living.

The curriculum content for the children with mental retardation requires focus on leading the students towards personal adequacy, social competency and economic independence. The curriculum for the children with mental retardation includes core areas such as personal, social, functional academics, occupational and recreational skills with the aim to prepare them for independent living. If we aim to prepare persons with mental retardation to lead life with independence and dignity and to become a contributing member of the society is warranted, then the above mentioned content areas should be considered.

1.5.1. Personal Skills

Personal skills include eating toileting bathing, brushing and grooming. The tasks involved in these skills vary for children of different ages and level of functioning. For example dressing skills at preprimary level may refer to wearing clothes but the same dressing skill at secondary level may mean selection of the right clothes to wear for an occasion matching accessories for the dress. Ironing of clothes and maintaining their wardrobe and so on. In addition, to perform the tasks in any area, appropriate motor skills (gross motor and fine motor), language and communication skills are also required. For example pouring water from the water filter and drinking from the glass. The girl has to go to the kitchen, identify the glass and take the glass, open the tap (finger grasp), pour water in the glass, close the tap and drink from the glass. Another example can be considered, the family has gone to visit their friend's house and the girl feels thirsty. They has to communicate to her mother or the host (Communication) that she needs water. Therefore, we need to remember that skills are not taught in isolation but they has to be generalized. Personal domain include the following skills which are to be taught to the children with intellectual disability:

- Eating and Meal Time Management
- Toileting
- Bathing
- Brushing
- Grooming skills

- Dressing skills
- Menstrual hygiene
- Shaving

1.5.2. Social Skills

Social behaviour of the students play a vital role in their independent living. Many of the children with mental retardation behave inappropriately in the social situations. Therefore, teaching of appropriate social skills is a major focus in the curriculum for children with mental retardation. These skills are related to social exchange coping with demands of environment and controlling impulses. It also includes the development of social skills to respond to situational cues and making choices.

To be accepted as a member of the group and part of the community, one needs to have good interpersonal relationship.

The main areas where social skills need to be taught to the children are as follows:

- Situations in school, in neighbourhood and in the community
- Standing in a queue, sharing, turn taking behaviour etc.
- Travelling by buses, trains and crossing the road with safety.
- When bullied, beaten or in distress, asking for help/ managing the situation is also a social competency to be taught.
- Acceptable and appropriate interpersonal behaviour in home, school, community and any other social situations.
- Taking care of personal belonging, under standing of right and civic roles etc.

Language and Communication Skills

Languages and communications are means of socialization. Like social skills language and communication help us to interact with the environment and therefore, communication must become part of all activities. While teaching young children the following points should be considered :-

- Proceed from known to unknown.
- Use various co-curricular activities for training.
- Use all modes of Communications.

- Include scope for field trips
- Use playway methods.

To teach social and language skills the school should focus on:

- Greeting people and use of polite gestures and courtesies.
- Group game
- Story telling
- Narrating experiences.
- Discussing important news (TV / News papers / neighbour hood)
- Receiving and passing on telephonic message to appropriate person.
- Getting involved in various functions in the school.
- Maintaining conversations.
- Activities at home can include social training like
- Greeting people and courtesies.
- Interacting with family members and guests.
- Attending social and religious functions.
- Sharing experiences with siblings.
- Receiving telephone calls.
- Going out with family.

In addition to developing appropriate social behaviours, we have to reduce the socially inappropriate behaviours.

1.5.3. Academics.

The functional academic refer to the literacy and numeracy skills. The children with mental retardation need to learn these skills for leading independent lives. It includes reading, writing and arithmetics.

Functional Reading

Functional reading is defined as student's actions or responses resulting from reading the printed word. Primary goal is the development of their ability to read signboards,

labels, directions and so on (concept of survival) for their protection.

The second goal is reading for information and instruction -newspaper, telephone book, job application and so on. The third goal is reading for pleasures-magazines, comics, story books etc.

Whole word approach is a widely used method in teaching functional reading. Through the whole word approach the students learn to recognize and read words and later receive decoding instructions (to spell). A variety of strategies have been used in teaching sight word vocabulary. Recent attention has been focused on the imagery level of the word to be learnt. High imagery words are usually concrete and include nouns such as ball, mango fan and house. Low imagery include abstract terms such as beautiful, good and have. In some instances high imagery can be provided for low imagery words by using the word in context. For example, consider the word 'Sour' "I ate mango. It is sour", becomes more concrete and student can remember better. Pairing of words with concrete objects and /or pictures will facilitate development of high imagery level in the students. Here, the concrete word 'mango' helps in learning the abstract word 'sour'.

Functional Writing

One of the important modes of communication is written expression. Writing demands eye hand co-ordination, motor co-ordination, sense of direction and recognition of symbols (Pictures/ Letters/ numbers/ Words/ Punctuations and so on). Some writing tasks demand horizontal writing (left to write as in writing words) and some demand vertical writing as in arithmetics (addition, subtraction) and some demand a combination of both as in statement sums.

Tracing writing involves four stages. They are:

1. Tracing
2. Joining dots (if needed)
3. Copying
4. Fill in the blanks
5. Writing from memory (including spelling learning)

To write sight words, students have to go through steps using auditory, visual, tactile and kinesthetic inputs.

Functional Arithmetic

We are in daily contact situations which require the use of number skills. For example, when we buy half a dozen bananas from the fruit vendor we glance at the bunch to check whether it contains six bananas or not. We use number skills in various setting such as at home, in community and at work place—how many plates to place on the table, which bus number to take to reach work place how much is the bus fare, how long it takes to reach office and so on.

Before beginning with numbers, make sure the child is aware of pre-math concepts or is able to generalize the pre-requisite skills to mathematics such as more less, far-near, heavy-light, tall-short-long, left-right, one-money, and so on.

The following are the points to be considered while planning and teaching arithmetic skills:

- The content should be arranged us a sequential order for which the task analytic approach is applied.
- Use concrete materials for meaning of concepts.
- Meaningful materials should be widely used inside or outside the school.
- Teach concrete to sub concrete then to abstract.
- Instruction must be practical and functional.
- Oppertunities of sufficient practice.
- Provision of generalization beyond the classroom.
- Programme must be flexible to meet the individual child's need.

A functional mathematics curriculum should include use of calenders time, money, measurements (mass, volume, weight, distance) which are necessary for daily living activities. The content must be graded from easy to defficult, distributed from pre primary to prevocational levels.

1.5.4. Occupational Skills

Occupational skills are essential for the overall development of persons with mental retardation. To prepare an individual with mental retardation for independent living, training in over all developmental skills is important. Occupational skills includes activities such as cooking, shopping, gardening and house keeping. However, the curriculum content for pre-primary and primary level will be less when compared in

secondary and prevocational level. As the child is promoted to the next level the occupational skills increase proportionately in the curriculum content and the personal skills will reduce as he would have gained competency in most of the personal skills.

Introduce the skills in school and teach the children. Simultaneously, keep the family, informed and involved so that they extend the training at home too. Such activities can be household activities, such as sweeping, dusting, washing, peeling, cutting vegetables and so on. Identifying and reading label on edible items, writing a shopping list are also other examples. Performing these activities require application of functional reading writing and arithmetic skills.

Through the joint efforts of school and home, appropriate work habits, punctuality, regularity, sincerity, persistence, proper work behavior, hand functioning, eye hand coordination and required community living skills (travelling, shopping, banking skills) can be taught to the students.

Eye hand co-ordination and hand functioning which are important prerequisite skills for any vocation can be improved by activities such as:

- Cutting, pasting
- Sorting, peeling, shelling, cutting vegetables.
- Using of different hand tools, files.
- Screwing and unscrewing.
- Sewing, knitting.
- Pouring and keeping water bottles.
- Dish washing and arranging.

In the school, engage the students in various simulated activities to assess the interests of the students.:

- Wood polishing, cutting, nailing, screwing.
- Assembling
- Labeling different items/tools (in the workshop)
- Binding and painting work.
- Sewing and knitting.
- Packaging work.
- Gardening (Cleaning gardens, watering plants and planting)

- Operation of different machines.

Various community living skills by organizing following activities for students

- Preparation of shopping list
- Budgeting
- Shopping
- Banking, post office, hospitals–attend and use.
- Use of public transport.

Domestic Skills

- Dusting, sweeping, mopping.
- Washing utensils.
- Cooking simple meals or helping in cooking.
- Washing clothes, drying, folding and ironing.
- Packing lunch boxes.
- Buying vegetables.
- Stitching buttons an garments.
- Decorating house during festivals.
- Booking LPG Cylinders.
- Paying bills.

In short any useful activity that is repetitive and frequently used but does not require decision making abilities can be taught to persons with mental retardation.

School curriculum has to play an important role in developing these skills with the children as these are absolutely functional and of high value to the child and family in making him a contributing member to the home and society. This is what the purpose of functional curriculum is.

1.5.5. Recreational Skills

Play is a major component in the curriculum. Research evidence shows that children with limited play skills and who were rarely touched had brains that were 20-30 percent smaller than normal (Nash 1997, as quoted by Chen 1999).

Young Children who have severe and multiple disabilities need training to use their senses and physical abilities to carry out activities. Such training will help the child to understand information by exploring the environment. By exploring in environment helps to develop concept mobility and communication.

Persons with disabilities also requires time for recreation. Many a time, they are unable to decide the activities for the recreation. In the school time table there should be the time slots for recreational activities when students can be given opportunity to participate in various co-curricular activities. Use of leisure time and engaging in recreational activities do not come naturally to persons with mental retardation. They need to be prompted to take part in such activities. After finding out their aptitude and interest they should be involved in suitable activities. Recreational activities should take a significant place in the overall curriculum.

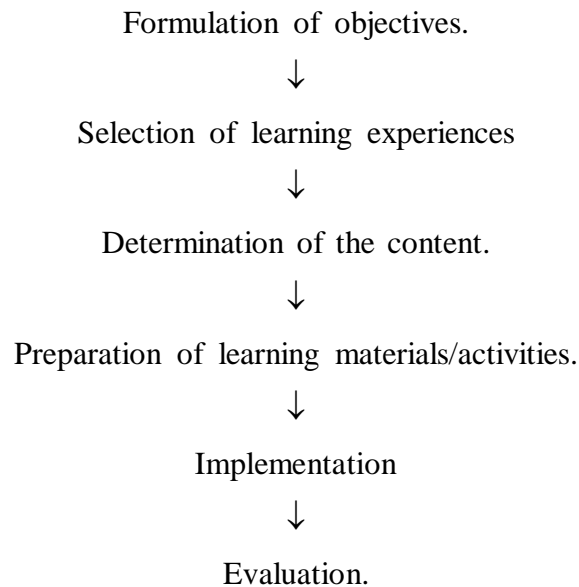
1.6 Steps in developing curriculum, challenges of developing curriculum for inclusion.

1.6.1. Steps in developing curriculum

The curriculum development process can be divided into six steps. They are:

- Formulation of objectives.
- Selection of learning experiences
- Determination of the content.
- Preparation of learning materials/activities.
- Implementation
- Evaluation.

These steps can be arranged in a sequential order



Assessment of Educational Needs

India is multi-cultural society. Since the background of students different from culture to culture, place to place, time to time, even student to student in a class room, it is important to assess the individual need of the students. We should identify the needs of the target group for whom curriculum is to be developed. As a first step, the curriculum planners should make a need analysis of different categories of learners. This analysis leads to a detailed description of activities, the requirements and expected learning experiences. It provides details of the knowledge, skills and attitudes required by/individuals to perform the tasks involved in learning a concept.

Formulation of objectives

Objectives should be grouped in terms of three domains—cognitive, affective and psychomotor. Proper grouping of objectives will help us in planning and developing a meaningful curriculum in terms of the suitability and relevance of its content and evolution. For each need of the learner, there should be corresponding objectives. Hence, these can be as many educational objectives as the educational need are. Each educational objective will suggest a series (and a variety) of learning experiences.

Objectives will be most functional if they are stated in terms of expected behavioural changes in the students of the going through teaching/instruction/schooling. Attainment of objectives should lead the learners to attain overall goal(s) of education.

Objectives should be modified updated or eliminated based on the changing needs of the students and the society this would help to maintain the quality of education. The statement of objectives should be worded properly so that the learner and the teacher are able to understand the intended outcomes.

Selection of learning experiences

Early experiences include physical, mental and educational experiences and their interactions. These bring desirable changes in behaviour of the learners. And change in the learners will lead to the attainment of curricular objectives.

Criteria of selection of learning experiences are as follows:

A learning experience should satisfy the recognized needs of the learner.

- It should be appropriate to the maturity and understanding of the learner.
- It should build towards consistent continuing and dynamic goals.
- It should be based on social values.
- It preferably should be positive.
- It should be realistic.
- It should be efficient.
- It should not be limited by artificial barriers such as the four walls of the classroom.
- Learning experiences should involve total behaviour.
- It should be feasible for accomplishment.

Determination of the Content.

Contents refer to the subject matter or the compendium of facts, concepts, generalizations, principles and theories. The subject matter to a large extent, contributes to the growth and development of a democratic, secular and socialist society. So, the content is considered as one of the most important components of curriculum development. The following can be considered while selecting the content:

- Is the subject matter significant to an organized field of knowledge?
- Is it useful?
- Is it interesting enough to the learner?
- Does the subject matter contribute to the growth and development of a democratic society?

Apart from the above, content should have the following characteristics:

- The content should help the learner to become self-reliant and self-sufficient.
- It should be significant in contributing to basic ideas and concepts.

- The selected content should be valid so that it should fulfill the objectives and goals of education.
- It should suit the personality and intellectual capabilities of the students.
- It should be useful in the job situation of the learners.
- It should be feasible in terms of time, costs and contemporary social climate.

Preparation of learning materials/activities

By now you have studied about assessment of educational needs of the learners, statement of objectives, and identification of the contents. This is done by preparing learning materials/activities. Learning experiences and contents of organizing, integrating and sequencing of materials and activities depend on the availability of learning situations in the schools and classrooms, infrastructural availability, developmental levels of learners, principles of learning and the cultural contexts of students and teachers. Learning materials include anything that leads to learning such as, text books, supplementary readers, audio and visual programme and other relevant teacher made material.

Preparation of learning materials is a complex task, it demands a thorough understanding of the teaching-learning process. As you have already learned, Bruner talks about three modes of learning. They are.

Enactive mode – activity based learning.

Iconic mode – learning by use images diagrams.

Symbolic mode – Learning by use of symbols/languages.

There are various criteria for selection of learning materials depending on the selected mode of learning.

Wood (1963) has suggested six criteria for learning materials. They are as follows:

- All learning materials should make a definite contribution to the satisfaction of recognized need on the part of the learner.
- They should be a variety of learning materials to provide for the individual differences, usually found in a group of students.
- Learning materials should be as authentic as possible. This will tend to increase the objectivity of analysis and the accuracy of conclusions drawn.
- Learning materials should be selected on the basis of efficiency. These materials

that result in the greatest amount of learning in the least amount of time should be given preference.

- Economy is always a factor if there is a choice between two types of materials of equal learning value, the less expensive one should be chosen. Even when the learning values are not quite equal, practical factors may demand the choice for the less expensive one.

Implementation

After the preparation of learning materials/objectives, the next step is the implementation of the curriculum in the classroom. This is the stage of actual teaching learning or transaction of curriculum. Teachers, Principals, Supervisors and Members of school management are involved in the proper implementation of the curriculum. Agarwal (1990) suggested the following major factors leading to the efficient implementation of the curriculum.

- Adequate preparation of the teachers by the Boards and State Department of Education for meeting, the changed requirements of the new curriculum
- Sufficient supply of the teaching aids and equipment is needed for the implementation of the curriculum.
- Community participation with curriculum.
- Adequate preparedness of the students to accept the curriculum with its additional requirements of energy, money and time.
- Adequate supervisory and guidance facilities for teachers needed for effective implementation on the curriculum.

Evaluation

An essential aspect of good curriculum is the evaluation of curriculum, which should be continuous. The primary purpose of evaluation of curriculum is to ensure quality control and suitable modification in the curriculum. Evaluation may be qualitative. It may be done both at 'macro' level as well as micro level. It also may be done both at formative and summative stages. Curriculum evaluation determines the worth of curriculum. It determines, whether curriculum fulfils its purpose for which it is planned.

1.6.2 Challenges of Developing Curriculum for inclusion

Historically, educational services for children with mental retardation were designed to be provided in segregated settings. With the efficacy of research done in recent

years, the idea of providing services as close to the normal environment as possible has become the trend to inclusion. When developing such a programme, the varied needs of children with mental retardation with various culture practices should be taken into consideration. This makes it difficult to develop an ideal curriculum and plan programme uniformly. This is also one of the reasons for not having a common curriculum for all the individuals with intellectual disability.

As suggested by Lieberman (1992) the curriculum for children with mental retardation should therefore focus on:

1. The need of the students.
2. the probability that the intervention requires a special set of arrangements that are generally not available in regular class room settings.

It is imperative that the shift of emphasis is made in curriculum priority from academics in regular classrooms to student based needs.

When curriculum has to focus on all-round development as mentioned earlier, it should be need based. It has to take into account the functions to be performed by the individual in his environment and the required competencies for it. Baine (1991) recommends an ecology based curriculum where the task involves assessment of not only the person with intellectual disability but also the functions he has to perform along with non disabled persons in a given environment. This allows for a discrepancy analysis, leading to specific focus on the strength of the individual with intellectual disability and selection of appropriate tasks and activities to be taught as suited to his environment.

The approach being a functional one is likely to be meaningful to the individual if used at secondary school level. The primary level curriculum for children with intellectual disability will predominantly include personal, social, basic academic and introductory occupational skills.

Co-curricular activities, recreational and leisure activities should not be ignored and should be included as in the regular school curriculum. Infactt inclusion will be more meaningful in the schools when recreational and leisure activities are planned for children with mental retardation along with those for non-disabled school children.

When functional academic area is planned in the curriculum, it should focus on those areas which will be of utility to the children with mental retardation. It is a waste of time teaching those activities that they will not use in present or future environments,

because, it is the need/opportunity for application of what is taught and what will benefit them.

A study (Narayan and Myreddi 1996) was conducted to compare the functional curriculum with the one that is in use at regular schools. Minimum level of learning (MLL 1992) as prescribed by NCERT was item endorsed with the listed thing in the Functional Assessment Checklist for Programming (FACP) (Narayan et al., 1992) from preprimary to prevocational level covering the ages of 3 to 18 years for children with mental retardation upto prevocational age level happens to cover about 43% of the regular curriculum upto class III. The coverage showed 65% of class I, 42% of class II and 23% of class III.

This again emphasized that primary education covers functional skills to a large extent making it possible for children with intellectual disability to learn. The essence of need based content area from regular primary education can be included in the curriculum area for academic learning of children with mental retardation. As they grow older or move to higher classes, need based education with ecological consideration is more suitable with specific evaluation criteria.

The cultural trend towards inclusive education, poses yet another challenge, the educators will have to face. The concept of inclusion demands that all children should be part of the educational and community mainstream. The Persons with Disability Act India (1995) also highlights equal opportunities for all support of inclusive education and special education and the new role to which they have to adapt themselves. The peer group adjustment, the resource requirement and administrative decisions are other components of this concept. In India, the inclusive education is at infancy demanding tremendous efforts by all concerned to study its efficacy.

In Short

- The curriculum should be developed after identifying the functional daily activities that are to be performed by the child with mental retardation in a given environment, may it be urban, rural, industrial, slum or semi urban areas.
- The curriculum should include specific activities that need to be mastered rather than are broad skill areas such as gross motor, fine motor, and socialization, language and so on.
- The Curriculum should emphasise process of training to be conducted as far as possible in the natural environment and that steps should be taken to minimize transfer of learning.

- The inclusion of academic skills in the curriculum such as reading, writing and arithmetic must be absolutely function oriented and that the person with intellectual disability uses the skills learnt in his daily living. For instance, some times, the special educators have their students working on 2 digits, 2 line additions on paper, but unable to say correctly, if they asked, orally, three cars and four autos make a total of how many vehicles. This happens because the addition taught on paper has not function oriented and was not generalized. Therefore, the curriculum must relate academic to its function in day to day life.
- In addition to academic skills, self care and communication skills, the curriculum should provide for recreational skills, home management skills, health and safety and community oriented skills which contribute to social competence.
- Though the initial instructions of certain skills begin in classrooms, as the child learns the skills and gains mastery over them, they have to be community referenced, as eventually a person with mental retardation has to live in the community.
- The curriculum should take into consideration, the economic, social, cultural and such environmental characteristics of the society in which the person with intellectual disability live. This should be emphasized especially in the aspects of vocational training. Local resources and occupations must be taken into consideration and the person will be trained accordingly.

To conclude, a good curriculum should take into consideration the environments in which the persons with intellectual disability lives namely, home and family, community, school, vocational and occupational areas. The skills should be identified, organized, sequential and the training should be given in the natural environment.

By this, the person with intellectual disability is taught what is required for him to be independent in his society.

1.7 Curriculum evaluation, Implementation in inclusion

1.7.1. Curriculum evaluation

Curriculum evaluation refers to evaluation of the defferent components of Curriculum, namely objective, contents, learning materials, teaching strategies and students evaluation procedure.

The purpose of Curriculum evaluation is to get feedback for further modification and refinement in the curriculum.

Curriculum is a complete design of planning. All teaching learning procedures are directed by this planning. So quality of curriculum is equivalent to the quality of education. Therefore, curriculum evaluation is the essential part of the education valuation, draws on one's judgement to determine the over all value of the Curriculums Evaluation of Curriculums Contineous.

There are mainly two types of curriculum evaluation namely summative and formative evaluation.

Summative evaluation:

Summative evaluation takes place after the implementation of the curriculum and learning and provides information and feedback that sums up the effectiveness of curriculum.

According to A. J. Nitko (1983), "Summative evaluation describes judgements about the merit of an already completed programme, procedure or product."

Objective of summative evaluations:

- Whether the Curriculum is appropriate for the particular level/class.
- It helps to determine the ultimate out comes of the students and their curriculum.
- Whether it is designed as per the needs of the students with intellectual disability.
- It helps to connect between the ultimate aims and immediate aims of the curriculum.
- It determines the time limit of the curriculum implementation.
- It helps to link between present level and subsequent level of the curriculum designed for the children with intellectual disability

Characteristics of the Summative evaluation:

- It leads to the use of well-defined evaluation designs.
- It focuses on analysis.
- It is concerned with broad range of issues.
- Its instruments are reliable and valid.
- It tends to stress local effects.

Advantages of Summative evaluation of Curriculum:

- It is time and cost effective.
- It is least complex in nature.
- It can be done by the teachers.
- It is more reliable and valid.
- It helps to determine the incompleteness, errors and problems of curriculum.

Disadvantages of Summative evaluation & Curriculum:

- It is very difficult to evaluate the curriculum during the implementation.
- Under qualified teachers can not evaluate properly.
- It involves the intelligence, interest, motivation of students which are very difficult to relate with the curriculum.
- Evaluation may be affected by the use of inappropriate tests.

Formative evaluation of Curriculum

Formative evaluation of curriculum provides feedback and information during the implementation process, while learning is taking place and while learning is occurring. Formative assessment measures the curricular aims, objectives, teaching strategies, curricular contents, teaching-learning materials selection, instructional methodology, students progress including learning outcomes and teachers competencies in the present Curriculum. A primary focus of formative evaluation of curriculum is to identify areas like objectives, contents, teaching strategies, methodology etc. that may need improvement. Formative evaluation is to determine teaching effectiveness and curriculum relevancy. Formative evaluation has allowed to 'rethink' and 're-deliver' that objectives, contents, selection of materials teaching strategies etc to ensure the curriculum is on track.

Characteristics of Formative evaluation:

- It relatively focuses on molecular analysis
- It is cause seeking.
- Its design is exploratory and flexible.
- It tends to ignore the local effects of a particular programme.
- It seeks to identify influential variables.

Stage of formative evaluation of Curriculum

Stage 1. The aim of this stage of evaluation is to evaluate the basis of the curriculum.

It is very important to assess the physical and mental status of the learners which is competeble to the basis of Curriculum.

Stage 2. Accumulated basis derived from the Stage 1 should be varified properly.

The aims of the curriculum should be evaluated in this stage.

Stage 3. In this stage the curricular contents need to be verified.

Stage 4. Evaluation of implementation including methods, teaching strategies is also an important part.

Stage 5. Evaluation of the arrangements of Curriculum contents is the main task of this stage.

The infrastructure, competencies of teachers, socio-economical needs etc are also to be evaluated during the formative evaluation of curriculum.

Advantages of formative evaluation:

- It helps to keep the curriculum almost errorless.
- Every stage of curriculum are verified appropriately.
- It helps to predict the effectiveness of curriculum is advance.
- Preparation of teachers training can be done in well advance.

Disadvantage of formative evaluation:

- It takes long time.
- It requires involvement of experts, people and various organizations.
- Effectiveness of the curriculum may decrease as formative evaluation takes a long time.

1.7.2. Implementation in inclusion

The academic learning and the abstractions involved in it makes it difficult for a child with mental retardation to cope with regular curriculum in inclusive set-up. Janney & Snell (2000) offer three considerations in curricular adaptation (1) Simplified, (2) Supplementary and (3) Alternative which are very essential for implementation of curriculum in inclusive education.

Simplified curriculum

Simplified curriculum includes fewer concepts and skills rather than the entire scope of the general curriculum.

Example: Structure and functions of part of the eye.

The text books have detailed description of parts of the eye. Iris, pupil, cornea, lens, aqueous humor, vitreous humor, optic nerve with difficult terminology and the functions eye. A child with mental retardation can just be taught major parts and functions. The parts that are visible so he comprehends (eyelid, pupil, iris) and focus on care of eyes, symptoms of problem of eyes, care of the eye glasses and such other information which is more functional and simplified and taken from regular educational curriculum.

Supplementary Curriculum

Supplementary curriculum includes basic skills such as reading, writing, maths and also social skills, study skills and learning strategies. This helps children in organizing themselves to improve memory and helps in learning. This type of curriculum is most useful for children with learning disabilities and these who have emotional/behaviour problems.

Example: Student attends regular class but performs poorly in exams. In such cases supplementary classes are provided for test taking, organizing time, paraphrasing, noting main points and practicing test taking skills.

Alternative Curriculum

An alternative curriculum emphasizes skills needed to participate in activities in the community living. An alternative curriculum therefore, can be functional, community referenced curriculum, determined by assessing the student and his environment. Functional academics forms part of the community referenced curriculum. Depending on the level of retardation, emphasis can be given on personal, social and communication skills. Opportunity for partial participation in school activities is recommended for children with severe retardation.

Example: If in the class curriculum demands 'gardening activity' a severely disabled child may perhaps participate by holding the hosepipe with the help of his/her peer for watering plant. He may receive his individualized instruction which may have minimum common content with his age appropriate regular curriculum. It is an alternative curriculum with the common objective of leading towards independent living.

In inclusive set-up the:

- peer-tutoring,
- team-teaching
- unique teaching strategies
- uses of effective teaching learning material
- reduction of subjects
- extension of the time to complete curriculum
- flexibility of examination system can be beneficial for the children with intellectual disability.

1.8 Let Us Sum Up

We discussed in this unit underlying meaning, definition, concepts and principles of curriculum which are goal oriented, age appropriate, need based, Level appropriate, upto date, creative, integrative and comprehensive. We discussed the different types and approaches of curriculum, designing which includes child centered curriculum (c.c.c), activity centered curriculum (ACC) and holistic curriculum (HC) types and different approaches like-develop mental approach, functional approach, ecological approach and unit approach. The curricular contents for children with intellectual disability focus on personal, social, academic and occupational domains. All these areas covered in curriculum content at all levels. A combination of various techniques has to be used while teaching a particular skill and can use different techniques for different students even for teaching the same skill. The curriculum, stages moves sequentially from formation of objectives to the evaluation. We discussed the curriculum evaluation which includes summative and formative evaluations of curriculum. Lastly we discussed the implementation of curriculum in inclusion using different curriculum adaptations like simplified, supplementary and alternative curriculum.

1.9 Check Your Progress

1. Define curriculum. Is curriculum same as syllabus? Discuss.

2. Describe any 2 principles with examples to be taken into consideration while constructive the curriculum in the context of intellectual disability.
3. Compare the developmental, functional and approaches to curriculum development and highlight the similarities and differences.
4. Think of a theme and group of children in preprimary to prevocational levels. Narrate how the theme chosen by you will provide the conceipts suitable at each of these level.
5. Development of personal skills varies according to culture and region. Discuss.
6. List social skills that you will include in primary level curriculum.
7. Discuss the methods of teaching functional academics to children with ID.
8. Prepare a list of resources available in our community to teach occupational skills for students with intellectual disability.
9. Write the various steps of curriculum development in sequence. Explains with example.
10. Assessment of educational needs is an essential component of curriculum development. Discuss.
11. Write different advantages and disadvantages of summative and formative evaluations of curriculum.
12. How do you implement the curriculum in inclusion?

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Unit - 2 □ Curriculum At Pre-school And Primary School Level

Structure

- 2.1. Introduction**
- 2.2 Objectives**
- 2.3 Significance of Early Childhood Education and School Readiness**
 - 2.3.1 Early Childhood Education and School Readiness**
 - 2.3.2 Importance of Early Learning**
 - 2.3.3 Need and Challenges in India**
 - 2.3.4 School Readiness Program**
- 2.4 Early child hood education curricular domains**
 - 2.4.1 Social Emotional Development**
 - 2.4.2 Language and Literacy/English Language Development**
 - 2.4.3 Science**
 - 2.4.4 Mathematics**
 - 2.4.5 Visual and Performing Arts**
 - 2.4.6 Social Studies**
 - 2.4.7 Focal Areas of Development in Early Childhood Education Program**
- 2.5 Curriculum Domains for Early Childhood Education and Sensory Mechanism**
 - 2.5.1 Principles for Designing Early childhood Education Curriculum**
- 2.6 Sensitization of family, involvement in pre-school and primary level**
 - 2.6.1 Family Involvement and Sensitization**
 - 2.6.2 The Importance of Parent Involvement in Early Childhood Education**
 - 2.6.3 Framework for Accessible Family Involvement**

2.7 Implication of pre- school and primary levels for Intervention, documentation, record maintenance and report writing

2.7.1 Meaning and Importance of Record Keeping

2.7.2 Why Do We Record And Document Observations?

2.7.3 Report Writing

2.8 Let us Sum Up

2.9 Check your Progress

2.10 References

2.1 Introduction

Early childhood is a crucial stage of life in terms of a child's physical, intellectual, emotional and social development. Growth of mental and physical abilities progress at an astounding rate and a very high proportion of learning takes place from birth to age six. It is a time when children particularly need high quality personal care and learning experiences. Education begins from the moment the child is brought home from the hospital and continues on when the child starts to attend playgroups and kindergartens. The learning capabilities of humans continue for the rest of their lives but not at the same intensity that is demonstrated in the preschool years. With this in mind, babies and toddlers need positive early learning experiences to help their intellectual, social and emotional development and this lays the foundation for later school success.

Children taught at an early age usually benefit in the following ways: improved social skills, less or no need for special education instruction during subsequent school years, better grades, and enhanced attention spans. Likewise, some researchers have concluded that young children enrolled in pre-school programs usually have fewer behavioral problems, and do not become involved with crime in their adolescent and young adult years.

The three broad objectives of ECCE are:

- holistic development of the child to enable him/her to realise his/her maximum potential;
- preparation for schooling;
- providing support services for women and girls.

The curriculum is defined as age appropriate, all round, play based, integrated, experiential, flexible, and contextual.

The guiding principles of the ECCE curriculum are:

- Play as the basis of learning,
- Art as the basis of education,
- Recognition of the special features of children's thinking,
- Primacy of experience rather than expertise
- Experience of familiarity and challenge in everyday routines
- Mix of formal and informal interaction
- Blend of the textual (basic literacy and numeracy) and the cultural elements
- Use of local materials, arts, and knowledge
- Developmentally appropriate practice, flexibility, and plurality
- Health, well-being, and healthy habits

Globally, many events have contributed to the realisation of the significance of the early childhood years for a country's economic progress. The beginnings of this change started with the United Nations Convention on the Rights of the Child in 1989. For the first time, there was a set of international standards and measures intended to protect and promote the well-being of children in society. The second major event that drew attention to the issue of early childhood was the creation of the Human Development Index, a summary measure of human development, by the United Nations Development Programme (UNDP) in 1990. The Human Development Index measures the achievements of countries on three basic dimensions of human development:

- (1) a long and healthy life;
- (2) knowledge; and
- (3) a decent standard of living; it includes indicators that specifically relate to children, namely, mortality, education, and child labour.

The third important event in the international arena was the World Conference on Education For All (EF A), held in Jomtien, Thailand in 1990, where a global commitment to education was made in a document beginning with the famous words 'Learning

begins at birth'. In addition, the World Education Forum, held in Dakar, Senegal in April 2000, reiterated the importance of ECCE through the involvement of the state, the family, and the community. India is signatory to all these agreements.

2.2 Objectives

After going through this unit you will be able to

- Discuss the different curricular domains in preschool education.
- Discuss the significance of preschool education.
- Narrate the role of parents in preschool and primary education.
- Discuss the importance of record maintenance.

2.3 Significance of Early Childhood Education And School Readiness

All children need and deserve a good start. Attending high quality early childhood programs is an important part of starting early and starting right.

2.3.1 Early Childhood Education and School Readiness:

Early childhood is defined as the period from conception through eight years of age.

The earliest years of a child's life are critical. These years determine child's survival and thriving in life, and lay the foundations for her/ his learning and holistic development. It is during the early years that children develop the cognitive, physical, social and emotional skills that they need to succeed in life.

These early experiences are largely determined by supportive family and community care practices, proper nutrition and health care, learning opportunities, which in turn are dependent on enabling policies and investments for young children and families. ECE positively impacts on attendance, retention, and learning of children in elementary and higher education.

The National Education Association recognizes that a high-quality early childhood program includes five, critical components:

- Provides a well-rounded curriculum that supports all areas of development

- Addresses child health, nutrition, and family needs as part of a comprehensive service network
- Assesses children to enhance student learning and identify concerns
- Employs well-educated, adequately conversent teachers
- Provides small class sizes and low teacher-child ratios

The U.S. Department of Education recognizes that the effectiveness of an early childhood program is dependent upon a number of factors:

- A quality staff
- An appropriate environment
- Consistent scheduling
- Parental involvement
- Proper grouping practices

This federal agency also recognizes additional characteristics of a high-quality early education program:

- A balance between individual, small group, and large group activities
- A balanced schedule that does not result in rushed or fatigued children
- A clear statement of goals and a comprehensive philosophy that addresses all areas of child development
- A strong foundation in language development, literacy and mathematics.
- Access to a safe, nurturing, and stimulating environment, along with the supervision and guidance of competent, caring adults
- Engages children in purposeful learning activities and play, which is instructed by teachers who work from lesson and activity plans
- Nutritious meals and snacks
- Teachers and staff who regularly communicate with parents and caregivers
- Teachers who frequently check children's progress

2.3.2 Importance of Early Learning

Research into the human brain shows that the period from birth to the age of 8 is a critical phase for brain development and therefore the best time for learning. The

influence of the external environment is crucial to brain development. If a safe and accepting environment with abundant sensory stimulation is available in early childhood, children will have positive brain development which is beneficial to their future learning.

According to the theory of multiple intelligences, there are many aspects of human intelligence and every individual has varied strengths. Pre-primary institutions should provide a diversified learning environment for children to develop their different potentials.

2.3.3 Need and Challenges in India

In India, according to Census 2011 data there are 164.48 million children of 0-6 years of age. Recognizing the need to provide quality pre-primary programmes, a number of constitutional and policy provisions have been made such as the 86th Constitutional Amendment which introduced Article 21 A on the right to free and compulsory education for 6-14 years old children and Article 45 to urge states to provide ECCE for all children until they complete the age of six years.

The Right of Children to Free and Compulsory Education (RTE) Act 2010 guarantees children their right to quality elementary education. ECE is not recognized as a compulsory provision by RTE, but RTE urges states to provide free pre-school education for children above three years. The 12th Five Year Plan acknowledges the importance of ECL and improving school preparedness.

The Government of India approved the National Early Childhood Care and Education (ECCE) Policy in 2013. The Policy framework also includes the National Curriculum Framework and Quality Standards for Early Childhood Care and Education. The Policy caters to all children under 6 years of age and commits to universal access to quality early childhood education. The Ministry of Women and Child Development (MWCD) is the nodal department for ECCE. MWCD is responsible for the Integrated Child Development Services (ICDS) programme, which is a centrally sponsored and state administered [CCI: programme, covering around 38 million children through a network of almost 1.4 million Aanganwadi centres (a village courtyard). rCDS includes delivery of an integrated package of services such as supplementary nutrition, immunization, health check-up, preschool education, referral services and nutrition & health education. ECCE is one of the components and aims at psycho-social development of children and developing school readiness.

Despite the recognition of the importance of ECE by the Government of India, the challenges in implementation still remain. There are still substantial numbers of children

not enrolled in preschools. Even in elementary education, while there is a significant rise in enrolments, the dropout rate continues to be a matter of concern, with drop outs being highest in the first two grades of elementary schooling. Learning assessments also show that literacy skills are poor in early primary grades. This points to the urgency of helping children, particularly from first generation families, develop adequate school readiness through a good quality ECE programme, to enable them to make a smooth transition.

2.3.4 School Readiness Program

Children's School Readiness is affected by the early care and learning experiences they receive. The research in brain development emphasizes that early learning (especially from birth to five) directly influences a child's ability to learn and succeed in school. These studies have contributed to a growing awareness of the importance of quality early education and prekindergarten experiences. Research indicates that pre schoolers who attend high quality programs:

- Enter kindergarten with skills necessary for school success.
- Show greater understanding of verbal and numerical concepts.
- Are more socially competent.
- Show ability to stay with an activity longer.
- Are more likely to make typical progress through the primary grades.
- Are less often placed in special education classes.
- Are less likely to be retained in kindergarten.

Children's readiness for successful transition into kindergarten needs to be viewed as a community responsibility. Parents, prekindergarten teachers, elementary schools, and local community programs working together provide the best base for children's success in school. Readiness needs to be defined in broad developmental terms so that the uniqueness of each child is preserved and respected. The National Education Goals Panel definition of school readiness covers three key areas:

- children's readiness for school
- schools' readiness for children
- family and community supports and services that contribute to children's readiness for school success

Five Essential Elements of School Readiness

- I. Early Care and Education
2. Parenting and Family Support
3. Health and Social Services
4. Schools' Readiness for Children/School Capacity
5. Program Infrastructure, Administration and Evaluation

2.4 Early Childhood Education Curricular Domains

2.4.1 Social/Emotional Development

Young children need social and emotional competencies. These skills are acquired through the development of close relationships, shared conversations and a nurturing environment. Preschool teachers guide children in learning social skills that include responsibility and self-control. Social emotional skills are developed through the shared activities of an appropriate and well designed preschool classroom environment. Preschool social emotional components are:

- Self-awareness and regulation
- Social emotional understanding
- Empathy and caring
- Initiative in learning
- Interactions with familiar adults and peers
- Group participation
- Cooperation and responsibility
- Relationship-attachment to parents, teachers and caregivers

2.4.2 Language And Literacy/English Language Development

Children's early language growth and later language outcomes are directly related to the verbal communication children receive from adults and other children. In the preschool classroom, students have meaningful and comprehensive opportunities for language stimulation. Teachers embrace the primary language of the child while supporting the development of English

The key competencies for being ready for kindergarten and becoming fluent communicators and readers are as follows

Language and Literacy

1. Language use
2. Vocabulary and grammar
3. Concepts about print
4. Phonological awareness
5. Word and letter recognition
6. Comprehension and analysis of age appropriate text
7. Literacy interest and response
8. Writing

Categories of English Language Development

- Listening
- Speaking
- Reading
- Writing

2.4.3 Science

Science in preschool fosters a joy of discovery and a positive approach to learning. Children become confident learner identifying solutions and problem solving through persistent hands on experimentation cum critical thinkers for lifetime. The content of Science in preschool consists of:

- The skills and language of science/scientific inquiry
- Knowledge of Physical Sciences, Life Sciences, and Earth Sciences

2.4.4 Mathematics

Young children explore the mathematic domains through interactions with their everyday environment. Children experience mathematics through the daily routine by counting, sorting, building shapes, measuring, and estimating. The preschool classroom is designed with intention and order to promote mathematics experiences as the children play and explore their world. There are five main developmental mathematics strands:

- Number sense
- Algebra and functions (classification and patterning)
- Measurement
- Geometry
- Mathematical reasoning

2.4.5 Visual And Performing Arts

The visual and performing arts are natural to young children, exhibited early in the form of scribbling, pretending, humming, and swaying to music. In the preschool classroom, we engage and encourage children in arts activities on a regular basis. These activities lay the foundation and help children for successful learning

- Arts experiences are more about process than product
- Arts are inclusive and common to all
- Cultural competence and appreciation of the arts
- Artistic thinking processes and problem solving
- Learning through dramatic and active play
- Aesthetics in the classroom and intentional environment design
- Disposition of learning and meaningful connections to the world

2.4.6 Social Studies

Children learn early how people live in the social world. Their preschool classroom mirrors the larger society with its diverse ethnic, religious, and socioeconomic backgrounds. Preschool teachers help children to think about themselves and their roles and responsibilities that they and others assume. Children are developing a sense of belonging to places and groups that are meaningful to them. They learn about the time and how their current experience is affected by their personal past and relates to their future

The components of Social Studies in preschool are:

- Sense of time (history)
- Sense of place (geography and ecology)
- A preschool community member (civics)

- Self and society
- Market place (economics)

2.4.7 Focal Areas of Development in Early Childhood Education Program

The early childhood years are filled with staggering growth and development. There are four main areas of development that occur all at the same time:

Physical development: In the first years of growth young children are physically developing at a rapid pace. There is both gross motor (crawling, walking, running) and fine motor development (eye-hand coordination, cutting, writing, weaving) happening all at once.

Social development: Understanding how to communicate, sharing, making friends, and getting along with others is just the tip of the iceberg when it comes to social development in the first five years of life.

Emotional development: The building blocks for a positive self-esteem and self-confidence starts in early childhood. Young children are also learning how to cope and appropriately express their own emotions such as fear, sadness, anger, and happiness.

Social and emotional development often comes hand in hand since how a child copes socially often impacts his or her emotional well-being.

Cognitive development: Young children are always processing information about their world. They do so through both structured and unstructured activities, play, and by interacting with others. From experiences such as these, young children develop their understanding and abilities in the areas like mathematics, science language, art. The mind of a young child absorbs information like a sponge.

2.5 Curriculum Domains for Early Childhood Education and Sensory Mechanism

2.5.1 Principles for Designing Early childhood Education Curriculum

We should adopt the following principles for designing the early childhood education curriculum. All children are capable of learning. The curriculum should be designed with a child-centred approach and from the children's perspective. It should be geared to meet their abilities, needs, learning styles, experiences and interests.

a. Curriculum should meet children's developmental needs and abilities:

When designing the curriculum, institutions should identify children's best learning moments to meet their developmental needs and abilities, and provide them with sufficient space for a balanced development.

b. Curriculum should relate to children's experiences and interests:

Children's previous experiences influence their learning. Curriculum planning should therefore be based on childrens' experiences and should relate to the environment in which they live. In addition, the curriculum should be interesting, so that the children are self-motivated and ready to take an active role in learning.

c. Curriculum should cater for children's holistic development in the cognitive, language, physical, affective, social and aesthetic aspects:

Cognitive, language, physical, affective, social and aesthetic developments are interrelated and interwoven. Therefore, in the process of curriculum planning, due consideration should be given to children's overall development, so that individual developmental needs will be met in a comprehensive and well-balanced manner.

d. Curriculum should foster children's knowledge, skills and attitudes in different learning areas:

A pre-primary curriculum should take into account all six learning areas and the relevant concepts, skills and attitudes.

e. Play may be a learning strategy:

Children loves to play, which enables them to enjoy the freedom and fun of sharing and working with others. They learn effectively in a pleasurable atmosphere. Play is also one of the most effective ways of learning, since it enables them to express their inner feelings and explore the real world. Therefore, pre-primary institutions should incorporate play activities into different learning areas and plan the curriculum through an integrated approach.

The curriculum must address the following interrelated domains of holistic development through an integrated and play based approach which focuses on development of life skills.

- **Physical and Motor Development:** Gross motor skills; coordination of fine muscles with dexterity; eye hand coordination; sense of balance, physical co-

ordination, and awareness of space and direction; nutrition, health status and practices.

- Language Development: Listening and comprehension; oral skills/speaking and communicating; vocabulary development; pre- literacy/emergent literacy skills like phonological awareness; print awareness and concepts; letter-sound correspondence; recognition of letters; building words and sentences and early writing. Introduction to language of school transaction.
- **Cognitive Development:** Development of various concepts including pre number and number concepts and operations (knowledge and skills related to comparing, classification, serialization, conservation of space and quantity, one to one correspondence; counting); spatial sense; patterns and estimations in measurement; data handling; skills related to sequential thinking, critical thinking, observing, reasoning and problem solving; and knowledge about concepts and physical, social and biological environment.
- **Socio-Personal and Emotional Development:** Development of self-confidence; self-control; life skills/ self-help skills; habit formation; initiative and curiosity; engagement and persistence; cooperation; compassion; social relationships; group interaction; pro- social behaviour; expressing feelings, accepting others feelings .
- Sensorial Development: Development of the five senses through visual, auditory and kinaesthetic experiences .
- Development of Creative and Aesthetic Appreciation: Exploring different art forms, develop dispositions, expression and appreciation for artistic, dance/ drama and musical activities

2.6 Sensitization of Family, Involvement in Pre-school and Primary Level

2.6.1 Family Involvement and Sensitization

Family involvement means that families work together with caregivers and teachers to create an atmosphere that strengthens learning both at the program and at home. Parents should be sensitized to the importance of preschool education and its vital role in children's lives. Parents should also be made aware about the importance of play way approach in early childhood education. The planners and school persornel should focus on child centered curriculum for the growth and all round development. There should be participation and involvement of parents in early education to improve the

performance and the best out of child. There should be proper comprehensive supervision of Aanganwadi workers so that they dedicate more time to preschool educational activities. Emphasis should not be laid only on nutrition and immunization but children should also get adequate educational inputs. The preschool education component should be strengthened by providing training and orientation to Aanganwadi workers. Necessary educational equipment and toys should be available to each centre. There should be greater community participation so that every single person comes to know about ICDS and its widening coverage. People should treat ICDS programme as their own programme so that the impression that everything is to be done by the government only is changed. Understanding the concerns of parents of children with disabilities is an important step to school counsellors as they are the advocates for students with disabilities and their parents.

"When schools and families work together, children have a much better chance for success, not just in school, but throughout life" (Henderson & Berla, 1996, p. 1). The benefits for children may look like they are too broad for your thinking about young children because they generalize across a wide age span (BCE to high school). But if you keep in mind that the patterns for success begin in early childhood, the benefits have much relevance for work with young children. Those benefits of family involvement include:

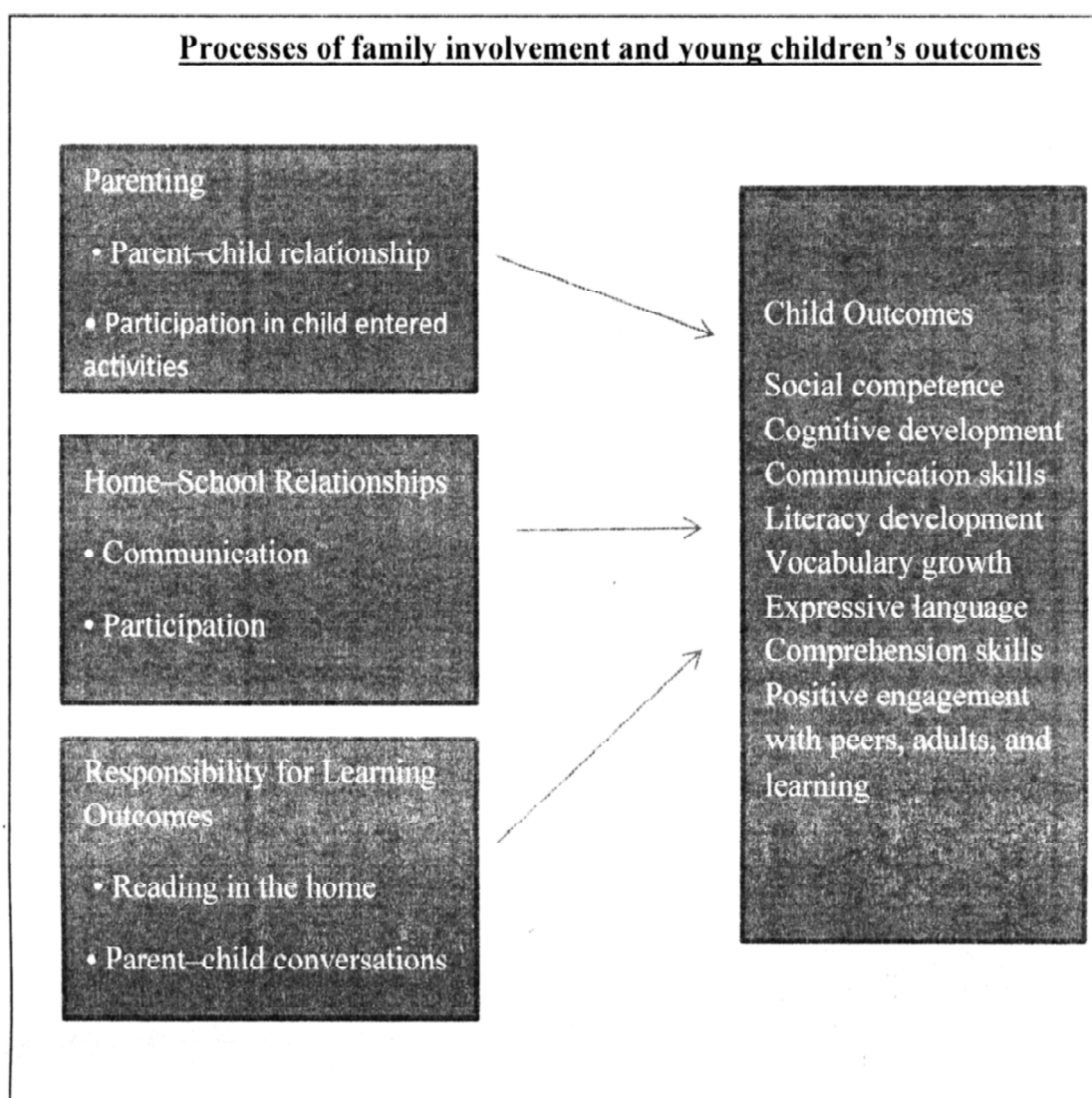
- Higher grades and test scores
- Better attendance and more homework done
- Fewer placements in special education
- More positive attitudes and behavior
- Greater enrolment in postsecondary education

2.6.2 The Importance of Parent Involvement in Early Childhood Education

- Parents who are involved in their child's education create a connection between the home and school.
- Those who participate along with their child are privy to the many aspects of their child's day.
- At home, they are able to replicate and extend activities that their child experiences in school.
- An astute parent will pick up where the school left off and have an intuitive sense

for what their child may need to work on to increase his competency and confidence.

- Ideas gleaned from the classroom give the parent inspiration for home activities that coincide with classroom tasks.
- Involved parents learn the names of various children in their child's class. They have a sense of who their child's friends are, who may be causing them trouble and how their own child is getting along in the group.



2.6.3 Framework for Accessible Family Involvement

One comprehensive perspective on family involvement in preschool and primary evolved from a review of studies from preschool through high school that included educators and families (Epstein, 2001). Epstein's framework includes six types of involvement:

- Parenting-home environments that support achievement
- Communicating-two-way information sharing between school and home
- Volunteering-helping with planned activities in and outside the classroom
- Learning at home-parents assisting children in the learning process at home
- Decision making-parent involvement in school decisions.
- Collaborating with the community-use of local services and resources to help children learn.

2.7 Implication of Pre-school and Primary Levels for Intervention, Documentation, Record Maintenance and Report writing

2.7.1 Meaning and Importance of Record Keeping

Records are the documented information generated, collected or received in the initiation, conduct or completion of an activity and that comprises sufficient content, context and structure to provide proof or evidence of the activity. Specifically, Hrach (2006) defined school record as a unified, comprehensive collection of documentation concerning all services provided to a student which may include intake information, evaluation(s), assessment(s), release of information forms, individual learning plan, all written notes regarding the student, all collateral information regarding the student, etc. Chifwepa (2001) observed that a record is a documented proof of transaction and that information is what a record contains, stores and transmits.

Hence, records do not only enable school administrators to have a clear picture of what is available and what is required, they provide justification for certain needs and seem to extend the memory by which persons and/or organizations can pass on their culture and achievement to the future generation. In fact, the content and quality of school record (such as lesson plans, report cards, etc.) can serve as a direct reflection of the amount of work that has been expended on the school enterprise. Also, records help school administrators and parents to keep a concise and accurate timeline of events in the life of the pupils. Individuals may think they will be able to recollect past events, but it is easier to use a written record.

2.7.2 Why Do We Record And Document Observations?

The typical day of a teacher is filled with multiple tasks, decisions and emotions. At the end of a week it is difficult to remember a comment made by a child on Monday about block building, or a problem solved by two children on Wednesday using their words instead of their hands. So recording is necessary. Teachers may feel recording takes precious time away from the children or necessary classroom tasks. However, when the process of observation and recording is organized systematically, it becomes an invaluable planning and teaching strategy.

2.7.3 Report Writing

Writing a Report reflects the partnership among families and service providers and are guided by the families' priorities, questions, and concerns. Reports present a shared vision of the child, convey useful and understandable information, and maintains a balance among consumers' needs unique to each child.

This process helps educators (in partnership with children, families and other professionals) to :

- plan effectively for children's current and future learning/wellbeing
- communicate about children's learning and progress/wellbeing and development
- determine the extent to which all children are progressing in their learning outcomes and if not, what might be impeding their progress
- identify children who may need additional support in order to achieve particular learning outcomes and provide that support. or assist families to access specialist help
- evaluate the effectiveness of learning opportunities, environments and experiences offered and the approaches taken to enable children's learning/wellbeing
- reflect on pedagogy that will suit the context and children.

2.8 Let us Sum Up

1. The National Education Association recognizes that a high-quality early childhood program includes five, critical components:
 - Provides a of children curriculum that supports all round of development.
 - Addresses child health, nutrition, and family needs as part of a comprehensive service network

- Assesses children to learning and identify concerns
 - Employs well-educated and well conversant teachers
 - Provides small class sizes and low teacher-child ratios.
2. Research on human brain shows that the period from birth to the age of 8 is a critical phase for brain development and therefore, the best time for learning. The influence of the external environment is crucial to brain development. If a safe and accepting environment with abundant sensory stimulation is available in early childhood, children will have positive brain development which is beneficial to their future learning.
 3. The Right of Children to Free and Compulsory Education (RTE) Act 2010 guarantees children their right to quality elementary education. ECE is not recognized as a compulsory provision by RTE, but RTE urges states to provide free pre-school education for children above three years. The 12th Five Year Plan acknowledges the importance of ECE and improving school preparedness.

The Government of India approved the National Early Childhood Care and Education (ECCS) Policy in 2013. The Policy framework also includes the National Curriculum Framework and Quality Standards for Early Childhood Care and Education.

4. Five Essential Elements of School Readiness
 - Early Care and Education
 - Parenting and Family Support
 - Health and Social Services
 - Schools' Readiness for Children/School Capacity
 - Program Infrastructure, Administration and Evaluation
5. Records are the documented information generated, collected or received in the initiation, conduct or completion of an activity and that comprises sufficient content, context and structure to provide proof or evidence of the activity.

2.9 Check Your Progress

- A.1. Describe about the curricular domains of pre school education.
 2. Discuss about record maintenance and documentation.
 3. Write about the significance of Early Childhood Education.

B. Assignment and Activities

Discuss about the importance of Early Intervention.

Frame a curriculum for pre school children.

C. Points for Discussion / Clarification

After going through the Unit you may like to have further discussions on some points and clarification on other.

1) Points for Discussion

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2) Points for Clarification

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Unit 3 □ Curriculum at Secondary, Pre-vocational and Vocational Level

Structure

3.1. Introduction

3.2 Objectives

3.3 Curriculum domains at Secondary level

3.3.1 Meaning and Definition of curriculum

3.3.2 Approaches to curriculum development

3.3.3 Curricular domains at Secondary Level

3.3.4 Functional curriculum for students at Secondary Group

3.4 Curriculum domains at Pre- vocational level

3.4.1 Areas of preparation at Pre vocational Level

3.4.2 Focal Pre Vocational Skills

3.5 Curriculum Domains at Vocational Level

3.5.1 Importance of Vocational Curriculum

3.5.2 Focal curriculum of Vocational Education

3.6 Rehabilitation of PwIDs under National Skill development Scheme (NSDS by MSJ&E)

3.6.1 Background

3.6.2 Vision of the National Policy on Skill Development

3.6.3 Scope of the National Policy on Skill Development

3.7 Implications of placement for inclusion in Community, Documentation, Record Maintenance and Reporting

3.7.1 Implications of placement for inclusion

3.7.2 Meaning and Importance of Record Keeping

3.7.3 Why Do We Record And Document Observations?

3.7.4 Report Writing

3.8 Let us Sum Up

3.9 Check your Progress

3.10 References

3.1 Introduction

When considering educational curriculum content for students with disabilities, it is important to recognize that the population of students labelled "disabled" is enormously diverse. For example, when a student has a physical disability alone, with no concurrent cognitive disabilities, it is generally accepted that he or she should pursue the full general education curriculum established for students without disabilities. Similarly, students with mild learning disabilities also are generally expected to pursue much, if not all, of the general education curriculum. So, for many students with disabilities, the question is not what these students should learn, but rather how they will access the curriculum and what accommodations will be needed.

Decisions about curricular selection become more complex and the curricular content tends to be more individualized when students have more severe disabilities or have combinations of physical, cognitive, sensory, or behavioral disabilities. A quality curriculum for a student with disabilities includes learning outcomes that are at an individually appropriate level and are pursued within typical class activities (e.g., small cooperative groups, unit-based projects). Selecting appropriate learning outcomes has long been, and continues to be, considered a marker of educational quality for all students. Individually determined curricula for students with disabilities should include a small set of family-selected priorities to establish a focus for instruction, as well as a breadth of curricula that allows the student opportunities to explore many options that coincide with state or local standards.

Curriculum planning for the intellectually disabled must be forward looking, giving due consideration to the students' current and future needs, sensitive to the environments in which the individuals would ultimately be expected to adapt and function after leaving school.

3.2 Objectives

After going through this unit you will be able to

- Discuss the different curricular domains in secondary level.
- Discuss the significance of pre vocational education.
- Discuss the importance of vocational education.
- Discuss about the different domains of pre vocational and pre vocational curriculum.

3.3 Curriculum Domains at Secondary Level

3.3.1 Meaning and Definition of Curriculum

Curriculum is the base in education on which the teaching learning process is planned and implemented. It is the totality of all the learning to which students are exposed during their study in the school, in the classroom, in the laboratory, in the library, in the workshop, on the farm and the playground.

A curriculum planned as a comprehensive design for learning, contributes a basis for the growth of human being and growth of community (Phenix, 1964)

The term curriculum has been derived from a Latin word "Currus" meaning a 'chariot' or 'runway'. It resembles closely to the Sanskrit term 'karyakram' and English term 'course'. Basically it is the programme of various activities and experiences of learning conducted by a body/institution for the benefit of the student's present and future life. Curriculum does not mean only the academic subjects traditionally taught in school, but it includes totality of experiences that a child receives at school.

3.3.2 Approaches to Curriculum Development

Unit Approach

Unit approach was introduced by Ingram (1935) later popularized by Meyen Centre upon development of life experience units including the six major core areas of arithmetic, communication, health, socialization and vocation. This was recommended for group teaching of children with special needs as each~elected life experience units is carried out by a group which in itself is a learning experience. This approach suggests an in built evaluation system, but requires elaborate planning on the part of the teacher.

As children with intellectual disability learn better through experiences, unit approach is found suitable as it has life experience units as the focus.

System Approach

System approach is defined as deliberately designed synthetic organisms comprised of interrelated and interacting components which are employed to function in as integrated fashion to attain pre determined purpose (Benathy, 1968).

The steps include "SOME" system which is briefly explained as

S- Survey of the variables including all assessment details.

O- Setting Objectives.

M- Multi 'M' program variable such as motivation, methods, materials, modality and models of learning.

E- Evaluation

This approach also takes into account the pupil teacher- learning situation and their interaction with family, community, administrative arrangements, therapeutic supports and legal aspects. Thus this approach provides a unified systematic way for developing curriculum to a special teacher. This approach is in many ways similar to the behavioral approach which is popularly in use in recent years.

In this approach the common curricular content is not specified. Based on the assessment of the child, the teacher has to develop suitable content of each child.

Child Centered Approach

A child is to be prepared for life. But this does not mean that his immediate interest should be sacrificed for the sake of future which is indefinite. As Ryburn (year?) puts, "the best preparation for the life that we can give a child is to help him to live fully and richly his life at that stage at which he is." The child automatically prepares himself for the next stage by living well and truly life at one stage. Smith and Harrison (years?) also observe "Education regards the child as an individual growing by his own activity, living in his own environment, and preparing himself for adult life, not by imitating the adult, by living as fully as possible in the environment of childhood possible. The basis of "Child centered curriculum" is that every individual is unique; each child is different having individual needs. Learning pace and ability depends on the child's ability, interest and aptitude. This approach aims at developing the deficient skills in the child making him achieve the optimum level of functioning. According to the needs and abilities learning experiences are provided. No task or activity is part of the content unless is

wanted or needed by the child. The method of teaching and aids for learning also depends on the child's ability, interest and aptitude.

Ecology Based Approach

The current trend in curriculum development for the children with intellectual disability is the ecology based approach. This approach stress the importance of curricular items based on the environment in which a child lives. Instead of the 'watered down curriculum' of regular education, this approach gives emphasis on the inclusion of those content areas necessary for independent living in his environment. This includes the assessment of not only the abilities of the child, but also his environment, the activities of the 'non handicapped' people in 'that' environment on a daily, weekly and occasional basis. This would lead to the process of decision making on what the child,—

Can already do,

What can be done by him with training and / or adaptation?

What he is the child's need

When such a clear concept is developed decision making on curriculum areas to be taught and what is best suited to his community becomes easy. In addition, one can be sure that what is taught will have utility value as it is absolutely functional. Popularized by Ben (1988) this approach is implemented in many countries, especially in developmental countries with varied socio-cultural practices. When the content for the curriculum is decided using this approach, the process recommended for implementing the curriculum is development of activity based IEPs. Instead of focusing on skill areas, the 'activities' cutting across various skill areas of self-help, social, motor, language, academic, vocational and so on are selected and the IEPs are developed to achieve the independence in the given activity. By this, measuring progress becomes easy and as selection of activity is need based and functional it will be performed by the child. In other words, retention of the learnt skill is maximized by regular performance.

Task Analytic Approach

This approach described by Hewett (1967) creates an hierarchy of educational tasks ranging from attention level to an achievement level of performance. This hierarchy provides framework for organizing the structure of the class, content, materials and rewards leading to meaningful transaction between the teacher and the student at the child's readiness level. The curricular items thus selected are broken down into tasks and each task is analyzed in a sequential manner for teaching the child. This breaking down of tasks to teach the child has the advantage of analyzing errors and correcting them.

Social Learning Approach

This is an interaction model of environmental encounters designed to develop 'critical thinking and independent action' among children with intellectual disability (Glodstein, 1969). This approach takes into consideration the child's expanding world from self to home and family, neighborhood and community. The curricular items are selected keeping in mind the required competency of the child to function independently at each level. Psychological, physical and social aspects of the child are identified as need areas for the above environmental components and for each stage the required communication) art and quantitative thinking are incorporated in the curriculum. This approach has many advantages.

3.3.3 Curriculum Domains at Secondary Level

This group includes children in the age group of 11-14 years. In this group the students are trained in their basic

- self-help skills,
- language,
- cognitive,
- academic and
- co-curricular activities in a more structured form.

Music, Dance, Art & Craft, and Yoga form an integral part of their curriculum. Speech therapy, occupational therapy, behavior modification are also provided simultaneously with the main learning schedule of the children.

3.3.4 Functional Curriculum for students in the secondary group

Students with intellectual disability in the secondary group need a distinct curriculum; a curriculum geared towards meeting the specific needs of this particular population. Smith and Smith (1978) proposed a curriculum be devised for each special education program that is practical and targets the skills needed for independence of the population within particular programs. Components of a functional or life management curriculum include the functional applications of core subject areas like academics, vocational education, community access, daily living, financial, independent living, transportation, social/relationships, and self-determination (Patton, Cronin, & Jairrels, 1997).

A distinct curriculum for students with intellectual disability at secondary level is geared towards their goals is not far from what exists in Western Schools today. In schools and some preparatory secondary schools, students are prepared and taught subjects, knowledge, and skills geared directly towards their post school life; knowledge that will enable them to be successful in the adult world. This same opportunity should be available for students with intellectual disability at secondary level.

A separate, unique curriculum is geared towards the different needs of a particular population. For example, functional mathematics does not just refer to basic skills, but also to more everyday computation and problem solving skills, which are embedded into experiences of individuals with mild mental retardation might encounter in life (Butler, Miller, Lee, & Pierce, 2001).

Researchers stress the daily use of mathematics, regardless of one's mental capacity. Some degree of math proficiency is required for most jobs and therefore, special educators need to devote attention to teaching functional math skills that are applicable on the job, at home, and in the community (Patton, Cronin, & Bassett, 1997).

3.4 Curriculum Domains at Pre Vocational Level

Children with intellectual disabilities may not be able to go through the regular educational system that prepares them for careers and jobs. They may not be able to cope with high school or college.

3.4.1 Areas of Preparation at Pre vocational Level

Some of the aspects that are covered in pre vocational training for students with intellectual disabilities are:

Functional Literacy:

Children may require training in basic literacy. Sight reading, identifying their name and writing it, identifying and writing their address are some of the tasks.

Functional Math:

Children will require training in simple calculations, use of a calculator, counting, sorting, arranging in numerical order etc. Skills in weighing and measuring are also very useful.

Work behaviors:

Children will require training in producing neat and quality work, punctuality and regularity, reporting once a task is completed, correct use and maintenance of tools and other materials.

They also need to know and learn about the behavior that is expected at the workplace.

Social skills:

Children need to learn to relate to their supervisor and colleagues, ask and answer questions and build relationships with others. In addition, the child must be taught to accept criticism from the supervisor and to express frustration in an acceptable way.

Exposure to different occupations and work tasks:

While preparing for employment, the child must be exposed to a variety of work tasks. This will help teachers and family to understand more about the aptitude and skills of the child.

3.4.2 Focal Pre-Vocational Skills

1. Understand and accept 'work times' and 'relax times' of day
2. Sustain attention to tasks (at least 15 minutes)
3. Independently recognize feelings of anxiety, frustration, and anger in self
4. Do non-preferred tasks without complaining/arguing/negotiating
5. Ask for help
6. Follow multi-step directions (out of sight of a prompter)
7. Be comfortable with getting temporarily interrupted
8. Accept suggestions/corrections
9. Read time on a variety of clocks/watches/phones
10. Understand various forms of authority
11. Regularly demonstrate semi-professional social niceties
12. Attend to personal cleanliness/hygiene, including dress code
13. Explore self-awareness: understand/accept diagnosis, learn about accommodations, strengths and challenges.
14. Disclose diagnosis (if desired)
15. Make small decisions independently
16. Demonstrate self-advocacy skills (indicating preferences, not waiting for prompts, making goals, asking for accommodations)

17. Demonstrate safety skills in the community (strangers, unwanted advances, emergencies)

3.5 Curriculum Domains at Vocational Level

3.5.1 Importance of Vocational Curriculum

Two key legislative acts that address workforce preparation of students are the Carl D. Perkins Vocational Education Act and the Individuals with Disabilities Education Act (IDEA). The purpose of the Perkins Act, is currently in the process of being reauthorized, is to provide technical training and education to students who do not necessarily plan on going to college. The act requires schools to provide parents and students with:

- Vocational education opportunities, which should be offered to the student by the beginning of ninth grade or one year before the student enters the grade in which vocational education is offered.
- Eligibility requirements for enrolling in vocational education. In addition, students with disabilities are entitled to receive.
- An assessment of interests, abilities, and special needs as well as other special services designed to help students enrolled in vocational education transition into post school employment or training .
- Career assessment, planning, training, and school-to-work transition services. IDEA requires schools to provide services to students with disabilities that will help them make a successful transition from school to post school activities-such as work, continued training or education, and other aspects of community living.
- By age 14, a student should have a transition plan incorporated into their IEP that specifies what services the student needs to make a successful transition from high school to work and community living, what career activities the student should undertake, and who will be providing the required services.

3.5.2 Focal curriculum of Vocational Education

Vocational training should provide students with a curriculum that prepares them for the job that they intend to enter. Broad-based knowledge and skills are good, but for some students with disabilities, specific skills are necessary for survival In the workplace and In the community and need to be explicitly taught.

Academic Skills

- Reading and writing (e.g., sight-word vocabulary, spelling, handwriting, typing, etc.)
- Math (e.g., basic computation, money, measurement)
- Problem solving
- Listening comprehension
- Speaking
- Computer
- Art or music

Communication Skills

- Following and giving directions accurately
- Communicating information
- Understanding and processing information
- Requesting or offering assistance in Social and Interpersonal Skills
- Answering the phone and taking a message
- Making necessary phone calls to employers and other professionals as a part of a job requirement
- Displaying appropriate work behavior and etiquette
- Knowing appropriate topics for discussion in the workplace
- Learning how to protect them from victimization
- Learning social problem-solving techniques

Occupational and Vocational Skills

There are a number of skills and behaviors that most, if not all, jobs require. It is important to help students who do not possess these skills, to acquire them. Examples of these activities include the following:

- Using a time card and punch clock
- Arriving to work on time
- Calling when sick

- Requesting vacation time
- Using the appropriate tone of voice and volume
- Accepting instructions and corrections
- Knowing appropriate interaction with co-workers (i.e., getting along; social problem solving; making friends; and recognizing personal, professional, and sexual boundaries)

There are also a number of skills that students should have so that they can be as independent as possible in their future job searches; these skills include the following:

- Looking for jobs (advertisements in the newspaper and online, help from neighbours and local resources)
- Filling in job applications
- Writing resumes and covering letters
- Enclosing necessary identification (photo ID, birth certificate) etc.
- Having for appearing in the interview skills.

3.6 Rehabilitation of PWIDs Under National Skill Development Scheme (NSDS by MSJ&E)

3.6.1 Background

The National Policy on Skill Development was first formulated in 2009, and it has provided the framework for skill development activities in the country.

Over the past five years, changes in the macro environment, and the experience gained through implementation of various skill development programmes in the country have necessitated changes in the policy. The creation of the Ministry of Skill Development & Entrepreneurship as the nodal Ministry for all skill development activities across the country has led to changes in the Allocation of Business Rules that have further necessitated the process. The new policy reflects the tenets of the-Skill India programme of the Government, which focuses on outcomevbased approach in terms of providing meaningful employment in the form of both wage and self-employment.

Accordingly, the National Skill Development Policy, 2015 is being formulated, and it will supercede the Policy of 2009.

3.6.2 Vision of the National Policy on Skill Development

The overall vision of the policy is an integrated outcomes-based skills development eco-system, which would promote economic, and employment growth and social development through a focus on education, skill training and employment services. The Skill India Programme is a commitment to the overall human resource development of the country.

The basic tenet of the National Policy on Skill Development would be the development of the individual. The emphasis of the policy is to deliver skill development so that it empowers the youth to attain decent standard of living. However, in order to link these two elements measures that adhere to good quality standards of the skill development programmes should be adopted. There is a need to facilitate a general increase in the skills profile of the population, through accredited high quality education and training linked to the National Skills Qualifications Framework (NSQF), a competency based framework.

The NPSD envisages creating a vibrant educational and skill ecosystem which would make our country the "skill capital of the world". It seeks to make skill development an integral part of all development schemes and aims to address the employability issue by initiating a multi-skills development programme in a mission mode with focus on job creation and entrepreneurship, in both rural and urban areas covering all socioeconomic groups of the population. The policy identifies the strategic interventions required to meet the objectives of skilling the youth of the nation as it has become imperative to India's sustained growth and is no longer a matter of choice. The policy recognizes that the need of the hour is to create a skill eco-system with increased investment.

The skill policy also envisages harnessing inclusivity and focusing on equity -- both social and gendering equity. There is need for affirmative action in accordance with Constitutional provisions to ensure that persons belonging to the Scheduled Castes, Scheduled Tribes, Minorities, Women, and other disadvantaged groups are provided the opportunity to develop their skills.

The skill policy would also focus on training to promote self-employment and focus would also be laid on special training on entrepreneurship. The NPSD would also focus on increasing the relevance with future employment market including promotion of self-employment; soft skills and entrepreneurship skills will be made integral part of skill development.

3.6.3 Scope of the National Policy on Skill Development

The issues which the National Policy on Skill Development & Entrepreneurship seeks to address include the following:

Changing the negative perception associated with vocational education and focusing on mobilization of candidates on the same: A major challenge in the skills arena is the mobilization of candidates, partly because of the socio-cultural attitude towards blue collared jobs. It is also evident that lack of awareness is a major reason for the relatively poor response to skill development opportunities. The skills! policy envisages awareness generation and information dissemination on the part of all the implementing agencies be it the Central Government, state government or the private agencies. A major initiative would be made in creating and raising awareness among the target groups about the benefit of skill development, employment and learning opportunities and also about support schemes that enable them to participate in training.

Co-ordination and integration of all skilling efforts in the country: A large number of stakeholders-ranging from central and state Governments, ministries, training providers, assessment agencies, industry bodies, and workers- are involved in the skill development space. Co-ordination amongst these various stakeholders often results in shortfall in implementation. Furthermore, the lacunae in establishing a clear skill supply-demand paradigm also limit positive impact in the resultant employment and productivity of the markets. Hence the NPSD envisages achieving effective coordination mechanisms at various levels.

Outcomes approach focusing on both employment and employability: When viewed from the perspective of a trainee, the ultimate goal of any skilling exercise is to ensure socio-economic mobility. Better employment opportunities for the trainees are an effective way to gauge the effectiveness of any skilling initiatives. This can be measured in terms of a trainee's ability to move from the informal sector to the formal sector and/or a raise in remuneration post, etc. Employability- as demonstrated through skills of an individual- is intrinsically linked to achieving gainful employment. From the perspective of the employer, the prospective trainee/employee must deliver tasks assigned to him/her efficiently. The ability of an employee to perform tasks effectively rest on his mastery over the job, which may relate to both core and soft skills. Thus, key objective of the policy is to enhance employability so that it reflects on employment of trainees.

Improving the capacity and quality of Training Infrastructure, along with geographical and distribution of capacity, sector wise and geography wise: Though the capacity that had been created by the private sector in the country is unknown, it is

evident that the infrastructure is skewed in terms of both sector and geography. A survey could be conducted to know the capacity that already exists and how it is being utilized, so that the shortfall in capacity can be gauged and a plan for meeting this shortfall can be formulated and implemented. The objective of enforcing quality and relevance in skill development will also be realized through improving infrastructure, improving quality of trainer and developing National Skill Qualification Framework.

Quality assurance and linkages with the NSQF: Ensuring the quality of training is essential for all stakeholders within the skill ecosystem and the resultant certification is a validation and recognition of the same. Irrespective of source of learning, whether through formal or informal or on-the-job learning, the quality assurance against certain benchmarks will facilitate recognition of learning. The NSQF is an important institutional mechanism that ensures consistency of nationally recognised qualifications both for formal and non-formal skills based education and training. It accommodates experiential life-long learning through mechanisms such as recognition of prior learning, improves the alignment of formal and non-formal training programs with industry requirements; and increases options for students by broadening program and progression for learners through horizontal and vertical pathways.

Working closely with the private sector and the industry: Industry is an essential partner in skill development, and there is need to encourage greater participation from the private sector. In India the initiative of developing skills has largely been a Government driven exercise. However, as a stakeholder, that will eventually absorb all the skilled manpower, the industry has an equal responsibility to participate in the skilling campaign. Successful models across the globe have indicated that inputs from the private sector should be at multiple levels of the skill value-chain, ranging from inputs to market information, to designing of occupational standards, to investment through apprenticeship and re-skilling to ensure trained manpower. Thus, a greater emphasis will be placed on the industry participation in the new policy.

Third party assessments and Certification: For meaningful skill development, there is a need for an independent and good quality third party certification, which would be adopted by institutes imparting skill development programmes as a means to bring accountability and regulation over training and assessments. This would promote professional and personal development of individuals. Apart from the formal sector, a large number of workers in the informal/unorganized sector have acquired skills through experience or other non-formal learning channels that are not able to derive proper market value for their services. The NSQF would facilitate certification to such persons to help them move into the formal sector jobs as long as they are able to perform to the

outcome standards. This recognition of prior learning would empower millions of workers through formal recognition of their skills.

Address the special needs of difficult areas — NE, Hill States, LWE affected areas: The border, hilly and difficult areas, including the North-Eastern states, J&K, and the hilly forested areas of central and eastern India, face additional challenges arising out of inadequate infrastructure, poor investment and industrial opportunities. Special attention needs to be given to the youth residing in these regions to address their needs for employment and employability. In order to provide more equitable access across the country, special efforts will be mounted to establish training facilities in deficient regions.

Technology interventions in terms of LMIS and monitoring of outcomes: There is a strong necessity to design platforms that facilitate information exchange and mitigate information asymmetries. The labour market information system will be dynamic platform that will enable a range of stakeholders to access reliable information. In line with the national policy, it will retain trainees as the focal point of initiatives; however, it will also cover a range of stakeholders such as training providers, industry/employers, Government agency/policy makers, Assessment agencies, Certifying agencies, Funding agencies, International Agencies, Sector Skill Councils, Labour Market tracking agencies, Govt. & Private agencies. The information generated under such a system would be both quantitative and qualitative in nature. Furthermore, the aim of the system will be to accumulate data through varied sources that will be analyzed to suggest corrective measures and forecast trends that will be linked to broad national development strategies, so that new and existing employment prospects and their skills requirements can be identified.

International equivalence and mobility of skilled manpower: The objective of the current exercise of skill development is not only to meet the domestic demands but also international markets. In a competitive global economy, trained manpower is an asset for employers, where an individual's skills must be a reflection of quality and competitiveness. The policy seeks to create avenues for greater mobility through quality assurance measures that will be at par with international standards. To this end, recognition and portability of skills abroad is an important outcome of the policy.

Create opportunities for all to acquire skills throughout life, and especially for youth, women and disadvantaged groups: High inclusivity is one of the central visions of the NPSD. The NPSD envisages skill development initiatives that will harness inclusivity and reduce divisions such as male/female, rural/urban, organized/unorganized employment and traditional/contemporary workplace. One of its key objectives is to

ensure that the skilling needs of the disadvantaged and the marginalized groups like SCs, STs, OBCs, minorities, women and differently abled persons, as well as those living in difficult geographical pockets, are appropriately taken care of.

Develop a high-quality skilled workforce/entrepreneur relevant to current and emerging employment market needs

3.7 Implications of Placement for Inclusion in Community, Documentation, Record Maintenance and Report Writing

3.5.1 Implications of placement for inclusion

One of the most important principles of inclusive education is that no two learners are alike, and so inclusive schools place great importance on creating opportunities for students to learn and be assessed in a variety of ways. Teachers in inclusive schools therefore must consider a wide range of learning modalities (visual, auditory, kinesthetic, etc.) in designing instruction. Certainly this enhances the way in which educators provide supports and accommodations for students with disabilities, but it also diversifies the educational experience of all students.

Inclusive education [or students with disabilities can only be successful when those students feel that they are truly a part of the school community.

In the past, special education often involved the segregation of students with disabilities for the purpose of specialized instruction. Not only does that model of special education in a separate setting deprive students with disabilities of interaction with their peers and full access to the curriculum, it can also involve duplicate systems and resources that are costly for schools to maintain. Inclusive education can make more efficient use of a school's resources by maximizing the availability of staff and materials for all students.

The curricular aim recommended is,

- 'To provide an education to equip students to live as independent a life as possible by them, in a community which may not always be fully cognisant of their needs.'

The objectives to fulfil the desired aim should be:

- The realisation that sets and quantities are essential to spatial positioning (Maths).
- The protection and care for the environment around them (Science).
- The ability to communicate their needs (Language) and be aware that others also have needs to be met.

- The awareness of being a part of the global family (History).
- The recognition that everyone is different but that there is a place for everyone (Social Studies).
- The ability to recognize that to be accepted by society one needs to contribute according to one's potential (Human and Commercial Geography).
- The primary need for self-care (Hygiene and Biology).
- The necessity to be selective in their faith in their fellow beings (Values).

3.7.2 Meaning and Importance of Record Keeping

Records are the documented information generated, collected or received in the initiation, conduct or completion of an activity and that comprises sufficient content, context and structure to provide proof or evidence of the activity. Specifically, Hrach (2006) defined school record as a unified, comprehensive collection of documentation concerning all services provided to a student which may include intake information, evaluation(s), assessment(s), release of information forms, individual learning plan, all written notes regarding the student, all collateral information regarding the student, etc. Chifwepa (2001) observed that a record is a documented proof of transaction and that information is what a record contains, stores and transmits.

Hence, records do not only enable school administrators to have a clear picture of what is available and what is required, they provide justification for certain needs and seem to extend the memory by which persons and/or organizations can pass on their culture and achievement to the future generation. In fact, the content and quality of school record (such as lesson plans, report cards, etc.) can serve as a direct reflection of the amount of work that has been expended on the school enterprise. Also, records help school administrators and parents to keep a concise and accurate timeline of events in the life of the pupils. Individuals may think they will be able to recollect past events, but it is easier to use a written record.

3.7.3 Why Do We Record And Document Observations?

The typical day of an early childhood teacher is filled with multiple tasks, decisions and emotions. At the end of a week it is difficult to remember a comment made by a child on Monday about block building, or a problem solved by two children on Wednesday using their words instead of their hands. When the process of observation and recording is organized systematically, it becomes an invaluable planning and teaching strategy.

3.7.4 Report Writing

Reports in early childhood reflect the partnership among families and providers and are guided by the families' priorities, questions, and concerns. Reports present a shared vision of the child, convey useful and understandable information, and strike a balance among consumers' needs unique to each child.

This process helps educators (in partnership with children, families and other professionals) to:

- plan effectively for children's current and future learning/wellbeing
- communicate about children's learning and progress/wellbeing and development
- determine the extent to which all children are progressing in their learning outcomes and if not, what might be impeding their progress
- identify children who may need additional support in order to achieve particular learning outcomes and provide that support, or assist families to access specialist help
- evaluate the effectiveness of learning opportunities, environments and experiences offered and the approaches taken to enable children's learning/wellbeing
- reflect on pedagogy that will suit the context and children.

3.8 Let us Sum Up

1. The term curriculum has been derived from a Latin word "Currus" meaning a 'chariot' or 'runway'. It resembles closely to the Sanskrit term 'karyakram' and English term 'course'. Basically it is the programme of various activities and experiences of learning conducted by a body/institution for the benefit of the student's present and future life. Curriculum does not mean only the academic subjects traditionally taught in school, but it includes totality of experiences that a child receives at school.
2. A distinct curriculum for students with intellectual disability at secondary level is geared towards their goals is not far from what exists in Western Schools today. In schools and some preparatory secondary schools, students are prepared and taught subjects, knowledge, and skills geared directly towards their life post school; knowledge that will enable them to be successful in the adult world. This same opportunity should be available for students with intellectual disability at secondary level.

3. Vocational training should provide students with a curriculum that prepares them for the job that they intend to enter. Broad-based knowledge and skills are good, but for some students with disabilities, specific skills are necessary for survival in the workplace and in the community and need to be explicitly taught.
4. The National Policy on Skill Development was first formulated In 2009, and it has provided the framework for skill development activities in the country.

Over the past five years, changes in the macro environment, and the experience gained through implementation of various skill development programmes in the country have necessitated changes in the policy. The creation of the Ministry of Skill Development & Entrepreneurship as the nodal Ministry for all skill development activities across the country has led to changes in the Allocation of Business Rules that have further necessitated the process. The new policy reflects the tenets of the Skill India programme of the Government, which focuses on outcomes, based approach in terms of providing meaningful employment in the form of both wage and self-employment.

5. Records are the documented information generated, collected or received in the initiation, conduct or completion of an activity and that comprises sufficient content, context and structure to provide proof or evidence of the activity.

3.9 Check Your Progress

- A.1. Describe about the curricular domains of pre vocational education.
 2. Discuss about record maintenance and documentation.
 3. Write about the significance of Vocational Education.

B Assignment and Activities

Discuss about the importance of planning curriculum for children with intellectual disability.

Frame a curriculum for pre vocational education.

C Points for Discussion / Clarification

After going through the Unit you may like to have further discussions on some points and clarification on other.

1) Points for Discussion

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2) Points for Clarification

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Unit - 4 □ Curriculum Adaptations

Structure

I4.1 Introduction

4.2 Objectives

4.3 Need for Curricular Adaptation, Accommodation and Modification

4.3.1 Modified Instructions for Children with Intellectual Disabilities (ID)

4.3.2 Organizing Adapted Materials

4.3.3 Organizing Adapted Modified Instructional Process

4.3.4 Adaptation of Evaluation Procedure

4.3.5 Curricula with functional Tasks

4.3.6 Functional Curriculum

4.4 Adaptation, Accommodation and Modification for Pre-academic Curriculum

4.4.1 Focus of Curriculum

4.4.2 Basic Considerations

4.4.3 Major Focus at preprimary level

4.5 Adaptation, Accommodation and Modification for Academic Curriculum

4.5.1 Functional Academics

4.5.2 Functional Reading

4.5.3 Functional Writing

4.5.4 Functional Arithmetic

4.6 Adaptation, Accommodation and Modification for Co-curriculum

4.6.1 Assess Abilities and Needs

4.6.2 Interaction with the child

4.6.3 Choose Activities

4.6.4 Consider Interest

4.6.5 Community Groups

4.6.6 Groups with special Needs

- 4.6.7 Family Involvement**
- 4.6.8 Co-curricular Activities for children with Intellectual Disability**
- 4.7 Adaptation, Accommodation and Modification for School Subject**
 - 4.7.1 Simplified Curriculum**
 - 4.7.2 Supplementary Curriculum**
 - 4.7.3 Alternative Curriculum**
 - 4.7.4 Multilevel Curriculum**
 - 4.7.5 Activity Based Curriculum**
- 4.8 Let Us Sum Up**
- 4.9 Check Your Progress**
- 4.10 Reference**

4.1 Introduction

The educational provision for students with special needs in India in the recent two and half decades is being focused on regular setting where they get equal educational opportunity as other non-disabilities peers which we call as integration, mainstreaming or inclusion. It has been described as the central issue in education for all. In inclusion, all students must have the opportunity to be enrolled in the regular classroom of the neighborhood school with age-appropriate peers, or to attend the same school as their brothers and sisters. When the children with disabilities are coming together with non-disabilities children in regular classrooms, certain adaptation in environment and curricular activities should be made. Developing curriculum for students with intellectual disability is a challenge. Due to their cognitive deficits each child needs a tailor made curriculum for him/her. When children are grouped together based on certain parameters, there is a need for curricular guidelines so that the curriculum is suitable to the group while taking into account the individual needs.

In this unit, you will study about several aspects of curriculum adaptations.

4.2 Objectives

After going through this unit, you will be able to

- Understand the Need for curricular Adaptation, Accommodation and Modification.

- Narrate the Adaptation, Accommodation and Modification for Pre -academic Curriculum.
- Narrate the Adaptation, Accommodation and Modification for Academies Curriculum.
- Narrate the Adaptation, Accommodation and Modification for Co-Curriculum.
- Narrate the Adaptation, Accommodation and Modification for School Subjects.

4.3 Adaptation, Accommodation and Modification in Curricular Activities

Curriculum adaptation tends to be significant at all grade level, but teachers have to develop their own style of presentation or teaching strategy, which may be related to how they teach or the availability of instructional materials in schools. Presentations may include combinations of lectures, assignments, or a host of other teaching / learning approaches. Teachers do change their methods through the years, and some teachers may be so open to trying new approaches that they don't give the "old" approach a proper tryout. But it appears that many, perhaps most teachers tend to have established ways to teach the various subjects or skill they are assigned to teach with the consideration of needs of children. These innovative methods are certainly logical if these methods have proved to be effective for them.

Before looking at curriculum adaptations for children with intellectual disability, let us understand the status of curriculum for children with other disabilities. It is important to understand the similarities and differences in developing curriculum for children with disabilities in general and for those with intellectual disabilities in particular. Curriculum decisions are founded on the beliefs and values regarding the purpose of education and the benefits of its outcome. Every curriculum aims at realizing the fullest potentials of students and helping them become productive and contributing members of the society.

Need for Adaptation, accommodation and modification in curriculum

When we look at children with disabilities, their abilities and needs are varied, demanding adaptation in curriculum content and transaction without compromising on the objectives and learning outcomes.

As seen earlier, the purpose of education is the same for all human beings. The process

might vary based on individual profiles. Therefore, before planning curricular adaptations, we have to consider what can be common as in regular education for non-disabled children and what needs to be adapted.

The common focus in schools is to develop competencies in

- Leading independent lives
- Developing and maintaining positive relationship with family and community
- Carrying out day to day activities in an acceptable manner and
- Being a good citizen

Three important areas of consideration when dealing with students with disabilities are: 1) how the curriculum is presented, 2) how students are required to respond, and 3) how their efforts are evaluated. Modifications in these three areas require advanced planning, and some require a degree of organization. All of these suggested adaptations will permit wider application, which indicates that all curricular areas at all grade levels are subject to some useful modification.

Adaptations in instructional strategies are needed, and given much priority, so as to make it possible for the student to achieve goals that are determined by the teacher. As with all other accommodations, it is essential plan ahead special equipment's that are required. Teachers must think ahead on a daily basis - what is needed for all students with special needs. On a weekly, monthly, or unit basis - what additional materials, alternate books, and so on are needed. Specialists must help regular classroom teachers to organize the learning activities through appropriate instructional strategies.

4.3.1 Modified Instructions for children with intellectual disabilities (ID)

The training programme for the children with intellectual disability tends towards the development of the adaptive behavior ranging from self help skills to the development of vocational skills. The lesser the degree of disability the stress is on the development of self help and community living skills.

The knowledge and skill regarding the individualize education programme is the basic to any training programme for the children will Intellected Disability.

1. Individualized training programme : The individualized training programme should be based on the assessment with reference to the academics, activities of daily living, social skills, personal skills, vocational skills and community skills. Plan for training is developed with objectives, strengths, and weaknesses. In functional academics, the academics are taught to the student to function independently on

with minimum help in his/her society. In functional reading, the person with Intellectual Disability is taught to read labels in grocery shops, names of stations, bus numbers, T.V. programmes, access the telephone directory to get certain phone numbers etc. Functional writing would entail writing ones name, address, telephone number, hand rudimentary banking, e.g., filling in deposit slips etc. Functional mathematics would teach him/her enough number work to make small purchases, handle change, travel independently and the concept of time, calendars and money.

2. Skill Development: The specific skills to be developed among children with Intellectual Disability based on the extent of Intelligent Quotient (IQ). Sometimes Developmental checklist can be referred to get the profile of the child.
 - A) Children with mild intellectual disability (Focus on academic skills and vocational training) - The planned adapted educational experiences are given at four different levels.
 - ✓ Pre-school level - Focus is mainly on daily living skills.
 - ✓ Primary school level - reading, writing and social training (sharing, peer helping etc.)
 - ✓ Intermediate classes - along with academic skills this group also needs pre-vocational training and training in independent living skills to live independently in society.
 - ✓ Secondary school level - all vocational and social skills, interacting and coping with people at work place and in other settings.
 - B) Children with moderate intellectual disability - (Focus on development of self-help as well as adequate communication and social skills to allow for semi-independent living. The planned adapted educational experiences are given in six areas.
 - ✓ Self help skills
 - ✓ Communication skills
 - ✓ Personal social skills
 - ✓ Perceptual motor skills
 - ✓ Functional academic skills
 - ✓ Vocational skills
 - C) Children with severe intellectual disability - Educational efforts mainly focus on basic communicational skills and self-help skills for children with severe intellectual disability.
 - D) Children with profound intellectual disability - main training should be on their

daily living activities because of physical and intellectual limitations. The daily living skills are in the areas of physical development, self-care, language training (including training on Augmentative and Alternative communications) and social behaviours. Challenging Behaviours such as rocking, self-abusive behavior, head banging etc. are managed with the help of behavior modification techniques.

4.3.2 Organizing Adapted Materials

The organization of teaching materials is important for all students including children with disabilities. But students with disabilities may sometimes need materials that are different from those required by normal students. Most of the special teachers prepare learning activities to satisfy the educational needs of children with disabilities so that maximum educational benefit can be derived.

The use of 'Activity schedule' is one of the more common organizational practices in use. The activity schedule should be kept for easy reference. Students should be taught to refer the activity schedule and check instructions. Standard cards might be used that say, "Do THIS FIRST, DO THIS SECOND", and so on. They can be kept in the appropriate folders. Cards with numbers may be used. Picture cards may be used to indicate to do one assignment first, and then second, and so forth. Because some may have difficulty with instructions as to how to proceed, innovative teachers have developed unique symbols that indicate what to do. After the student learns to associate the symbol with a particular concept, this system can prove to be very effective, some students need only very few directional and or orientation skills that they must be taught accordingly.

4.3.3 Organizing Adapted Modified Instructional Process

The teacher has to use the combination of instructional strategies to suit the educational needs of learners.

- i) The teacher who prefers innovation attempts to elicit sorting, grouping, categorizing, and inductive thinking and promotes attention to goals, objectives, and logical sequential thinking.
- ii) The teacher who prefers lecturing describes, explains, illustrates, and asks students to recall or apply what was presented.
- iii) The entertainer - one who regularly digresses from subject matter - is open to student opinions and their self-expression and is not particularly goal oriented.
- iv) The role-learning teacher - one who provides information, repeats for emphasis, and expects students to attend, practice, and regurgitate.

- v) The counselor - one who listens, redirects behavior, and elicits student's feelings, attitudes and values.
- vi) The story teller - one who narrates, reads, tells that which is to be learned, and encourages sharing and participation in this process.

Most teachers reflect some combination of styles, and special education teacher must recognize these differences and provide assistance that complement existing styles. Planning is a prerequisite to effective teaching and that good planning can "extend the teacher's tolerance for stress, heighten sensitivity to student behaviours, and enhance openness to new techniques". Advance planning takes many shapes and forms, including ordering of new materials and equipment and other "standard" practices known to all organized, experienced teachers. For the special educator, this means that whenever possible, all available information of the students who will be part of the programme should be assembled and organized to provide a basis for determining what materials to be needed.

The special teacher should know their academic needs, social/emotional needs, ability to work in a small group, personal interests, procedures that have worked most effectively in the past, and other related information. This information is in addition to information about age, physical characteristics, home/family status, home assignment, previous (standardized) testing date, and the like.

4.3.4 Adaptations in Evaluation Procedures

For some teachers it is a matter of professional ethics, and adaptations in evaluation procedures may be viewed as a "lowering of academic standards". In thinking through the ethics of the matter, it may be of value to consider the situation of student with visual impairment who is not asked to complete all work in handwriting and is, for example often permitted to record on tape. If we accept the disability of the student for e.g. who is learning disabled, behaviour disordered or intellectually disabled as real then the same philosophy could apply. There may be nearly endless variations, and the best one to use is the one that is best accepted in a given school system.

- ✓ Tests may be modified as to number of questions asked.
- ✓ Tests may be modified through simplification of the wording of questions.
- ✓ Tests may be given on tape and/or students may be permitted to answer on tape.
- ✓ Test questions may be presented orally.
- ✓ Combinations of 1, 2, 3 and 4 above or other similar ideas.

Programme adaptations and modifications may be effective only in that they teach the students that he/she can get by with less effort than other students or the selection of questions may by-pass some of the most critical skills.

4.3.5 Curricula with Functional Tasks

Functional tasks for children without disability and persons with disability are required to learn now or in the future. To design a curriculum for particular students, tasks are to be selected.

The curriculum for each student is organized and emphasizes the functional nature of each task. For example all three students are of ten years of age. Student one is blind and is capable of passing to the next level of academic study. His/her long term goal is to enter University study. His/her programme is mainly academic. He/she is also being taught a number of functional skills relating to general community. A few skills related to functional at home are also being taught.

Student two has a moderate degree of intellectual disability. He/she has not learned many academic skills and will not likely learn many more. His/her long term goals are for sheltered employment and independence in the community and home. He/she will likely to have considerable time for recreation. There are many functional skills in the community and home that he/she needs to learn. His/her programme should focus on teaching functional and recreational skills for the community and home environment. As he/she gets a little older, the amount of emphasis in the vocational area will be increased.

Student three has a locomotor disability with mild degree of intellectual disability. He/she is not strong in academic areas of performance and will likely not achieve a high academic level. He/she is capable of learning some additional practical academic skills to assist him/her in other areas of his/her life. With suitable training he/she will likely be able to gain independent employment. His/her programme will focus on training of vocational skills. He/she will also be taught a number of functional community skills.

The programmes for each of these students should be reviewed every year and the relative amount of emphasis in each area of instruction should be adjusted as required.

4.3.6 Functional curriculum

Consider the existing standard curriculum used by non-disabled children,.

the common aspects found in the three areas are:

- Students needs and potentials
- Demands placed on him by the environment
- Existing standard curricula

A curriculum developed thus is called 'functional curriculum'. Learning activities in a functional curriculum are chosen because they will maximize the student's independence, self direction, and enjoyment in every day school, home, community and work environment.

4.4 Adaptation, Accomodation and Modification for Pre academic Curriculum

The early childhood years (0 to 6 years) are viewed by many as a critical time for the intellectual and social development of any child. Children in the age range of 0 to 3 years receive training in early learning skills while those children in the age range of 3 to 6 years preprimary education. The Pre-Primary level programmes and early intervention programmes aim at reducing further damage to the child. The pre-school classes for children with ID emphasize content areas that are commonly referred to as readiness skills, which are prerequisites for later learning. Pre Primary classes for these children start at an early age and the training may take as long as two or four years. Depending on the level of disability of the child, primary education can be provided in the regular play school/nursery schools too. As the curricular content will be predominantly language, social, personal and motor skills, there is a possibility that the child with ID will be able to learn with children without disabilities.

The pre-school curriculum of regular education is more conducive to inclusive practices because of the following:

- The content focuses on motor, language and daily living skills that is required for children with mental retardation or developmental delayed ones also.
- Most of the learning at this age is concrete and activity based.
- Worries about achieving 'high scores' is not a concern at this age and therefore the child does not face stressful demands from school and family.
- Children with without disabilities have an opportunity to learn from each other.
- There is a scope for enhancing social competency due to exposure to natural environment.

- Non-disabled children develop positive attitudes and learn to appreciate individual differences.

4.4.1 Focus of curriculum -

In a regular preschool the curriculum will focus on skills needed at pre operational stages and therefore many of our students with mild developmental delays will benefit from these adaptations & modifications at regular preschools.

Readiness skills include the abilities to:

- Sit and attend to the teacher
- Discriminate auditory and visual stimuli
- Follow direction
- Develop language skills
- Improve gross and fine motor co-ordination
- Develop self-help skills
- Interact with peers in a group situation
- Suitable mobility skills
- Pre reading, pre writing and premath skills

4.4.2 Basic Considerations:

While preparing a training curriculum for the pre-school level, the following basic considerations may be made.

- Children learn through imitating people around them. This is a first step in organizing information from the external world. Hence encourage interaction between children and their environment.
- Provide children with experiences that stimulate all sense. Multisensory approaches to teaching can facilitate assimilation and accommodations. Assimilation refers to, use of mental schemata to comprehend new objects in the environments, in older persons it refers to tendencies to see and interpret things according to the pre-existing ideas. Accommodation on the other hand, is an adjustment of schemata to new objects, events and ideas.
- Because the child has difficulty in organizing himself, the teacher must give stimulation. Children should have an opportunity to become more aware of their bodies and maintain control over their actions.
- Programme should be developmental in the most basic areas and should focus on the child's actual functioning level. Knowledge of the normal sequence of cognitive development can aid the teacher in providing appropriate intervention programme.

- Teaching strategies should be consistent, structured and controlled. Set goals and plan activities with clear objectives in mind. Action oriented activities facilitate attainment of the goal
- Do not waste time to teach the activities that do not have a functional value in the immediate environment and later stages in life.

4.4.3 Major focus at preprimary level will include

- Self - Body parts, name, gender, family members, daily living skills
- Common objects - clothing, food, furniture, toys, dishes, utensils, plants, animals, holidays
- Action Words - sit, stand, walk, run, clap, jump, hop, top, stop, go, drink.
- Concept - Shapes, size, color, sound, taste, smell, texture, position, weight, beauty, same and different, laterality, safety.
- Preacademics - readiness skills for reading and writing and math. Pre-reading may include activities such as seeing picture books, holding it properly, turning pages and enjoying seeing and naming pictures and talking about it. Pre writing may include activities such as scribbling, colouring pictures, tracing pictures and so on. Pre math skills include concepts such as far-near, up-down, heavy-light, long-short, more-less, full-empty and so on. All of these pre academic skills lead to preparing the child for learning academics later.

4.5 Adaptation, Accomodation and Modification for Academic Curriculum -

Academic activities depend to a great degree on the quality and extent of the pre-school programming in individual child has had. The curriculum mainly consists of components that may be taught independently or together and to relate to long-range goals for academic and social education. It is wise to try using the regular school content simplified and taught so that the concept is understood. If the child tends to fail as the content becomes more abstract, functional curriculum can be considered. Functional academics are stressed where the child is unable to cope with the regular education curriculum.

4.5.1 Functional Academics -

The functional academic refer to the literacy and numeracy skills required to teach the

children with ID for leading independent lives in the society. It includes reading, writing and arithmetic.

4.5.2 Functional Reading

Functional reading is defined as a student's actions or responses resulting from reading the printed word. Primary goal is the development of their ability to read for protection-sign boards, labels, directions and so on (concept of survival)

The second goal is reading for information and instruction- newspaper, telephone book, job application and so on. The third goal is reading for pleasure-magazines, comics, story books.

Whole word approach is a widely used method in teaching functional reading. Through the whole word approach, the students learn to recognize and read words and later receive decoding instructions (to spell). A variety of strategies have been used in teaching sight word vocabulary. Recent attention has been focused on the imagery level of the word to be learnt. High imagery words are usually concrete and include nouns such as ball, mango, fan and house. Low imagery words include abstract terms such as beautiful, good and have. In some instances, high imagery can be provided for low imagery words by using the word in context.

For example, consider the word "sour" "I ate mango. It is sour", becomes more concrete and students can remember better. Pairing of words with concrete objects and / or pictures will facilitate development of a high imagery level in the students. Here, the concrete word mango helps in learning the abstract word 'sour'.

Keeping inclusion in mind, try to follow the primary level text books, simplify the concepts for children with mental retardation and help them read using whole word approach initially and then the parts of the word (spelling). Reading and writing should be planned together to allow for multisensory input.

4.5.3 Functional Writing

One of the important modes of communication is written expression. Writing demands eye hand coordination, motor coordination, sense of direction and recognition of symbols (pictures/letters/numbers/punctuations and so on). Some writing tasks demand horizontal writing (left to write as in writing words) and some demand vertical writing as in arithmetic (addition, subtraction) and some demand a combination of both as in statement sums.

Teaching writing involves four stages they are:

1. Tracing
2. Joint dots (if needed)
3. Copying
4. Fill in the blanks
5. Writing from memory (including learning spelling)

To write sight words, students have to go through six steps using auditory, visual, tactile and kinesthetic inputs.

4.5.4 Functional Arithmetic

We are in daily contact situations which require the use of number skills. For example, when we buy half a dozen bananas from the fruit vendor we glance at the bunch to check whether it contains six bananas or not. We use number skills in various settings such as at home, in community and at work place, for example, how many plates to place on the table, which bus number to take to reach work place, how much is the bus fare, how long it takes to reach office and so on.

Before beginning with numbers, make sure, the child is aware of pre-math concepts such as more-less, far-near, heavy-light, tall-short-long, left-right and so on.

The following are the points to be considered while planning and teaching arithmetic skills.

- The content should be arranged in a sequential order for which the task analytic approach is applied.
- Concrete materials should be used while teaching to provide meaning for the concepts.
- The selection of materials should be such that they can be used meaningfully both inside and outside the school environment.
- The programme should be structured in such a way that there is a gradual transition in teaching concepts moving from concrete to semi-concrete and abstract levels.
- Instruction must be practical and functional with special emphasis given to social and vocational orientation.

- Sufficient practice should be given to deal with the concepts in variety of ways to ensure understanding.
- Additional opportunities should be provided to generalize the skill to a variety of experiences to note similarities and to establish associations and relations among these experiences.
- Practical experiences and situations should be provided for the application of numerical skills, However, care should be taken in planning the application of number skills to the real life experiences that they should have relevance to the world in terms of the individual child's needs.
- A programme must be flexible to meet the individual needs of students.

A functional mathematics curriculum should include, time, money, measurements (mass, volume, weight, distance) which are necessary for daily living activities. The content must be graded from easy to difficult distributed from preprimary to prevocational levels.

One of the successful environments for inclusion of children with ID is the class of co-curricular activities. There is scope for natural and spontaneous integration of children with and without disabilities. If well planned, it enhances positive self concept, releases tension and anxiety, develops social skills, sharpens creativity, leads to physical fitness and sense of well being, inculcates discipline and helps the student to learn to use his leisure time well. When a teacher plans for co-curricular activities, she has to keep the above goals in mind and plan carefully.

A competent teacher will,

- Schedule co-curricular activities with due importance;
- Avoid combining more than one class to make large groups (unless it is a whole school event) which would reduce individual attention to children with special needs;
- Avoid using co-curricular class periods to use children to run errands - moving furniture, clean the class and so on;
- Avoid deprivation of co-curricular activity class as a punishment;
- Avoid using the co-curricular time for other curricular activities;
- Develop a well planned IEP with specific goals and objectives for co-curricular activities including evaluation procedures;

- Equip the class well with necessary resource material;
- Update herself with latest trends and developments in co-curricular activities;
- Use technology wherever appropriate;
- Be innovative in activities as well as in individual adaptations for the students with specific needs.

4.6 Adaptation, Accomodation and Modification for Co-Curriculum:

Co-curriculum is a structured activity which supports for the curriculum in practical way in education programmes. Any activity organized systematically apart from the syllabi of subjects of classroom is considered as co-curriculum. There is no separate co-curriculum for children with special needs. However, all co-curricular activities cannot be carried out by the children with disabilities due to their limitations, so they need adaptations in their approach, method, and materials.

The children with Intellectual disabilities select co-curricular activities based on their abilities, interests, motivation and encouragement. The following are certain aspects we have to keep in mind to select co-curricular activities.

4.6.1 Assess abilities and needs

Some co-curricular activities are purely for fun. Others require a certain level of ability. Making a good match between the activity and the child's unique abilities, interests, and needs is the first step.

4.6.2 Interaction with the Child

Co-curricular activities should be challenging. They should provide relaxation, satisfaction, and in most cases - socialization. Above all they should be enjoyable.

Talk to the child about the kinds of things he/she likes to do.

4.6.3 Choose activities

Our society offers lots of choices for free time. The child will not be able to sign up for everything, so you will need to help him/her to select. Beyond interests and special needs you will need to consider some other factors when choosing co-curricular activities.

- a) Age Consideration: A young child needs some unplanned time to explore the

world around him/her. As the child gets older, he/she may be ready to participate in some group activities. Schedules are helpful for children with learning disabilities or autism and those with cognitive delays. Young children need some time to figure out what to do next.

- b) **Realistic Commitments:** Children with intellectual disabilities especially need to focus on a reasonable amount of activity. Too many parts to the schedule or too many new situations (and rules) can be overwhelming for them.
- c) **Balance with Schoolwork:** Even with modifications and accommodations, schoolwork will take longer time to complete than it does for his/her siblings. Take schoolwork into consideration when signing up for co-curricular activities.

4.6.4 Consider Interests

Your child may have ability in areas that are not of high interest to him/her. Co-curricular activities are sometimes recreational, pass time and they should be enjoyable. They are not compulsory insisted schoolwork or jobs. Talk to the child to know about his/her interests.

For example :

- Athletics
- Art and Music
- Community service

4.6.5 Community Groups

Some activities are not offered through schools. If the child is interested in learning how to train the family dog, for example, he/she will need to look for a community group that focus on animal care.

4.6.6 Groups with Special Needs

Grouping is formed based on the conditions of disabilities. For example, if a child in a wheelchair wants to bowl a ball, he/she may sign up for bowling leagues that will use ramps and have volunteers to assist the bowlers. A child who is blind might enjoy outings with sighted peers. In the inclusive schooling, the child with disabilities is fixed with the non-disabled children for all activities including co-curricular activities.

Adaptations are to be given to the children with disabilities wherever essential which will help them to have co-curricular activities as that of non-disabled children.

4.6.7 Family involvement

The family members are to be oriented about the abilities of the child to participate in co-curricular activities. Naturally the members of the family may have hesitation to provide co-curricular activities because of fear about the child's safety and sometimes not knowing of the child's needs and required adaptations. In this regard, the teacher has to give clear idea about the requirement of the child for co-curricular activities.

4.6.8 Co-curricular activities for children with intellectual disability

Special Olympics offers year-round training and competition in 25 Olympic type sports to children and adults with intellectual disability. Participation is open to anyone from ages eight and above up, and programs are designed to serve all ability levels.

Official Summer Sports

- Aquatics
- Athletics
- Basketball
- Bowling
- Cycling
- Equestrian Sports
- Football (Soccer)
- Golf
- Gymnastics (Artistic and Rhythmic)
- Power lifting
- Roller Skating
- Softball
- Tennis
- Volleyball

Official Winter Sports

- Alpine Skiing
- Cross Country Skilling
- Figure Skating
- Floor Hockey
- Speed Skating
- National Popular Sports
- Cricket
- Football
- Volleyball
- Kabadi
- Badminton
- Table Tennis
- Team Handball.

4.7 Adaptation, Accomodation and Modification for school/ subjects

A teacher of children with Intellectual Disability has to carefully consider the three types of adaptations for her students, based on their ability level and the type of educational placement (special school, special class in regular school, resource room, home based education). As Janney & Snell (2000) note, knowing whether the student's objective in a particular subject will be supplemented, simplified or altered will help to clarify the relationship between his learning objectives and that of his classmates. It has to be kept in mind that different subject areas may need different adaptations. For example, for a student, science may be simplified; language may be supplemented while math may need to be altered. The student's interest and age may also play a role in selection of the type of adaptation. High interest subject may need fewer adaptations. It may also be that a teacher may use one type of adaptation in curriculum for a student at a particular point of time and may use another type of adaptation at other times. For

instance, for a student in math, curricular content of geometry may be simplified while basic four computation skills may be supplemented while algebra may be altered. Teacher should keep in mind that within the context of class room, simplified and supplementary curriculum meet the needs of special education. Alternative curriculum are used in special schools or special class in regular schools.

4.7.1 Simplified Curriculum

Simplified curriculum includes fewer concepts and skills rather than the entire scope of the general curriculum.

Example: Science: Structure and functions of parts of the eye

The text books have detailed description of parts of the eye with difficult terminology and how the eye functions (iris, pupil, cornea, lens, aqueous humor, vitreous humor, optic nerve). A child with ID can just be taught major parts and functions. The parts that are visible so he comprehends (eye lid, pupil, iris, lens) and focus on care of eyes, signs of problem with eyes, care of eye glasses and such other information which is more functional and simplified yet taken from regular educational curriculum.

4.7.2 Supplementary curriculum

Supplementary curriculum includes basic skills of reading, writing and math and also additional social skills, study skills and learning strategies. This helps children in organizing themselves, improve memory and learning ability. This type of curriculum is most useful to children with learning disabilities and those with emotional/behavior problems.

Example: Student attends regular class but performs poorly in exams. In such cases, supplementary classes are provided in test taking, organizing time, noting main points etc.

4.7.3 Alternative Curriculum

An alternative curriculum emphasizes skills needed to participate in activities in the community living domain of the curriculum. An alternative curriculum therefore, can be a functional, community referenced curriculum, determined by assessing the student and his environment. Functional academics forms part of the community referenced curriculum. Depending on the severity level of disability, emphasis can be on personal,

social, communication skills. Opportunity for partial participation in school activities is recommended for severely disabled children.

For example, if the class curriculum demands gardening activity, a severely disabled child may perhaps participate by holding the hose pipe for watering plant, with the support of a peer. He may receive his individualized interaction which may have minimum common content with his age appropriate regular curriculum. It is an alternative curriculum with the common objective of leading towards independent living.

4.7.4 Multilevel Curriculum

Another commonly used form of curricular adaptation is, 'multilevel curriculum'. This involves having objectives at varying levels of difficulty for different students in the same class. Thus in mathematics class one student may do two digit addition with carry over, another without carry over and yet another may be doing single digit addition, all doing curricular content - addition. This is commonly seen in most of the special schools for children with intellectual disability.

4.7.5 Activity Based Curriculum

When the students belong to different levels, planning and implementing instructions in difficult. Activity based curriculum is based suited for children with mental retardation as it provides experience based learning. Because of the multi-sensorial input and the experience of carrying out the task, the students are likely to retain the learnt information better.

For example, teaching freezing point, boiling point, evaporation and such concepts with black board and text books are too difficult for a child with mental retardation to understand. The same concepts included in their curriculum with the teaching method focusing on demonstration using boiling in a kettle and freezing using a refrigerator - all done by the students under supervision and guidance will be better understood. Demonstration of use of thermometer showing boiling and freezing points on it will be better comprehended by them. Though time consuming and requires a lot of efforts, it is one of the best way to plan and teach students with mental retardation.

A good curriculum has inbuilt evaluation procedures. As evaluation provides information on effects and effectiveness of the training it is very essential to structure evaluation carefully and objectively. If the student attends regular education, the examination systems need modification focusing on testing student's learning. A few examples are, simplifying directions in a test paper so that a child with mental retardation understands, providing example if the instruction is difficult to comprehend or allowing to write one

word/few word answers if it conveys the correct response. Provide alternatives to exams such as projects, reports, action oriented content and so on.

The student may be at different levels Bloom's taxonomy of cognitive domain(1956). This includes knowledge, comprehension, application, analysis, synthesis, and evaluation. See box for an example. Find out at what stage the student is in and suitably plan the instruction for each curricular content area.

Example of Bloom's taxonomy of cognitive domain

Knowledge	Define, list name	1. Name the capital of India 2. How many states are there in India?
Comprehension	Explain & Summaries in your own words	1. What is a Union Territory? 2. What is a peninsula?
Application	Dramatize, practice, apply, compute	Make a model of India and show the mountains and rivers
Analysis	Interpret, categorizes, Compare, group, order	1. What are similarities and differences in the festivals celebrated in various parts of India
Synthesis	Create, formulate, develop, improve, rearrange	Compose song/write 5 lines to express 'nifty in diversity' in India.
Evaluation	Judge, criticize, assess, infer, conclude	Report the importance of National language in India.

A Child with mental retardation may be at different levels of this taxonomy, identify the levels and suitably develop his evaluation plan. To be successful;

- Identify strengths and needs
- Specify instructional objectives Plan curriculum and sequence items to be taught
- Select activities for each skill domain/subject.
- Teach in variety of environment
- Provide opportunities to practice
- Ensure mastery.

4.8 Let us sum up:

- The educational provision for students with special needs in India in the recent two and half decades is being focused on regular setting where they get equal educational opportunity as other non-disabilities peers which we call as integration, mainstreaming or inclusion.
- Curriculum adaptation tends to be significant at all grade level, but teachers have to develop their own style of presentation or teaching strategy, which may be related to how they teach or the availability of instructional materials in schools. Presentations may include combinations of lectures, assignments, or a host of other teaching / learning approaches.
- Curriculum decisions are founded on the beliefs and values regarding the purpose of education and the benefits of its outcome. Every curriculum aims at realizing the fullest potentials of students and helping them become productive and contributing members of the society.
- When we look at children with disabilities, their abilities and needs are varied, demanding adaptation in curriculum content and transaction without compromising on the objectives and learning outcomes.

The common focus in schools is to develop competencies in

- Leading independent lives
- Developing and maintaining positive relationship with family and community
- Carrying out day to day activities in an acceptable manner and
- Being a good citizen

Adaptations in instructional strategies are needed, and given much priority, so as to make it possible for the student to achieve goals that are determined by the teacher is more important.

Basic to any training programme for these children with Intellectual Disability, is the knowledge and skill regarding the individualize education programme.

- Individualized training programme : The individualized training programme should be based on the assessment with reference to the academics. ADL., social skills, personal skills, vocational skills and community skills and plan for training is developed with objectives, strengths, and weaknesses.

- Skill Development: The specific skills to be developed among children with Intellectual Disability based on the extent of Intelligent Quotient (IQ).
- The organization of teaching materials is important for all students including children with disabilities. But students with disabilities may need materials that are different from those required by normal students. Most of the special teachers prepare learning activities to satisfy the educational needs of children with disabilities so that maximum educational benefit can be derived.
- The teacher has to use the combination of instructional strategies to suit the educational needs of learners.
- Programme adaptations and modifications may be effective only in that they teach the students that he/she can get by with less effort than other students or the selection of questions may by-pass some of the most critical skills
- Functional tasks for children without disability and persons with disability are required to learn now or in the future. To design a curriculum for particular students, tasks are to be selected.
- The early childhood years (0 to 6 years) are viewed by many as a critical time for the intellectual and social development of any child.
- The pre-school classes for children with ID emphasize content areas that are commonly referred to as readiness skills, which are prerequisites for later learning.
- In a regular preschool the curriculum will focus on skills needed at pre operational stages and therefore many of our students with mild developmental delays will benefit from these adaptations & modifications at regular preschools.
- Academic activities depend to a great degree on the quality and extent of the pre-school programming in individual child has had. The curriculum mainly consists of components that may be taught independently or together and to relate to long-range goals for academic and social education.
- To cope with the regular education curriculum.
- Functional Academics - The functional academic refer to the literacy and numeracy skills required to teach the children with ID for leading independent lives in the society. It includes reading, writing and arithmetic.

- Co-curriculum is a structured activity which supports for the curriculum in practical way in education programmes.
- Some co-curricular activities are purely for fun. Others require a certain level of ability. Making a good match between the activity and the child's unique abilities, interests, and needs is the first step.
- Co-curricular activities should be challenging. They should provide relaxation, satisfaction, and in most cases - socialization.
- A teacher of children with Intellectual Disability has to carefully consider the three types of adaptations for her students, based on their ability level and the type of educational placement (special school, special class in regular school, resource room, home based education).
- Teacher should keep in mind that within the context of class room, simplified and supplementary curriculum meet the needs of special education in general setting while alternative curriculum are used in special schools or special class in regular schools.

4.9 Check your progress:

What is Curriculum adaptation?

.....

Adaptations in evaluation procedures?

.....

What is Functional curriculum?

.....

What are the Major focus at preprimary level?

.....

Short Note:

Co-Curriculum, Simplified curriculum, Supplementary curriculum, Alternative Curriculum, Multilevel Curriculum

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Web Resources

www.spannj.org/

www.specialeducationguide.com/

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Unit - 5 □ Therapeutic Intervention

Structure

- 5.1 Introduction**
- 5.2 Objectives**
- 5.3 Occupational Therapy: Definition, Objectives, Scope, Modalities and Intervention**
 - 5.3.1 Definition of Occupational Therapy**
 - 5.3.2 Aims of Occupational Therapy**
 - 5.3.3 Objectives of Occupational Therapy**
 - 5.3.4 Scope of Occupational Therapy**
 - 5.3.5 Modalities of Occupational Therapy**
 - 5.3.6 The Intervention Process**
- 5.4 Physiotherapy: Definition, Objective, Scope, Modalities and Intervention.**
 - 5.4.1 Definition of Physiotherapy**
 - 5.4.2 Aims and Objectives of Physiotherapy**
 - 5.4.3 Scope of Physiotherapy**
 - 5.4.4 Modalities of Physiotherapy**
 - 5.4.5 Intervention of Physiotherapy**
- 5.5 Speech Therapy: Definition, Objectives, Scope, Types of Speech, Hearing and Language Disorders and Intervention**
 - 5.5.1 Definition of Speech and Language Therapy**
 - 5.5.2 Objectives of Speech Therapy**
 - 5.5.3 Scope of Speech Therapy**
 - 5.5.4 Types of Speech, Hearing and Language Disorder.**
 - 5.5.5 Speech and Language Intervention**

- 5.6 Yoga and Play Therapy: Definition, Objectives, Scope and Intervention**
 - 5.6.1 Meaning and Definition of Yoga**
 - 5.6.2 Objectives of Yoga**
 - 5.6.3 Scope of Yoga Therapy**
 - 5.6.4 Yoga Intervention**
 - 5.6.5 Definition of Play Therapy**
 - 5.6.6 Scope of Play Therapy**
 - 5.6.7 Importance of Play Therapy**
 - 5.6.8 Objectives of Play Therapy**
 - 5.6.9 Intervention of Play Therapy**
- 5.7 Therapeutic Intervention: Visual Arts and Performing Arts (Music, Drama, Dance, Movement and Sports)**
 - 5.7.1. Visual Arts and Performing Arts**
 - 5.7.2 Music therapy**
 - 5.7.3. Drama Therapy**
 - 5.7.4 Dance and Movement Therapy**
 - 5.7.5 Sports Activities for Children with Special Needs**
- 5.8 Let us Sum Up**
- 5.9 Check your Progress**
- 5.10 Reference**

5.1 Introduction

Treatment of developmental disabilities can come in a variety of different forms. The best treatment regimens are the result of an individualized treatment plan formed by a team of health care multidisciplinary professionals. The plan will be based on the severity of the disability and should involve patients, families, teachers, and caregivers in all phases of planning, decision making, and treatment. The individualized treatment plan will take into consideration both the immediate needs of the patient, and the long term prognosis for development.

Occupational therapy, or OT for short, is a treatment therapy that helps people achieve independence in all facets of their lives. If a child has physical disabilities or developmental delays, occupational therapy can improve their cognitive (thinking), physical and major skills as well as address psychological, social, and environmental factors that impact the child's functioning.

Physical therapy (PT), or sometimes called physiotherapy, focuses on improving gross and fine motor skills, balance and coordination, and strength and endurance. The child may be evaluated by a physical therapist to assess muscle and joint function, mobility, strength and endurance, oral motor skills such as feeding and talking, posture and balance, even the status of the heart and lungs.

Speech therapy is a clinical program aimed at improving speech and language skills and oral motor abilities. This means talking, using sign language, or using a communication aid. Children who are able to talk may work on making their speech clearer, or on building their language skills by learning new words, learning to speak in sentences, or improving their listening skills.

Dance and creative movement provide physical challenges in a structured, supportive environment for sensory integration. The intimate connection with music often makes dance feel less like exercise or physical therapy and more like leisure. Dance/Movement Therapy (DMT) has been used in the United States since World War II. Marian Chace, a dancer, choreographer, and teacher of modern dance in Washington D.C. during the 1930s and 1940s, first developed the mind-body connection as a form of therapy for her dance students. She "questioned why pupils who had no intention of being professional came to take dance classes" and started gearing her classes toward the needs and interests of recreational dancers.

In 1942, she was asked to work with returning soldiers from World War II at St. Elizabeth's Hospital in Washington D.C. Dance/movement therapy was seen as promising because it could so easily be a group treatment. Chace developed her methods working with institutionalized, often schizophrenic and psychotic, individuals.

Music therapy enhances one's quality of life, involving relationships between a qualified music therapist and individual; between one individual and another; between the individual and his/her family; and between the music and the participants. These relationships are structured and adapted through the elements of music to create a positive environment and set the occasion for successful growth.

Music Therapy is a well-established, research-based profession In which music is used to accomplish therapeutic and educational goals. Recreational therapy is based on the idea of increasing a person's independence and ability to function through participation in creative arts, dance, sports, adventure programs and puzzles or logic games. It is a holistic approach to wellness.

According to the American Therapeutic Recreation Association, recreational therapy "aims to improve an individual's functioning and keep them as active, healthy and independent as possible in their chosen life pursuits." In most cases, these goals are accomplished by combining a person's speech, fine motor or gross motor goals with community involvement, while engaging in the person's preferred interests.

5.2 Objectives

After going through this unit you will be able to

- Define the different therapies like occupational, physio, speech, yoga and play, music, dance and movement.
- Discuss the aims and objectives of the different therapies.
- Narrate the scope and modalities of the therapies.
- Describe the intervention procedures of the therapies.

5.3 Occupational Therapy: Definition, Objectives, Scope, Modalities And Intervention.

5.3.1 Definition of Occupational Therapy

Occupational therapy is a method of treatment for which the primary area of concern is the patient's ability to perform functions required in day to day life. This method of treatment is also concerned with the social, psychological and cognitive development of the patient.

In the early years, occupational therapy was regarded as a means to keep long term convalescent patients occupied. It derived the name "Occupational therapy" owing to this. Its contribution was limited to the field of chronic illness - mental illness, tuberculosis, leprosy etc. Occupational therapy is a client-centred health profession concerned with

promoting health and well being through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. Occupational therapists achieve this outcome by working with people and communities to enhance their ability to engage in the occupations they want to, need to, or are expected to do, or by modifying the occupation or the environment to better support their occupational engagement. (WFOT 2012)

"Occupational therapy is the art and science of directing man's participation in selected tasks to restore, reinforce and enhance the performance, facilitate learning of those skills and functions essential for adaptation and productivity, to diminish or correct pathology and to promote and maintain health." (Council of Standards, American Occupational Therapy Association, 1972)

5.3.2 Aims of Occupational Therapy

A person with intellectual disability is observed to have dysfunction in almost all performance components. The specific aims of occupational therapy for persons with intellectual disability are as follows.

- (a) To facilitate the development of performance components of the patients.
- (b) To enhance independence of the patients.
- (c) To provide sensory stimulation.
- (d) To improve hand functions.
- (e) To enhance gross motor functions.
- (f) To facilitate development of perceptual motor functions.
- (g) To reinforce social development.
- (h) To enhance independence skills.
- (i) To provide vocational training.
- (j) To correct mal adaptive behaviour.
- (k) To provide extrinsic adaptations.

5.3.3 Objectives of Occupational Therapy

Occupational Therapists work with children who have difficulties with the practical and social skills necessary for their everyday life. An Occupational Therapist will aim to enable the child to be as physically, psychologically and socially independent as possible. Occupational Therapists work in close partnership with the child and their family, schools and other healthcare professionals. Together they have a shared responsibility for meeting the child's needs. In schools, for example, they evaluate the child's abilities, recommend and provide therapy, modify classroom equipment, and help the child participate as fully as possible in school programs and activities. A therapist may work with the child individually, lead small groups in the classroom, consult with a teacher to improve the functioning skills of the child etc.

Occupational therapy is provided when there is a disruption in function in one or more of the following the areas:

Gross Motor Skills: Movement of the large muscles in the arms, and legs. Abilities like rolling, crawling, walking, running, jumping, hopping, skipping etc.

Fine Motor Skills: Movement and dexterity of the small muscles in the hands and fingers. Abilities like in-hand manipulation, reaching, carrying, shifting small objects etc.

Cognitive Perceptual Skills: Abilities like attention, concentration, memory, comprehending information, thinking, reasoning, problem solving, understanding concept of shape, size and colors etc.

Sensory Integration: ability to take in, sort out, and respond to the input received from the world. Sensory processing abilities like vestibular, proprioceptive, tactile, visual, auditory, gustatory and olfactory skills.

Visual Motor Skills: A child's movement based on the perception of visual information. Abilities like copying.

Motor Planning Skills: Ability to plan, implement, and sequence motor tasks.

Oral Motor Skills: Movement of muscles in the mouth, lips, tongue, and jaw, including sucking, biting, chewing, blowing and licking.

Play Skills: To develop age appropriate, purposeful play skills

Socio-emotional Skills: Ability to interact with peers and others.

Activities of daily living: Self-care skills like daily dressing, feeding, grooming and toilet tasks. Also environment manipulation like handling switches, door knobs, phones, TV remote etc.

Occupational therapists in schools collaborate with teachers, special educators, other school personnel, and parents to develop and implement individual or group programs, provide counselling, and support classroom activities.

Occupational therapists design and develop equipment or techniques for improving existing mode of functioning.

5.3.4 Scope of Occupational Therapy

Occupational Therapists work with parents/care givers and others to assess if a child has difficulties with practical and social skills. Occupational Therapists assess the physical, psychological and social functions of the individual identify areas of dysfunction and involves the individual in a structured programme of activity to overcome disability. Following assessment, the Occupational Therapist will design and implement programs with appropriate strategies in order to enable the child to maximize his/her potential.

Occupational Therapists provide services to individuals often in conjunction with physicians, social workers, psychologists, and other therapists. Occupational therapists use qualitative and quantitative assessment methods, including standardized tests, as well as devices, to analyze and diagnose the nature and extent of dysfunction. Occupational therapists develop an individualized plan of care, tailored to each patient's needs.

5.3.5 Modalities of Occupational Therapy

Occupational Therapy is a form of treatment which directs the patients to practice and master human activities. Thus human activity is indeed the foremost modality of occupational therapy. The modalities of occupational therapy are as

1. Human Activity.
2. Extrinsic adaptation: Extrinsic adaptation is a adaptation in the physical, natural or non human environment of the person. Here adaptation refers to the structural adjustment or change in factors in the environment.

3. Splints and pressure garments.
4. Therapist.
5. Environment
6. Teaching/ Learning Process.

5.3.6 The Intervention Process

Occupational therapy intervention for people with intellectual disability is an on-going process that is both gradual and dynamic. Treatment is provided throughout the life cycle in accordance with the client's changing needs, desires and preferences in all areas of occupation. The intervention often requires repeated drills and practice to achieve internalization and learning, and performance in a variety of contexts to enable generalization. As is the case with respect to assessment, the intervention is preferably carried out in the client's various daily environments. This enables and encourages the client's participation in the many contexts of his/her life. Occupational therapy interventions for people with intellectual disabilities are specifically adapted to the client with respect to the degree and type of support needed as well as the context. Interventions may include direct treatment as well as environmental adaptations, guidance, monitoring and counseling (including of the family, the educational staff, the clinical staff, employers and others).

Examples of Occupational Therapy Intervention:

Activities of daily living: including activities directed to the person's care of his/her bodily needs (ADL) such as personal hygiene, eating, dressing, and instrumental activities of daily life (IADL) such as preparing a meal or managing finances. This area represents a central focus of intervention in occupational therapy for this population. For example, with respect to activities related to eating, the intervention can range from adapting the feeding environment, choosing preferred food or bringing the food to one's mouth, to teaching more advanced skills such as organizing shopping, and meal preparation.

Learning/Studies: These are activities necessary to be a student and to participate in a learning environment, including academic and non-academic activities. Intervention in this area covers a variety of educational settings such as day care centers for very young children, kindergartens and special education schools (ages 3-21 years), regular school settings and professional training facilities. The intervention is varied and may focus on

gaining basic learning-skills, such as understanding cause and effect processes and object permanence, or on more complicated skills, such as preparation for learning and writing, organization in time, in space and with accessories, adaptation to different learning environments, the use of information technologies and computers and gaining learning strategies. In addition, the intervention can include adapting various learning environments.

Work: These are productive activities, whether for remuneration or not, that include preparing for work, producing a product and providing services. Intervention in this area covers a variety of work settings including: special educational settings in which students receive training to enter the work force, youth rehabilitation centers, adult sheltered-work facilities, an array of protected supportive community work systems, and placement-services for gaining open market positions. Intervention varies and may include basic work skills training (behavior norms, work routines), developing and practicing basic cognitive abilities, practicing motor skills, exposure to varied work opportunities, support and advice for developing areas of interest, identifying abilities and choosing suitable occupations, analyzing occupations and adapting them as needed, as well as supporting and assisting placement in various work sights in the community.

Play: These are activities that are generally internally motivated and provide pleasure, entertainment and learning. Play-intervention, as an occupational therapy goal in this population, is directed towards the most basic experiencing of play as a source of pleasure, as well as providing the client with an opportunity to participate in play activities. The intervention includes drills in basic skills such as the use of equipment, recognizing rules and agreed-upon behavior patterns, or choosing suitable play activities. In addition, play represents a treatment method for learning and practicing a variety of social, motor and functional skills.

Leisure: These are non-obligatory activities that are internally motivated and are performed at times that are not devoted to work, studies, self-care or sleep. Research reveals that people within this population have a relatively large amount of time to devote to leisure, whereas their participation in leisure activities is minimal (Buttimer & Teirney, 2005). Therefore, coping with leisure within this population is a central topic. Intervention in this area may focus on exposure to varied leisure opportunities, identification and choice of areas of interest, planning leisure time and participation in activities that lead to a perception of capability, pleasure, control and satisfaction.

Social participation: These are activities related to agreed-upon behavior patterns expected of an individual within a given social system (e.g. community, family or with friends). The intervention within occupational therapy encourages the person to gain skills in the various areas or occupation and thus supports and strengthens social participation. For this population, an emphasis is placed upon understanding acceptable social norms and as well as learning and practicing activities that lead to satisfactory social interactions.

Accessibility and Environmental Modification: Occupational therapy practice relates to the person, the occupation and the environment. The occupational therapist's broad knowledge base in the areas of function and limitation enables him/her to identify, through performance analysis in the different areas of occupation, environments and/or tasks that should be modified. The various limitations that characterize the population of people with intellectual disabilities require both general and client-specific environmental modifications to ensure accessibility. The characteristic difficulty in problem-solving, initiative and coping with unfamiliar situations, amplifies the need for accessibility modifications for this population. These accessibility modifications include changes in the environment (as in widening passageways, modifying playgrounds or adding symbol signs), in the equipment (such as adapting seating systems or adapting feeding aids), or the task (such as changing the complexity of instructions or dividing a task into sub-stages).

Assistive technology is one of the methods used to adapt the environment and includes modifications of hardware; software and various combinations thereof (such as a virtual keyboard, a touch screen, a motorized wheelchair, switch systems, computer programs and internet sites, adapted content amount, or voice output devices). Thus, for example, a switch can be modified to be activated through the person's head or hand. Other modifications of the switch may include size, colour, texture, or sensitivity (such as speed or pressure response). Assistive technology promotes a variety of functions related to the individual, the occupation and the environment. In addition, it allows for the modification of an individual's environment in the manner in which his/her requires, by relating to his personal abilities, wants, areas of interest and specific limitations and difficulties.

Environmental modification is likely to significantly improve a person's ability to participate in all areas of occupation, his or her level of independence and the degree of supports required.

In summary, the occupational therapist, as part of a therapeutic, rehabilitative and educational profession plays a central role within the support system available to people with intellectual and developmental disabilities, throughout the life cycle. As such, occupational therapists hold key positions as leaders in this area. Working with people with intellectual and developmental disabilities requires consideration of function, independence and participation in the various areas of occupation, which enables the occupational therapist to utilize all the areas of knowledge and expertise included in the practice of occupational therapy.

5.4 Physiotherapy: Definition, Objective, Scope, Modalities and Intervention

5.4.1 Definition of Physiotherapy

It is also called physical therapy. The treatment of physical dysfunction or injury by the use of therapeutic exercise and the application of physical modalities (like heat, light, cold, current, water, sound waves). Assistive devices are also used as a part of the treatment programme. They are intended to restore or facilitate normal function or development.

5.4.2 Aims and Objectives of Physiotherapy

Physiotherapy in the field of mental retardation is aimed at improving overall motor functions of the child to the maximum extent possible, so as to make the child independent in walking and carrying out activities of daily living. If it is not possible for the person to walk, and carry out activities independently, then aids and appliances are trainings given to the person to use it.

(A) Objectives of physiotherapy in general

1. Reduces or relieves pain, muscle spasm, tenderness of muscles.
2. It helps to reduce or relieve swelling.
3. It helps to reduce or relieve inflammation (means the response of the body in the form of pain, swelling, muscle spasm and tenderness of the muscles etc. in the presence of any foreign body).
4. To improve ventilation of lungs, by giving, deep breathing exercises and postural drainage.

5. To encourage correct weight bearing and weight transference on both sides of the body.
6. Re-education of affected or paralysed muscles.
7. It is effective in healing of infected wounds.
8. It helps to check the abnormal growth of bone (bony spurs).
9. Breaking up of adhesion formation (gluing of joint structures by synovial fluid).
10. To keep the person physically fit.
11. To teach relaxation.
12. Stimulation of sensory and motor nerves if sensations are reduced or lost.
13. Post fracture and dislocation, management.

(B) Objectives of physiotherapy in relation to Intellectual Disability

1. To facilitate the development of child gross motor and fine motor.
2. To prevent or correct contractures and deformities.
3. Prevent or correct wasting and atrophy of muscle.
4. To normalize muscle tone.
5. To maintain or improve the muscle power.
6. To maintain and improve the joint range of movement.
7. To emphasize the importance of handling and positioning the child.
8. To make the child independent in walking and activities of daily living.
9. Provide aids and appliances and to train the person and parents how to use assistive devices.
10. To improve posture, gait, balance coordination.
11. Inhibition of abnormal reflex activity, abnormal patterns of movement and abnormal muscle tone and facilitation of normal in place of abnormal.
12. To keep the children physically fit.

5.4.3 Scope of Physiotherapy

Physiotherapy has scope in treating a wide range of conditions. It play an important

role in all the branches of medical sciences, especially Orthopaedics, Paediatrics, Neurology, Cardio thoracic, Surgery, Sport Medicine etc. In set ups like leprosy, paraplegic and poliomyelitis after plastic surgery, burns clinics, spinal cord injury centres and in assistive devices manufacturing units etc.

Physiotherapy has three major functions in the management of children with intellectual disability.

1. To facilitate motor development
2. To prevent and correct contractures and deformities.
4. To make the child as independent as possible and functional (locomotor function and activities of daily living).

5.4.4 Modalities of Physiotherapy

1. Hydrotherapy:

Hydrotherapy, or water therapy, is the use of water (hot, cold, steam, or ice) to relieve discomfort and promote physical well-being.

2. Electrotherapy:

Electrotherapy is the use of electrical energy as a medical treatment.

3. Exercise Therapy:

Exercise Therapy is a regimen or plan of physical activities designed and prescribed for specific therapeutic goals.

4. Massage or Manipulation

5. Gait:

Gait training is a type of physical therapy. It can help improve your ability to stand and walk.

5.4.5. Intervention of Physiotherapy

Role of Physiotherapist in the field of Intellectual Disability

- **Diagnostician:** Here the physiotherapists assess the client and order for the necessary investigation, on the basis of this therapist arises at diagnosis. According to the diagnosis therapy will be planned.
- **Interventionist:** Therapist plays a role as interventionist in setting intervention goals. planning and implementation of therapy programme, giving follow - up and

regular evaluation of the client, modifying programme as per the clients need.

- **Team member:** Therapist treated as a team member as the team member in multidisciplinary approach, this is the most commonly seen approach in field of mental retardation. In Trans disciplinary approach therapist plays a role as a team member by gathering information and helps in planning intervention along with other experts of the team. In certain condition therapist become a case manager and given input.
- **Providing Information and guidance:** As the parents need information guidance regarding the condition of the child and therapy, the therapist gives proper information to parents and also to other professional whenever needed.
- **Counsellor:** Physiotherapist plays a counsellor role in the field of mental retardation. Parent counselling is an important aspect, which should be included in intervention programme. The parents of the clients may not be aware of the condition of child and the facilities available for their child. They will come to you in a state of confusion and anxiety to know what is happening with their child.

Before as part of planning and intervention programme therapist should give proper information to the parents regarding the following things:

- Condition of the child.
- Child's needs and abilities.
- How the therapy is going to help the child in improving his functional abilities.
- Proper instructions given to the parents.
- Training is given to the parents how to give therapy at home.
- What are the facilities and services available for the persons with intellectual disability.
- **Trainer:** Therapist plays a role of trainer, as the therapist will train the parents how to give therapy at home and conducts classes and workshops for parents and other professional, to make them aware of disability and effects of intervention on the clients.
- **Researcher:** Research is an important aspect in the field of intellectual disability. Therapist also plays a role as a researcher by doing research on different aspects

and population study. To innovate new techniques and equipment for making the intervention better and to get better out come results.

- **Leader:** Therapist plays a role of leader of the team voicing on behalf of the client and by giving guidelines to the former self-help groups by the parents.
- **As an administrative officer:** Therapist plays a role of administrative officer by heading and organization and establishing a institution or center to serve the people better.
- **Provider of referral:** Therapist will give referrals to the concern professionals to obtain information of the clients and to related services outside the institute for investigations or for expert opinion.

5.5 Speech Therapy: Definition, Objectives, Scope, Types of Speech, Hearing and Language Disorders and Intervention

5.5.1 Definition of Speech and Language Therapy:

Speech and language therapy provides treatment, support and care for children and adults who have difficulties with communication, or with eating, drinking and swallowing.

Speech and language therapists (SL Ts) are allied health professionals. They work with parents, carers and other professionals, such as teachers, occupational therapists and doctors.

5.5.2 Objectives of Speech Therapy

A speech pathologist's narrow, well-defined objectives work toward achieving broad therapeutic goals. This professional develops an individualized treatment plan for each patient, which often includes time-based objectives. For example, his objectives may include helping a patient correctly say several new sounds by the end of a quarter, marking period or year. Other objectives can include helping a patient to understand and to explain a speaker's gestures, demonstrate newly learned conversation strategies, explain the perception of body language, speak for a period of time without stuttering and improve reading comprehension to a specific level.

A speech language pathologist sets broad but specific goals for each of his patients. Specific goals can include helping patients develop clearer speech, learn to use alternate

methods of communication, develop better reading and writing skills, and strengthen throat and neck muscles.

Goals also may include coordinating treatment programs with other professionals or referring patients for other treatments. For example, a patient with a swallowing disorder may benefit from the collaborative care of a speech language pathologist and a medical doctor.

5.5.3 Scope of Speech therapy

Speech Therapy is an Allied Health Science subject. Medical advancement in this field, awareness of the need for early intervention etc has increased the scope of Speech Therapy. A number of Speech Therapy courses are available now in India and abroad.

Speech Therapy has its necessity in teaching and training children with intellectual disability.

5.5.4 Types of Speech, Language and Hearing Disorders

The most intensive period of speech and language development is during the three of life a period when the brain is developing and maturing. There skills appear to develop best in a world that is rich with sounds, sights, and consistent exposure to the speech and language of others.

At the root of this development is the desire to communicate or interact with the world. The beginning sign of communication occur in the first few days of life where in infant learns that a cry will bring food, comfort, and companionship. Research has shown that by 6 months of age, most children recognize the basic sounds of their native language.

5.5.4 (a) Speech and Language Disorders

A speech disorder refers to a problem with the actual production of sounds. A language disorder refers to a problem understanding or putting words together to communicate ideas.

Speech disorders include:

1. Articulation disorders: difficulties producing sounds in syllables or saying words incorrectly to the point that listeners can't understand what's being said.
3. Fluency disorders: problems such as stuttering, in which the flow of speech is

interrupted by abnormal stoppages, partial-word repetitions ("b-b-boy"), or prolonging sounds and syllables (sssssnake).

4. Resonance or voice disorders: problems with the pitch, volume, or quality of the voice that distract listeners from what's being said. These types of disorders may also cause pain or discomfort for a child when speaking.

Language disorders can be either receptive or expressive:

1. Receptive disorders: difficulties understanding or processing language.
2. Expressive disorders: difficulty putting words together, limited vocabulary, or inability to use language in a socially appropriate way.
3. Cognitive-communication disorders: difficulty with communication skills that involve memory, attention, perception, organization, regulation, and problem solving.

5.5.4 (b) Hearing disorders

There are four types of hearing loss:

- Auditory Processing Disorders
- Conductive
- Sensorineural
- Mixed.
- **Auditory Processing Disorders**

Auditory Processing Disorders occur when the brain has problems processing the information contained in sound, such as understanding speech and working out where sounds are coming from.

- **Conductive Hearing Loss**

Conductive Hearing Loss occurs when there is a problem with the Outer or Middle Ear which interferes with the passing sound to the Inner Ear. It can be caused by such things as too much earwax, Ear Infections, a punctured eardrum, a fluid build-up, or abnormal bone growth in the Middle Ear such as Otosclerosis. It is more common in children and indigenous populations.

Surgery and some types of hearing technologies can be used to treat Conductive Hearing

Loss such as Bone Conduction Hearing Aids, Bone Anchored Hearing Devices and Middle Ear Implants.

- **Sensorineural Hearing Loss**

Sensorineural Hearing Loss occurs when the hearing organ, the Cochlea, and/or the auditory nerve is damaged or malfunctions so it is unable to accurately send the electrical information to the brain. Sensorineural Hearing Loss is almost always permanent.

It can be genetic or caused by the natural aging process, diseases, accidents or exposure to loud noises such as Noise-induced Hearing Loss and certain kinds of chemicals and medications. Auditory Neuropathy is another form where the nerves that carry sound information to the brain are damaged or malfunction.

Technologies such as Hearing Aids, Cochlear Implants and Hybrid Cochlear Implants can help reduce the effects of having Sensorineural Hearing Loss.

- **Mixed Hearing Loss**

A Mixed Hearing Loss occurs when both Conductive Hearing Loss and Sensorineural Hearing Loss are present. The sensorineural component is permanent, while the conductive component can either be permanent or temporary. For example, a Mixed Hearing Loss can occur when a person with Presbycusis also has an Ear Infection.

5.5.5 Speech and Language Intervention

In speech-language therapy, a speech language pathologist will work with a child one-to-one, in a small group, or directly in a classroom to overcome difficulties involved with a specific disorder.

Therapists use a variety of strategies, including:

- **Language intervention activities:** The SLP will interact with a child by playing and talking, using pictures, books, objects, or ongoing events to stimulate language development. The therapist may also model correct vocabulary and grammar and use repetition exercises to build language skills.
- **Articulation therapy:** Articulation, or sound production, exercises involve having the therapist model correct sounds and syllables in words and sentences for a child, often during play activities. The level of play is age-appropriate and related to the child's specific needs. The SLP will physically show the child how to make certain

sounds, such as the "r" sound, and may demonstrate how to move the tongue to produce specific sounds.

- **Oral-motor/feeding and swallowing therapy:** The SLP may use a variety of oral exercises -including facial massage and various tongue, lip, and jaw exercises - to strengthen the muscles of the mouth for eating, drinking, and swallowing. The SLP may also introduce different food textures and temperatures to increase a child's oral awareness during eating and swallowing. General guidelines for interventions
- Selection of Specific goals
- Organizing all the gathered information
- Structure the environment
- Selection of relevant materials
- Transformation and adaptation of the material
- Use of object from the environment
- Maintenance of schedule Principles for therapy
- Highlighting new or relevant information
- Pre-organized information
- Trained rehearsal strategies
- Using over learning & repetition
- Training in natural environment
- Early Intervention
- Following proper schedule

5.6 Yoga and Play Therapy: Definition, Objectives, Scope and Intervention

5.6.1 Meaning and Definition of Yoga

The word yoga comes from the Sanskrit root 'Yug' meaning to join on yoke, implying the integration (on joining) of every aspect of human being from the inner most to the external. Yoga is practical philosophy that aims at uniting the body, mind, and spirit for

health and fulfilment. The father of modern yogashashtra Patanjali Maharshi defines yoga as 'Yogaschitta Vrutti Nirodhaha' that is yoga is controlling the nature of the mind.

The ultimate aim of this philosophy is to strike a balance between mind and body and attain self- enlightenment. To achieve this, yoga uses movement, breath, posture, relaxation and meditation in order to establish a healthy, lively and balanced approach to life. Though the exact origins of Yoga are unknown but Yoga is considered to be the oldest physical discipline in existence. Yoga, thus symbolizes balance in every area of life. Yoga is one of the six schools of ancient Indian Philosophy. It is the practice that enables one to achieve higher levels of performance, bringing out the hidden potentials from within. Systematic Yoga practice will increase the physiological and psychological well being.

5.6.2 Objectives of Yoga

- Yoga practice reduces tension, stress, anxiety, weakness, helplessness, fear, negative thoughts etc. Which are increasing day by day in this mechanical human life.
- It treats the prolonged diseases or deficiencies like diabetes, asthma, heart problems, pains, sprains, indigestion etc. and makes the body active and good looking.
- Yoga practice equips the practitioners with devotion, attention, and concentration and alertness in every activity that he does. He also discharges his responsibilities with dedication thereby get respect and honor at his work.
- Man can prove his life worth living by developing his self physically and psychologically that contribute for the development of spiritual instinct in him.
- As soon as one is habituated for yoga practice, there would be number of changes in his routine activities, habits, thoughts, food habits, behaviors etc.
- Improvement in balance is one of the major benefits of Yoga. Improved balance is referred not only to the sharp physical coordination but also to the balance between the left and right, front and back and high and low aspects of one's body.
- Along with a host of benefits, Yoga also helps in developing and attaining personal values. Yoga erases a variety of ills in human beings. These may range from feelings of frustration, persecution and insecurity. Yoga greatly helps in the development of personal values. Personal values are those values which an individual develops and lives by all through his life.

- Yoga and social values are closely related to each other. Social values are a set of philosophy that an individual carries for all his life. Yoga possesses great power to inculcate those values that go a long way in making a man complete.
- Yoga helps an individual not only to realize his own self but also understand other issues around him/her. Yogic theory and practice lead to increased self-knowledge. Yogic practices like breathing and posture exercises help in attaining and maintaining health, physical and mental, and relaxation. The knowledge gained through Yoga is not simply that of the practical kind relating to techniques, but of a spiritual sort pertaining to grasping something about the nature self and other matters.

5.6.3 Scope of Yoga Therapy

Yoga is certainly more than mastering its postures and asanas and increasing the strength and flexibility of body. It indicates towards healing of mind and body and attaining the state of self- enlightenment. It is said that in early periods when Yoga was just introduced, the main purpose was to heal community members and the practitioners act as religious mediators. Needless to say, practicing of Yoga includes the traditional aspects too such as practicing different poses, chanting of mantra, observing breathing habit and controlling thoughts coming to mind with the help of meditation. Today, it has been practiced for fitness, healthy body and mind, strength, flexibility, emotional well-being and much more. The main purpose of practicing Yoga is to taking control over the body, mind and emotional aspects. The cessation of bad thoughts creates a positive vibe around the person and makes him healthy overall.

5.6.4 Yoga Intervention

Yoga is an ancient Indian practice which involves moving the body and training the mind to achieve balance and well-being. The purpose of traditional yoga is for each individual to be healthy, both physically and mentally, and able to reach his or her highest potential as a person. Yoga aim is to prepare the body for meditation through breathing and physical exercises. Yoga emphasizes body-mind wellness through postures or asanas which tone and strengthen our muscles and increase our flexibility. The different asanas, particularly the twists and inversions, stimulate internal organs, as well as the nervous system, and promote circulation in all the body's major organs and glands.

Importance of yoga for children with intellectual disability

1. Helps to co-ordinate the activities of the mind and body.

2. Tends to reduce the distracted state of mind and helping the mind to deal on the present activity.
4. Helps to improve his adaptive behavior to a degree unobtainable before.
5. Actively increase the ability to concentrate on the present activity.
6. Aims at improving general health, concentration, self-reliance and social relationship of the persons with mental retardation.
6. Yoga has been tried as an adjunct in education of children with mental retardation and attention deficit hyperactivity disorder.

5.6.5 Definition of Play Therapy

Play Therapy uses a variety of play and creative arts techniques (the 'Play Therapy Tool-Kit (TM)' to alleviate chronic, mild and moderate psychological and emotional conditions in children that are causing behavioural problems and/or are preventing children from realising their potential.

The Play Therapist works integratively using a wide range of play and creative arts techniques, mostly responding to the child's wishes. This distinguishes the Play Therapist from more specialised therapists (Art, Music, Drama etc). The greater depth of skills and experience distinguishes a play therapist from those using therapeutic play skills.

Play therapy utilizes play, children's natural medium of expression, to help them express their feelings more easily through toys instead of words.

Association for Play Therapy (APT) defines play therapy as "the systematic use of a theoretical model to establish an interpersonal process wherein trained play therapists use the therapeutic powers of play to help clients prevent or resolve psychosocial difficulties and achieve optimal growth and development."

In the textbook Play Therapy: The Art of the Relationship (2nd ed.), Landreth (2002) defined child-centered play therapy:

A dynamic interpersonal relationship between a child (or person of any age) and a therapist trained in play therapy procedures who provides selected play materials and facilitates the development of a safe relationship for the child (or person of any age) to fully express and explore self (feelings, thoughts, experiences, and behaviors) through play, the child's natural medium of communication, for optimal growth and development.

5.6.6 Scope of Play Therapy

Children are referred for play therapy to resolve their problems (Carmichael; 2006; Schaefer. 1993). Often, children have used up their own problem solving tools, and they misbehave. may act out at home, with friends, and at school (Landreth, 2002). Play therapy allows trained mental health practitioners who specialize in play therapy. to assess and understand children's pia).

Further. play therapy is utilized to help children cope with difficult emotions and find solutions to problems (Moustakas, 1997; Reddy, Files-Hall, & Schaefer, 2005). 13y confronting problems in the clinical Play Therapy setting, children find healthier solutions. Play therapy allows children to change the way they think about, feel toward, and resolve their concerns (Kaugars & Russ, 200 I). Even the most troubling problems can be confronted in play therapy and lasting resolutions can be discovered, rehearsed, mastered and adapted into lifelong strategies (Russ, 2004).

5.6.7 Importance of Play therapy

- It is difficult for most children below age ten to eleven to sit still for sustained periods of time. Play therapy provides for children's need to be physically active.
- In play, children discharge energy, prepare for life's duties, achieve difficult goals and relieve frustrations.
- As children play, they are expressing the individuality of their personalities and drawing upon inner resources which can become incorporated into their personality. Virginia M. Axline (1974) who developed the child-centered play therapy asserted that:
"A play experience is therapeutic because it provides a secure relationship between the child and the adult, so that the child has the freedom and room to state himself in his own terms, exactly as he is at the moment in his own way and in his own time. "
- Play therapy helps to actualize the ultimate objectives of elementary schools facilitating the intellectual, emotional, physical and social development of children from the learning opportunities and experiences offered in school.

5.6.8 Objectives of play therapy

- Develop a more positive self-concept
- Assume greater self-responsibility
- Become more self-accepting
- Become more self-directing
- Become more self-reliant
- Become more trusting of self
- Experience a feeling of control
- Become sensitive to the process of coping
- Develop an internal source of evaluation
- Engage in self-determined decision making

5.6.9 Intervention of Play as a therapy results in

- Developing a more positive self-concept
- Assume greater self-responsibility
- Become more self-accepting
- Become more self-directing
- Become more self-reliant
- Become more trusting of self
- Experience a feeling of control
- Become sensitive to the process of coping
- Develop an internal source of evaluation
- Engage in self-determined decision making

5.7 Therapeutic Intervention: Visual Arts and Performing Arts (Music, Drama, Dance, Movement and Sports)

5.7.1 Visual Arts and Performing Arts :

Art reflects human emotions and human beings spontaneously express their frame of

mind through various art forms. Thus the intellectual mind merges with the artistic streak, giving birth to art.

The visual arts are those creations we can look at, such as a drawing or a painting. For example Drawing, painting, sculpture, architecture, photography, film, printmaking.

It also includes the decorative arts of: ceramics, furniture and interior design, jewellery making, metal crafting and wood working.

The literature available for utilizing art education for exceptional students is generally addressed to art education teachers to use in their classroom. However, expanding the use of art in the education of children with special needs into general and special education is advantageous to these individuals. The art educator can evolve to be a resource and perhaps a liaison between the special and general educator. Thus, to improve the education afforded to students with special needs, art can act as a bridge between general, and art educators to enhance the communication and cooperation between these specialists. Creating a cohesive network between art educators, special and general educators, draws upon the unique perspective that each educator has that can help the others in bolstering special education programs.

The visual arts are a powerful teaching tool that can enhance the cognitive, emotional and social development of children. Children in special education programs are particularly in need of the assistance that the arts can provide.

The performing arts range from vocal and instrumental music, dance and theatre to pantomime, sung verse and beyond. They include numerous cultural expressions that reflect human creativity and that are also found, to some extent, in many other intangible cultural heritage domains.

Music is perhaps the most universal of the performing arts and is found in every society, most often as an integral part of other performing art forms and other domains of intangible cultural heritage including rituals, festive events or oral traditions.

5.7.2 Music Therapy

Music therapy is a well-established allied health profession similar to occupational and physical therapy. It consists of using music therapeutically to address behavioral, social, psychological, communicative, physical, sensory-motor, and/or cognitive functioning. Because music therapy is a powerful and non-threatening medium, unique outcomes

are possible. For individuals with diagnoses on the autism spectrum, music therapy provides a unique variety of music experiences in an intentional and developmentally appropriate manner to effect changes in behavior and facilitate development of skills.

Music therapy may include the use of behavioral, biomedical, developmental, educational, humanistic, adaptive music instruction, and/or other models. Music therapy enhances one's quality of life, involving relationships between a qualified music therapist and individual; between one individual and another; between the individual and his / her family; and between the music and the participants. These relationships are structured and adapted through the elements of music to create a positive environment and set the occasion for successful growth.

The interventions used in Music Therapy aid in fostering skills across the entire developmental spectrum for children with special needs. Music Therapists encourage a child's sense of exploration and wonder as they focus on the goals targeted in your child's Individualized Education Program (IEP).

How Does Music Therapy Make a Difference with Young Children?

- Music stimulates all of the senses and involves the child at many levels. This "multi-modal approach" facilitates many developmental skills.
- Quality learning and maximum participation occur when children are permitted to experience the joy of play. The medium of music therapy allows this play to occur naturally and frequently.
- Music is highly motivating, yet it can also have a calming and relaxing effect. Enjoyable music activities are designed to be success-oriented and make children feel better about themselves.
- Music therapy can help a child manage pain and stressful situations.
- Music can encourage socialization, self-expression, communication, and motor development. Because the brain processes music in both hemispheres, music can stimulate cognitive functioning and may be used for remediation of some speech/ language skills.

5.7.3 Drama Therapy

Drama therapy is the intentional use of drama and/or theater processes to achieve therapeutic goals.

Drama therapy is active and experiential. This approach can provide the context for participants to tell their stories, set goals and solve problems, express feelings, or achieve catharsis. Through drama, the depth and breadth of inner experience can be actively explored and interpersonal relationship skills can be enhanced. Participants can expand their repertoire of dramatic roles to find that their own life roles have been strengthened.

5.7.4 Dance / Movement Therapy

Dance/movement therapy, a creative arts therapy, is rooted in the expressive nature of dance itself. Dance is the most fundamental of the arts, involving a direct expression and experience of oneself through the body. It is a basic form of authentic communication, and as such it is an especially effective medium for therapy. Based in the belief that the body, the mind and the spirit are interconnected, dance/movement therapy is defined by the American Dance Therapy Association as "the psychotherapeutic use of movement as a process that furthers the emotional, cognitive, social and physical integration of the individual."

Benefits of Dance and Movement Therapy:

Dance Movement therapy can help children with special needs in varied ways and in all the areas of impairment. The benefits experienced are as follows:

- It helps in improving attention and concentration and thus helps in furthering education
- Dance as a way of expression of emotion enables children to express through movements
- It helps in forming better relation
- Due to liking towards repetitive movements, a therapist can repeat a movement pattern which the patient needs to learn and when they start imitating the movement vocabulary develops.
- This helps them in learning different patterns of movements required for daily life activities

- Group sessions in dance movement therapy enables in developing social skills and communications of autistic person
- Doing a choreographed dance movement sequence in a series of sessions in a row helps in improving memory and recapitulation skills.
- Touch therapy helps in developing trust on others as well as helps in reducing sensitivity to physical contact and touch.
- Dance movement therapy helps in improving body image of an autistic person.

Dance/movement therapists work with individuals of all ages, groups and families in a wide variety of settings. They focus on helping their clients improve self-esteem and body image, develop effective communication skills and relationships, expand their movement vocabulary, gain insight into patterns of behavior, as well as create new options for coping with problems. Movement is the primary medium dance/movement therapists use for observation, assessment, research, therapeutic interaction, and interventions. Dance/movement therapists work in settings that include psychiatric and rehabilitation facilities, schools, nursing homes, drug treatment centers, counseling centers, medical facilities, crisis centers, and wellness and alternative health care centers. Dance/movement therapy can be a powerful tool for stress management and the prevention of physical and mental health problems. Dance/movement therapists integrate the dancer's special knowledge of the body, movement, and expression with the skills of psychotherapy, counseling, and rehabilitation to help individuals with a wide array of treatment needs. Social, emotional, cognitive, and/or physical problems can be addressed through DMT via group and individual sessions in many different types of settings from hospitals and clinics to schools. The fact that dance/movement therapists are immersed in the language of the body, rather than focusing solely on the verbal, lends characteristics to their work that set it apart from other types of therapy.

5.7.5 Sports Activities for Children with Special Needs

All individuals benefit from regular physical activity and children with special needs especially. Children with special needs are benefitted in the following ways from physical or sports activities.

- We can see improvements in muscle strength, coordination, and flexibility.
- Improve exercise endurance, cardiovascular efficiency, and possibly increased life expectancy .

- Experience better balance, motor skills and body awareness.
- Will show improvement in behavior, academics, self-confidence and building friendships.
- Will have positive changes in their health, quality of life and boost to their self-esteem.
- Gets to experiences a sense of accomplishment and possibly the taste of winning or personal satisfaction.
- Experience increases in attention span, on-task behavior, and level of correct responding.
- Will increase appetite and improve quality or sleep.
- Will see a decrease in secondary health complications like obesity, high blood pressure, low HOL ("good") cholesterol and diabetes.
- Will find an outlet for their physical energy, will help them cope with stress, anxiety and depression.

Sports and activities especially good for special needs children:

- Swimming
- Bicycling
- Soccer
- Football
- Handball
- Gymnastics
- Bocce (is a ball sport)
- Weightlifting

Sports, especially fundamental and movement education based sports like gymnastics, provide tremendous benefits for children with special needs. Physical education programs can considerably improve the lifestyle of a disabled child and are highly recommended. These programs may help control obesity, promote activeness, increase a child's self-image and social skills, and increase motivation. The physical activity along with support,

rewards, and interaction can, among other benefits, be very helpful to these children and their families. **Physical Improvements** - Children suffering from cognitive disabilities are most likely going to suffer from physical impairments as well. These children have substantial problems with motor skills in areas such as hopping, skipping, and jumping. Involvement in gymnastics can help these individuals develop fundamental motor and physical fitness skills. **Self-Esteem** - Developing a sense of self-esteem and confidence is an extremely important part of special education. These children need to be involved in environments where they feel that they are contributing successfully to a group. Their abilities in all other skill areas will improve as a result of a positive self-image and confidence. **Cognitive Benefits** - The hands-on aspect of sports leads to cognitive skill improvement in children with disabilities and allows them to discover and access strengths that cannot be challenged in the traditional classroom setting. The inherent structure of sport, with its organization and rules, can be used as a learning tool for introducing and practicing self regulation and decision making skills. Additionally, children can learn verbal communication and interaction with peers through involvement in sport.

Special Olympics

The mission of Special Olympics is to provide year-round sports training and athletic competition in a variety of Olympic-type sports for children and adults with intellectual disabilities. This gives them continuing opportunities to develop physical fitness, demonstrate courage, experience joy and participate in a sharing of gifts, skills and friendship with their families, other Special Olympics athletes and the community.

- The Special Olympics is the only organization authorized by the International Olympic Committee to use the word "Olympics" worldwide.
- Athletes compete in 32 sports, including snowboarding, judo, cricket, soccer.
- The Special Olympics program Healthy Athletes offers 1.4 million free health examinations in more than 120 countries to athletes at Special Olympics competitions. Health professionals perform a full exam in the categories of podiatry, physical therapy, audiology, vision, dentistry, physical therapy and more and more.
- More than 3.1 million athletes from over 175 countries take part in the Special Olympics.

- Special Olympics athletes are divided to compete in categories based on gender, age, and ability.
- The Special Olympics athlete oath is "Let me win. But if I cannot win, let me be brave in the attempt."
- Special Olympics World Games are held every two years, alternating with Summer and Winter Games.

5.8 Let us Sum Up

1. "Occupational therapy is the art and science of directing man's participation in selected tasks to restore, reinforce and enhance the performance, facilitate learning of those skills and functions essential for adaptation and productivity, to diminish or correct pathology and to promote and maintain health." (Council of Standards, American Occupational Therapy Association, 1972).
2. An Occupational Therapist will aim to enable the child to be as physically, psychologically and socially independent as possible. Occupational Therapists work in close partnership with the child and their family, schools and other healthcare professionals. Together they have a shared responsibility for meeting the child's needs. In schools, for example, they evaluate the child's abilities, recommend and provide therapy, modify classroom equipment, and help the child participate as fully as possible in school programs and activities.
3. Occupational therapy interventions for people with intellectual disabilities are specifically adapted to the client with respect to the degree and type of support needed as well as the context. Interventions may include direct treatment as well as environmental adaptations, guidance, monitoring and counseling (including of the family, the educational staff, the clinical staff, employers and others).
4. Physiotherapy has scope in treating a wide range of conditions. It play an important role in all the branches of medical sciences, especially Orthopaedics, Paediatrics, Neurology, Cardio thoracic, Surgery, Sport Medicine etc. In set ups like leprosy, paraplegic and poliomyelitis after plastic surgery, burns clinics, spinal cord injury centres and in assistive devices manufacturing units etc.
5. A speech language pathologist sets broad but specific goals for each of his patients. Specific goals can include helping patients develop clearer speech, learn to use

alternate methods of communication, develop better reading and writing skills, and strengthen throat and neck muscles. Goals also may include coordinating treatment programs with other professionals or referring patients for other treatments. For example, a patient with a swallowing disorder may benefit from the collaborative care of a speech language pathologist and a medical doctor.

6. Yoga is one of the six schools of ancient Indian Philosophy. It is the practice that enables one to achieve higher levels of performance, bringing out the hidden potentials from within. Systematic Yoga practice will increase the physiological and psychological well being.
7. Music therapists involve children in singing, listening, moving, playing, and in creative activities that may help them become better learners. Music therapists work on developing a child's self-awareness, confidence, readiness skills, coping skills, and social behavior and may also provide pain management techniques. They explore which styles of music, techniques and instruments are most effective or motivating for each individual child and expand upon the child's natural, spontaneous play in order to address areas of need.

5.9 Check Your Progress

- A.1. What is the difference between Occupational Therapy and Physiotherapy?
 2. Explain the objectives of the different therapies applicable for children with special needs?
 3. Discuss about Dance and Movement Therapy.
- B.1. Discuss about the importance of yoga for children with special needs.
 2. Prepare a short note on Therapeutic Application of Drama.
- C. After going through the Unit you may like to have further discussions on some points and clarification on other.

1) Points for Discussion

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2) Points for Clarification

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মানুষের জ্ঞান ও ভাবকে বইয়ের মধ্যে সঞ্চিত করিবার যে একটা প্রচুর সুবিধা আছে, সে কথা কেহই অস্বীকার করিতে পারে না। কিন্তু সেই সুবিধার দ্বারা মনের স্বাভাবিক শক্তিকে একেবারে আচ্ছন্ন করিয়া ফেলিলে বুদ্ধিকে বাবু করিয়া তোলা হয়।

— রবীন্দ্রনাথ ঠাকুর

ভারতের একটা mission আছে, একটা গৌরবময় ভবিষ্যৎ আছে, সেই ভবিষ্যৎ ভারতের উত্তরাধিকারী আমরাই। নূতন ভারতের মুক্তির ইতিহাস আমরাই রচনা করছি এবং করব। এই বিশ্বাস আছে বলেই আমরা সব দুঃখ কষ্ট সহ্য করতে পারি, অন্ধকারময় বর্তমানকে অগ্রাহ্য করতে পারি, বাস্তবের নিষ্ঠুর সত্যগুলি আদর্শের কঠিন আঘাতে ধূলিসাৎ করতে পারি।

— সুভাষচন্দ্র বসু

Any system of education which ignores Indian conditions, requirements, history and sociology is too unscientific to commend itself to any rational support.

— Subhas Chandra Bose

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