BLOCK 2
INDIVIDUALIZED EDUCATION PROGRAMME: CONCEPT AND STRATEGIES

BLOCK 2 INTRODUCTION

As teachers or community workers our main concern is to teach and train the child to become as independent as possible in various areas of life. The child should learn to be able to carry out the activities she needs in her day-to-day life, interact in appropriate ways with people around, develop basic concepts about the world around her, and develop school readiness.

However, our teaching and training will be successful only if it is based on certain principles. The purpose of this Block is to help you to become aware of the principles and strategies for teaching so that the education and training you provide to the child becomes meaningful for her and leads to learning. This is the basic knowledge that you need to have in order to carry out any intervention activity with the child.

Each child with visual impairment needs an individualized education and training programme, which is based on the specific strengths of the child and the challenges that she may be facing. **Units 5 and 6** describe how to develop an individualized education programme (IEP) for the child. As a teacher, you would need to coordinate with other professionals to develop the child's IEP. Knowing the basics of IEP will also be helpful for the parents because the teachers will most often be relying on information provided by them about the child, in order to develop the child's IEP. Parents are important members of the team that develops the child's IEP. Thus, knowing about how an IEP is formulated will help the parents to know the rationale behind what the teachers are doing

Unit 7 helps you to understand the learning process. Learning proceeds through certain stages and is based on certain principles and steps. These stages and principles are the same in case of all people – with or without disabilities. It is important to follow these principles and steps when teaching the child, whether at home or in the school. The child must also receive feedback about how she is progressing. How to give feedback to the child, when she is learning to do something, has also been described in this Unit.

Units 8 and 9 of this Block describes certain teaching strategies that will help you in teaching and training the child and helping her acquire various skills and concepts. The use of these teaching strategies will help the child to learn more effectively. In fact, you may find that you have been using these strategies all along with the child, without your consciously realizing that you are doing so.

UNIT 5 INDIVIDUALIZED EDUCATIONAL PROGRAMME PLANNING – PART 1

Structure

5.1 INTRODUCTION

In Unit 1, you learnt about the nature and types of visual impairment and common eye diseases. In Unit 2, you learnt in detail about the functional vision of low vision persons and the assessment procedures to determine the extent of functional vision, using simple tools and techniques. After knowing the child's visual ability — whether the child has no vision at all or has some residual or remaining vision, you have to plan for an Individualized Educational Programme (IEP). IEP depends of child's needs and strengths.

When you prepare an educational programme for teaching and training the child to acquire various skills and concepts, you also need to check at regular intervals whether the child is learning and whether your strategies and methods are appropriate. You will find this out by evaluating the performance of the child as well as your educational programme. **Thus we see that assessment, developing an educational programme and evaluation are the three pillars on which rests the teaching and training of children with visual impairment.**

In this Unit, we shall describe about how to prepare an educational plan for the child with visual impairment. In the next Unit 6, you will read about how to evaluate the child's learning which will tell you whether or not your training programme was effective. After developing the educational plan, you need to keep certain principles of learning in mind and use specific strategies when teaching children with visual impairment. These will be described in Units 7, 8 and 9.

If you are a parent you are perhaps wondering as to how the knowledge about developing the Individualized Education Programme (IEP) will help you. **While developing an IEP is primarily a teacher's job, the parent also have a major role to play in the preparation of the IEP. The parents have valuable information about their child. Parents can share**

information about their child' s behaviour, her likes and dislikes, time spent on play, eating manners and her attitude towards school and learning activities. These are vital information for the teacher to develop an IEP. Developing an IEP is a team effort and, often, the teachers will be asking the parents a lot of information regarding the child in order to develop the IEP. Thus, it will help the parent to know how an IEP is formulated so that you can help the teachers to help the child better. Further, the parents also have to continue with the training of the child at home.

In fact for certain tasks such as toileting, eating and grooming, the parents would be having the primary responsibility of training the child rather than the teacher. An understanding of IEP will help them to do this better.

This Unit will help you to understand several aspects in the education of children with visual impairment.

Objectives

After studying this Unit, you will be able to:

- explain what is an individualized education programme (IEP);
- state the need for developing an IEP;
- describe the steps in developing an IEP;
- formulate annual goals and short term objectives in order to train the child; and
- develop the teaching plan.

5.2 WHAT IS AN INDIVIDUALIZED EDUCATION PROGRAMME?

As you have read in Block 2 of Course 2 (BCD -102) children with visual impairment experience a delay in reaching the milestones of development in different domains. Thus, a 6-year-old child with visual impairment needs adaptation in teaching and content adaptation to get along with the mainstream classroom because in lower Grades many concepts are visually oriented with diagrams and pictures.

To understand this better, think of a regular classroom situation. Here, usually, the teacher first decides upon the content of teaching (in other words, 'what' has to be taught to the students). Then she formulates her method of teaching — whether she will have a discussion or ask the children to do some activity or use some other method. Whatever method or combination of methods she chooses, she uses this with the entire class. That is, she teaches all students in the same way the teaching method is a standard one for all. The majority of the children in a class are of a particular age and their level of development in most areas is, by and large, similar. Most of them are able to understand the content through the teaching method she uses. Of course, there are individual differences, some children are quick to grasp, while some take longer. The teacher gives some extra attention to the ones who seem to lag behind, modifies her method of teaching a little for their benefit and they catch up others The main point is that **in a regular classroom, the teacher**

teaches certain content in a standard way to the entire class because she know that most children are at the same developmental level, approximately. Thus, the content of education and teaching style in a regular class are generalized.

The curriculum designed for children without disabilities is generally appropriate for children with visual impairment as well. However, **some adaptations to the learning materials and the teaching approaches have to be made** so that the learning needs of children with visual impairment can be met. Vision impairment includes the type and extent of vision loss and the timing of vision loss. Learning needs vary according to the type and extent of vision loss. No two children with visual impairment are alike — they are a heterogeneous group.

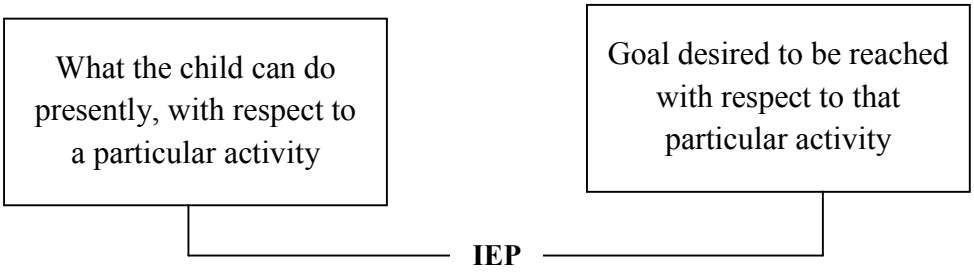
Therefore, there is a need for an educational and training programme specially designed for each child, based on her individual needs and abilities. **This education and training plan developed exclusively for a particular child is called the Individualized Education Programme/ Plan (IEP).** It is also called as **Individualized Programme Planning** (IPP) or **Individualized Training Programme** (ITP). 'Individualized' means that the education or training programme must be developed to meet the educational and learning needs of a single person rather than a group of persons, using teaching strategies best suited for that person. The 'Programme Plan' is a statement of the steps or input that will be provided by the trainer (who may be a teacher or parent or community worker) to enhance the abilities of the child to carry out the activities that she is required to in her day-to-day life and to manage and adapt behaviour problems, if any. Thus, the main purpose of the IEP to provide appropriate education and training to every child with disability. 'Appropriate' here means that the education and training are devised on the basis of (i) What are the child's needs, and (ii) what are her abilities. **Let us understand the concept of IEP through the following case study:**

Case Study - 1

Munaf is a 5-year-old boy with total visual loss. He can recognize and name the various household items by touching, smelling, and hearing their sound. He is mobile in the house but does not have the orientation and mobility skills to move in unfamiliar environments. His both the parents are working and cannot assist him every time. They are keen that he learn to move independently and go to school by himself because that will enable him to be quite independent and then he can also be trained to help himself.

Thus, in the present condition Munaf's parents are aware that he has the ability to recognize things using the other intact senses but he needs to learn orientation and mobility. The goal of Munaf's parents is that: "Munaf should learn to recognize the various places around his house and travel to the school independently in the school bus.

Now, a plan needs to be worked out which will help Munaf to achieve this goal. While working out the plan, one also needs to decide upon the time Munaf will take to reach his goal — one month, two months or more.



Thus, you would need to develop an individualized education plan with respect to each activity that you want to teach the child and the specific behaviour of the child that you want to change.

5.2.1 IEP as a Comprehensive Educational Plan

Since visual impairment affects development in many areas, therefore, the child requires services from various other professionals as well, apart from teachers. These specialists who provide inputs to the child are: orientation and mobility instructor, Braille instructor, physiotherapist (in some cases), occupational therapist, counselor, medical doctor, psychologist etc. **It is important that the IEP be prepared in consultation with all those who will be involved in providing services to the child.**

Thus, developing an IEP for a particular child is a team effort. The most important persons in this team are the parents of the child. In this process of planning the child's IEP, the parents are the main contributors and decision makers. Parents can decide the most important activity for their child to learn, and the method to be taught both at home and in school. Suggesting priority activities to the teachers and other professionals will help them understand what will make life easier and simpler for the child, as well as for the parents. Parental involvement in training and education of the child is the critical factor which will influence how soon and to what extent the child will learn to carry out various activities. **Involving the parents in developing the IEP is necessary for the following reasons:**

- The parents have a right to decide what the child will learn.
- The parents have important information about the child and can help to prioritize and decide what the child should learn.
- Involvement in developing the IEP will help the parents to understand their child's abilities and will help them to appreciate the efforts made by the child.
- The parents will be better able to train the child at home once they know why it is important to do so and how to do it. As you know, the training of the child will be successful when what is learned at school is reinforced at home and vice-versa. Thus, the IEP developed for the child will work best when the parents and professionals come together as equal participants to identify the child's needs, how these will be met and what the expected outcomes may be. Therefore, it is important that parents broadly understand the process of developing and implementing the IEP.

5.2.2 Coordinating the Development of IEP

It is quite clear that the planning of an IEP is a team effort. But someone has to coordinate the work of the team. Who can do this? **Usually, the person who has the main responsibility of developing, implementing and coordinating the IEP is the special teacher** (also referred to as special educator or resource teacher), who works in a school or organization for children with visual impairment. When the special educator develops the IEP in consultation with the regular teacher and the parents, they alo get trained in the development and implementation of the IEP.

Check Your Progress Exercise 1

1) State whether the following statements are correct or incorrect:

   a) Functional Assessment, developing an educational programme and evaluation are the three pillars of teaching and training children with visual impairment. ( )

   b) The main purpose of IEP is to provide appropriate medical services for every individual child with disabilities. ( )

   c) Functional Assessment is the evaluation of a child to know the current level of the child or what the child can do presently. ( )

2) Define Individualized Education Programme.

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3) Parents have a major role in the preparation of the IEP Explain.

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5.3 STEPS IN DEVELOPING AN IEP

There are six steps in developing an IEP.

- Step 1 - Collecting General Background Information
- Step 2 - Carrying out Functional Assessment
- Step 3 - Identifying the Annual Goals
- Step 4 - Setting Short Term Goals
- Step 5 - Formulating Behaviouiral Objectives
- Step – 6 Formulating the Teaching Plan

The first four of these steps we will explain in this Unit and the next two steps in the next Unit.

5.3.1 Step 1 - Collecting General Background Information

This is the first step in developing an IEP. In fact, this information would have been collected as part of information on case history of the child when the child first comes to the centre/institution/school. This includes the following information: family background; socio-economic status; rural/urban; number of siblings; educational level of parents; joint or nuclear family; Whether one or both the parents are working; age of the child; any complications or illness during pregnancy (prenatal history); birth history; illness of the child after birth (postnatal history), achievement of developmental milestones by the child; the child's favourite food or toy; persons she is friendly with; and things or people or activities she does not like at all.

It is important to collect this information so that the goals can be planned keeping in mind the requirements of the child's environment. Thus, if the child comes from a rural area where the family earns a living by working on the farm, the family would want that the child learns to help with the work on the farm. Therefore, the IEP has to be planned to develop these skills in the child.

Information regarding the number of members in the household is important because it will indicate how many of them can be involved in training the child at home.

If the medical history shows that the child has seizures or fits, and the condition has not been attended to, she would have to be referred to a medical doctor.

Thus, the various details which would be collected as part of general background information would help to understand the child as a whole, and her environment, which is important before beginning to plan the educational programme.

5.3.2 Step 2 - Carrying out Functional Assessment

The next step in developing an IEP is to carry out functional assessment of the child in order to know what the child can do with respect to various activities (in other words, what is her current level of performance). The teachers can perform functional assessment of the child She can train the parents to assess the child's abilities in certain domains. Functional assessment is the basis on which the goals for training are selected. Your observations will also tell you what interests the child has, what are her likes and dislikes, what she enjoys doing and what motivates her. You can use these as reinforcement for training.

You have read in detail in Unit 2 of this Block regarding how to do functional vision assessment. We will restate some main points here to refresh your memory. Briefly speaking, **'functional assessment' means observing the child performing a particular activity and noting down exactly what she**

does, without adding any interpretation your own. Some centres and schools for children with visual impairment may be using some specific functional assessment checklists like DENVER II or Jamaica Portage for this purpose. However, do not worry as these checklists are usually used by well-trained persons involving parents in the process. However, the teacher and the parents can observe the child's activities in day-to-day life even without these checklists and identify the areas in which the child needs training.

Below are listed areas in which you must assess the child's abilities and his/her level of functioning while doing Functional Assessment:

- **Physical and Motor Abilities :** This includes
  - gross motor skills (refers to achieving head control, standing, walking, running, jumping, throwing, catching and so on);
  - fine motor skills (refers to the activities such as holding a pen or crayon, cleaning, writing, holding, pouring);
  - self-help skills such as meal time activities, dressing, grooming, toileting, bathing.
- **Communication Abilities:** This includes
  - the ability to understand what others say (receptive language);
  - the ability to express oneself through speech; expressive language;
  - if the child cannot speak, any other way through which the child expresses the needs and feelings.
- **Cognitive Abilities:** This includes
  - following and carrying out single and multiple instructions;
  - identifying objects used every day and their use;
  - concepts of colour, size and shape;
  - concept of numbers;
  - concept of time;
  - using money for making small purchases;
  - reading;
  - writing.
- **Social Abilities:** This includes
  - participation in domestic activities;
  - social interaction and relationship with people;
  - participation in community life and use of community resources;
  - recreation and leisure time activities.
- **Vocational Abilities:** This includes
  - pre-vocational skills (includes assessment of interest in various types of work, ability to take care of personal belongings, sense of responsibility.
- **Assessment of Functional/ Residual Vision:** You have read about this in Unit 2.

This list may appear rather long and you may be wondering how you are going to assess the child's abilities in all these areas. However, it is not difficult to do so. Y**ou can assess the child's performance in the above mentioned areas as the child carries out her day-to-day routine.** Often, the skills mentioned above are used by the child in various activities during the day. For example, during bathing time, the child uses different gross and fine motor skills such as holding the mug and pouring water, opening and closing the tap etc. The child also identifies her own clothes, soap and towel, the temperature of water (hot and cold water) or more and less oil (pre-number concept) etc. If the child is enjoying while taking bath or if the child needs help, she also tries to communicate it — either through words or sounds and facial expressions, etc. For parents, it would be 'most helpful to do a functional assessment of their child during such routine activities to get information about the child's motor abilities, communication ability, ability to count etc. After all, the child will need all these 'skills' to take a simple bath almost every day in her life. Similarly, when there are any guests/neighbours at home, one can note how the child interacts with them; whether she is comfortable with others or not; and if the child is happy or anxious. This will give you an idea about her social skills and communication abilities. If you are observant, you will- find many opportunities during the day to note the child's abilities.

What we are saying is that, by and large, *you do not have to make the child do these activities specifically in a test like situation* in order to know whether she can do theseor not. That would make the assessment artificial by making the child conscious of herself and it may not provide the true picture. Of course, some situations may have to be created deliberately in order to know the child's level of performance with regard to these. For example, to know whether the child can write, you would need to specifically set up such an activity.

If the child has been going to a school, one needs to find out the grade at which the child is actually functioning. This is referred to as grade level assessment and is usually done by the teacher.

What is grade level assessment?

This assessment is done for finding out the grade level (class level) to which the child's abilities correspond, irrespective of the class (grade) in which she is presently studying. It is also called assessment for grade level functioning. What we mean here is that it is possible that the child is placed in grade 1, but her academic ability and concepts are at the level of nursery class. Grade level assessment could be carried out by assessing important concepts that the child is expected to know at various grade levels, starting from a lower grade and moving on to higher grades. Text books can be used as guidelines regarding what concepts need to be assessed. Stop at the grade level at which the child starts having a difficulty. In this way, you can determine the grade level functioning of the child. Grade level assessment is usually not required for children in the early childhood years as they have not entered into formal schooling yet.

To summarize, we can say that through functional and grade level assessment we can find out the child's abilities in the following areas of development. Having made an assessment of the child's abilities in various areas, the next step is to identify the annual goals for training.

5.3.3 Step 3 - Identifying the Annual Goals

The third step in developing an IEP is to decide upon the goals you want the child to achieve with respect to various areas of development in one year. Setting annual goals, short term goals and formulating behavioural objectives (the third, fourth and fifth step) forms the heart of the IEP. **Annual goals are broad statements, stating in general terms, what we want the child to be able to accomplish in one year.** The goals may be related to any area of development - learning a social skill, acquiring a motor skill, fulfilling a physical need, understanding a concept or any other.

The following factors need to be considered while setting annual goals for a child:

- **The current level of functioning:** To take an example, if a 5-year-old-child adequately develops sense of touch to recognize textures, size, shape etc. and also has concept of right, left etc., then we can have 'learning to read and write the Braille alphabets' as an annual goal. But if the child does not have those pre-requisite skills then learning to read and write the Braille alphabets in one year would be too ambitious.
- **The child's age:** The goals must be chosen in accordance with the child's age. The goal for a two-year-old cannot be "the child will be able to dress herself independently."
- **The degree of visual impairment:** Any amount of usable vision may help the child to learn various skills so the degree of vision loss should be taken into account before setting the annual goals. Moreover IEP may have to be specifically prepared for increasing the visual efficiency of a child having low vision.
- **The associated disabilities, if any:** These will hinder the learning process and increase the time to achieve the goal. So these have to be taken into account while identifying Annual Goals.
- **Difficult behaviors:** These, too, can hinder learning and progress of the child.
- The **amount of time to be devoted** in training the child towards the particular goal.
- **The practicality of achieving the goal:** This is influenced by the child's current level of performance. Goals set too high or too low will not benefit the child. The child will not be able to achieve the goal set too high and it will de-motivate her. Too easy a goal will not ad to any substantial improvement in the child's functioning.
- There are certain areas with respect to which the parents may be better able to carry out the training at home. Therefore, in the IEP, the goals for

the school and the home must be specified separately. Training the child in eating, , bathing and toileting on her own usually will be a goal to be achieved by the parents, under teacher's guidance; while "learning to read Braille" is a goal mainly to be achieved by the teacher. Yet, both the teacher must follow the same methods and steps with the child during the feeding and toileting times at school as those being used by the parents at home. And if the parent is helping the child to practice 'reading Braille alphabets' with Braille blocks, at home, then the parent must follow the same methods as being used by the teacher in the school. Thus, there has to be coordination between the training being provided in the school and home and the parents must participate actively. This makes the learning continuous and consistent for the child.

- **The priorities for the child:** Obviously, the child cannot achieve all the goals you have listed for her at the same time. Therefore, you have to decide the goals which you want the child to achieve first; in other words, the priority goals. Decide these on the basis of what is of immediate need and relevance to the child in order to adjust to her environment. Discussion with the parents will help in setting priorities— find out what is it that they want the child to learn. The priority for a child who is not independent in feeding, bathing, toileting and dressing is: independence in toileting, followed by feeding, dressing, then bathing and then other skills. In the case of a child who shows unacceptable behaviour in the form of hitting others and injuring him/herself and also has difficulty in recognizing various objects and alphabet through tactile sense, the priority will be to make her stop her self-injurious and destructive behaviour before training her to recognize objects and the alphabet.

The annual goals must be written in the sequence, as per priority, in the IEP. The goals must move from simple to complex so that by the time the child reaches the complex goal, she has acquired the pre-requisite skills.

It is important to remember that setting the annual goal does not mean that the child is expected to learn that activity completely. The annual goal could be learning to do a part of the activity. To take an example, the activity of feeding oneself independently includes: being able to serve the food on to one's plate, eating it without spilling and keeping the used utensils in the appropriate place. However, you may feel that the child will not be able to learn to carry out the entire activity in one year. Thus, teaching the child to learn a part of the activity — 'eating without spilling and keeping the used utensils in the appropriate place' — may be your annual goal.'

It is also possible that you may have set an annual goal but towards the end of the year you find that you have not been able to achieve it — the child may have acquired only a part of the goal. Do not get disheartened. This goal can get carried on to next year. To take an example, the annual goal might have been that 'the child will be able to read Braille alphabets up to 'M'. However, you find that the child has learnt to read only up to H' in one year. Thus reading up to 'M' becomes your annual goal for the next year.

Let us now understand how to set annual goals through an example. In the following case study, we have described the current abilities of a five year-old girl, which is the basis for determining annual goals for her.

Case Study 2: Deciding the Annual Goals

The current level of functioning of a five-year-old girl, with total blindness was assessed using the Functional Assessment Checklist. The checklist helps to make an assessment of the child in the following areas: personal, social, academics, occupational and recreational.

The following are the capabilities of the child in various domains:

***Personal**:*

- *The child can move in the house but often hurts herself by colliding with walls or any hard surface. She can turn the bolt and open the door when she wants to go in and out of the room.*
- *She can wear and remove undergarments and simple clothes but cannot tie shoe laces or buttons.*
- *She needs assistance to seat herself on the toilet seat independently and to clean herself after defecation.*
- *When given food served in a plate, she eats a full meal but with spilling. She asks for more curry, if needed.*
- *She identifies brush and paste, brushes her teeth but needs help while applying paste on the brush.*
- *She can pour water on herself but does not apply soap on the body. She needs help in bathing, combing hair, applying cream/oil and wearing shoes.*

***Social**:*

- *She usually plays alone but sometimes enjoys (when assisted) in a group game in which 4-5 children are involved.*
- *She does not wait for her turn while playing games as she does not know when her turn would be.*
- *She shares the play material with her friends.*
- *She feels shy with people and always keeps quite. When forced to be in a situation with a crowd, she fiercely trembles but becomes calm when she finds a familiar person around her.*

***Academics**:*

- *The child is aware of the concept of 'more' and 'less'.*
- *She names body parts when being asked by touch.*
- *She can hold a stylus and punch it through Braille Slate. She cannot write letters of the alphabet.*
- *She does not identify numbers written on Taylor Frame but she can easily put the types into the Frame in the direction 2, 4, 6 and 8.*

- *She counts objects correctly up to 10.*
- *She does not match paper cut-outs of different sizes or shapes.*
- *She is not able to classify or seriate objects on the basis of size or shape*
- *She can identify different textures.*
- *She can differentiate money from other objects but does not know the value of coins or notes.*

Occupational:

- *She can sort vegetables (i.e. identify and separate different vegetables), and place them in the container.*
- *She is not able to bring the washed vessels and put them in their appropriate places on the shelf.*
- *She cannot place plates and glasses for washing after eating.*
- *She does not dust the furniture and other items in the house.*

***Recreational**:*

- *She plays games like beating drums or with sound making toys alone.*
- *She likes to listen to music and rhymes.*
- *She does not draw simple figures; does not cut and paste the pictures.*
- *She likes touching things around her.*
- *She goes out for a walk with her mother and when her mother takes her to play in the park with other children she tries to join them.*

***The associated disability or conditions along with blindness**: None.*

***Mannerisms**:*

Always pokes her right eye with her right hand even in social gathering which makes her look odd.

Verbalization — always makes factual comments which she has heard others speak but which do not have any relevant meaning in that context.

The following are the ANNUAL GOALS that were set for the child in different domains.

- **Personal**
  1) Developing orientation and mobility skills so as to move independently in familiar surroundings of her home and preschool
  2) Eating food without spilling Independence in toilet use.
- **Academics**
  1) Improving tactile sense and other remaining senses (i.e hearing, olfactory etc.)
  2) Reading and writing alphabets in Braille
  3) Develop prerequisite skills for abacus – setting and clearing numbers

4) Reading numbers up to 9 on Taylor Frame.
5) Writing numbers from 0 to 9 on Taylor Frame.
6) Matching different sizes and shapes.
7) Recognizing and naming the five vegetables and fruits.
8) Money: Identification and naming of Rs. 10 and Rs. 20 coin and rupees.
9. Differentiate between 'near' and 'far'
10. Differentiate between 'big' and 'small'
11. Differentiate between 'heavy' and 'light' articles

- **Social**
  1) Becoming comfortable in a crowd.
  2) Waiting for her turn during playing.
- **Occupational**
  1) Bringing her plate and glass to the washing place and washing self after eating.
  2) Dusts the furniture with cloth.

5.3.4 Step 4 - Setting Short Term Goals

Since the Annual Goals stated in the above case study are too many in number and each goal is too big in itself, all cannot be taught to the child at the same time.

Therefore, there is a need to break down the annual goals into small goals to teach on a short term basis. **'Short term goals' here means goals that can be achieved by the child in a shorter period or duration of time, such as three to four months.**

For example, under the area 'Personal', one of the annual goals is: 'developing orientation and mobility skills'. Presently, the child is able to walk within her home but is not fully confident and collides with the wall. So before teaching her mobility in the outside environment, it would be worthwhile to teach her the complete orientation and mobility within her home surroundings and to make her able to move around independently in the home environment without hurting herself. She can also be provided with kiddie cane to use to detect objects in front of her. She cannot use cane techniques as adults are using. She has to be trained in other techniques such as sighted guide, upper body and lower body protection techniques, search technique and trailing technique. These techniques you will read about in Units 19 and 20. Therefore, the goal we select for the first three months is that: 'the child be fully aware about her home and confidently and safely move around in the environment, with the assistance of elders when required'. The next goal can be to train the child to use techniques in the school which is also a known environment.'

Similarly, under 'Academics', we will break the Annual Goal: 'Reading and writing alphabets in Braille' into different short term goals. So for the first

three months the goal is to recognize and read 5 letters with easier shapes like 'a' 'b', 'c', 'k', T etc. When the child can do this, we move on to the next short term goal selecting another six Braille letters.

To take another example, the Annual Goal of: "Reading numbers up to 10 on Taylor Frame" can be broken down into the short term goal: "Reading numbers up to 4" for the first three months. When the child achieves this short term goal, you can set the short term goal for the next three months.

Thus, the short term goals can be thought of as a ladder — each short term goal is one step of the ladder and, the child keeps climbing up the ladder until she achieves the annual goal.

If you think about it, you will realize that what we have actually done is to break up the Annual Goal into small steps. The number of steps you break up an Annual Goal into would depend upon the ability of the child. For example, for a child who has a lower ability, instead of stating the short term goal as 'learns to identify 5 letters' for the first three months, you can set the goal as: "learns to write 2 letters".

As explained above, there are six steps in developing an IEP. In this Unit, you have read the first four steps. In the next Unit, you will read Steps 5 and 6 – i.e., Formulating Behavioural Objectives and Formulating the Teaching Plan.

Check Your Progress Exercise 2

1) Match the Following

a) Physical Abilities	i) Concept of more or less
b) Social Abilities	ii) Climb the stairs
c) Cognitive Abilities	iii) Peel vegetables
d) Vocational Abilities	iv) Participation in group games

2) List the various factors that need to be considered while setting Annual Goals for a child.

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3) Explain the various areas in which a child is assessed to find the abilities and level of functioning of the child.

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5.4 SUMMING UP

- Because of the wide variation in the abilities of children with visual impairment, we need to develop an individualized education programme for each child keeping in mind
  - What the child can learn
  - The pace at which he will learn
  - The extent to which he can learn
  - The teaching methods through which he will learn.
- The main purpose of the IEP is to provide appropriate education and training to every child with disability, including those with visual impairment.
- Developing an IEP for a particular child is a team effort, The most important persons in this team are the parents of the child.
- The steps involved in developing an IEP are:
  - Collecting general background information
  - Carrying our functional assessment
  - Identifying the annual goals
  - Setting short term goals/objectives
  - Formulating the teaching plan.

5.5 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) a) Correct.

   b) Incorrect — The main purpose of the IEP to provide appropriate education and training to every child with disability, including those with visual impairment.

   c) Correct

2) The degree of visual impairment and associated handicaps influences the child's learning, the pace (speed) and extent of learning and the teaching methods for learning. Therefore, there is a need for an educational and training programme specially designed for each child, based on the child's individual needs and abilities. This education and training plan is called the Individualized Education Programme (IEP).

3) While developing an IEP apart from the teachers, parents have a major role to play. If the child goes to a centre or a school, it is very likely that the teachers there will develop an IEP for the child and will teach and train the child on the basis of the Plan. Developing an IEP is a team effort and, often, the teachers will be asking the parents a lot of information regarding the child in order to develop the IEP. Thus, it will help the parent to know how an IEP is formulated so that they can help the child

better. Moreover, parents have to continue with the training of the child at home too for better results.

Check Your Progress Exercise 2

1) a) (ii)

   b) (iv)

   c) (i)

   d) (iii)

2) The factors that need to be considered while setting Annual Goals for a child are:

   - The current level of functioning
   - The child's age
   - The degree of impairment
   - The associated disabilities, if any
   - The amount of time to be devoted in training the child towards the particular goal.
   - The practicality of achieving the goal
   - The extent of parental involvement
   - The priorities for the child.

3) The second step in developing an IEP is to carry out functional assessment of the child in order to know what the child can do with respect to various activities. The following are the areas in which we must assess the child's abilities and the level of functioning.

   i) **Physical and Motor Abilities:** This includes gross motor skills, fine motor skills and self-help skills.

   ii) **Communication Abilities**: This includes receptive language, expressive language and any other gestures/sounds etc. through which the child expresses the needs and feelings if the child cannot speak.

   iii) **Cognitive Abilities**: This includes following and carrying out single and multiple instructions, identifying objects used every day and their use, concepts of colour, size, shape, numbers, time, money, reading and writing.

   iv) **Social Abilities**: This includes participation in domestic activities, social interaction and relationship with people, participation in community life and use of community resources — recreation and leisure time activities.

   v) **Vocational Abilities**: This includes the child's interest in various types of work, ability to take care of personal belongings, sense of responsibility, etc.

   vi) **The extent of functional vision**

UNIT 6 INDIVIDUALIZED EDUCATIONAL PROGRAMME PLANNING – PART 2

Structure

6.1 INTRODUCTION

In Unit 5, you have understood the meaning of Individualized Education Plan and the steps involved in planning it. There are six steps in the planning process and you read about four of these steps in the Unit 5. In this Unit, you will read about Step 5 and 6. You will also read about how to evaluate the child's learning which will tell you whether or not your training programme was effective.

Objectives

After studying this Unit, you will be able to:

- formulate behavioural objectives as a part of developing the IEP;
- formulate the teaching plan;
- explain what is evaluation and be able to conduct formative and summative evaluation;
- state the importance of teaching the child various skills in the appropriate context; and
- explain the overall process of Individualized Programme Planning/ Individualized Education Plan.

6.2 STEPS IN DEVELOPING AN IEP

As you have understood from reading Unit 5, there are six steps in the planning process of an Individualized Education Plan and you read about four of these steps in the Unit 5. Here we will briefly recapitulate the firsts four steps and then explain Steps 5 and 6 in detail.

6.2.1 Step 1- Collecting General Background Information

This is the first step in developing an IEP. This includes the following information: family background; socio-economic status; rural/urban; number of siblings; educational level of parents; joint or nuclear family; whether one or both the parents are working; age of the child; any complications or illness during pregnancy (prenatal history); birth history; illness of the child after birth (postnatal history), achievement of developmental milestones by the child; the child's favourite food or toy; persons she is friendly with; and things or people or activities she does not like at all. For details read Unit 5.

6.2.2 Step 2 - Carrying Out Functional Assessment

The next step in developing an IEP is to carry out functional assessment of the child in order to know what the child can do with respect to various activities (in other words, what is her current level of performance). Functional assessment is the basis on which the goals for training are selected. Your observations will also tell you what interests the child has, what are her likes and dislikes, what she enjoys doing and what motivates her. You can use these as reinforcement for training. For details read Unit 5.

6.2.3 Step 3 - Identifying the Annual Goals

The third step in developing an IEP is to decide upon the goals you want the child to achieve with respect to various areas of development in one year. Annual goals are broad statements, stating in general terms, what we want the child to be able to accomplish in one year. The goals may be related to any area of development — learning a social skill, acquiring a motor skill, fulfilling a physical need, understanding a concept or any other.

6.2.4 Step 4 - Setting Short Term Goals

Since each Annual Goal is too big in itself, there is a need to break down the annual goals into small goals to teach on a short term basis**.** 'Short term goals' here means goals that can be achieved by the child in a shorter period or duration of time, such as three to four months. For details read Unit 5.

6.2.5 Step 5 - Formulating Behaviouiral Objectives

For each task/activity you have selected for teaching for the short term duration (in other words, for each short term goal), we need to write a specific behavioural objective. It is only when you write the specific behavioural objective will you know what exactly you want to teach the child

A specific behavioural **objective states five things**

1) **who** is the person to be trained
2) **what** the person will learn at the end of training and how she will demonstrate her learning (in other words, what the child will be able to do at the end of the particular time duration of training)
3) **under what circumstance** the person will show the performance/behaviour (condition)
4) **how well** the person should be able to do what she has been taught (in other words, 'expected level of performance' after training; also referred to as 'criterion' or 'degree of success').
5) **after what period of teaching** the person will achieve the objective (duration).

Thus, the specific behavioural objective is a statement of what the person will be able to do after training. Let us now understand how to write each of these components of the specific objective.

How to Write Behavioural Objectives

1) Who will be trained?

The specific objective must name the person who will be trained.

2) What will she learn at the end of training and how this learning be shown?

The specific objective should describe the behaviour or skill that you intend to develop, strengthen, modify or eliminate in the person and this should be stated in measurable and observable terms — i.e., in ways that can be seen or heard (observable) and counted (measurable). The following examples will make this clear.

Example 1

Supposing you are teaching the child how to count and you write the objective as: "Rajni will understand counting up to 5." Now the word 'understand' cannot be seen or measured —'understanding' is in the person's mind. On the other hand, if the person has 'understood', she will do something that shows her understanding. So she might be able to recognize a group of 5 objects, out of groups of 2, 3, and 5 objects; she might pick up 5 objects from a pile; she might count correctly up to 5.

These are behaviours and performance that can be seen or heard or counted. They give you proof that the child has understood the concept.

The word 'understanding' cannot be counted or seen or heard and also it might mean different things to different people. Thus, the above objective should be stated as: "Rajni will pick up and give objects up to five when asked not sequentially (4, 3, 1, 5, 2,) or "Rajni will identify the group of objects (2, 4, 1, 5, 3) when asked not sequentially."

Example 2

Let us take another example. Do you think that the following objective has been stated appropriately?

"I want Radha to become more self-sufficient."

The objective is inappropriate for two reasons. Firstly, it states what someone else wants and not the behaviour that would be taught to Radha. Secondly, the word 'self-sufficient' may itself mean different things to different people. It could mean that Radha will be able to:

- eat by herself
- carry out toileting and bathing on her own
- decide what to wear and wear it
- travel to and back from school on her own
- keep herself occupied by playing on her own
- do her homework by herself.

Thus, instead of using the global word 'self-sufficient', we should say exactly what we are going to teach. This is important for two reasons: Firstly, it tells you the exact teaching activity that you must plan because you know the exact behaviour that you want the person to learn. Secondly, many people are involved in teaching the person with visual impairment — family members, parents, teachers, community workers. If everyone knows exactly what is being taught, the training will be better and more can be accomplished.

AVOID	USE
• Knows (for example, the alphabet)	- reads the alphabet - points to the specific letters when asked - names the letters when pointed to writes the letters
• Knows (the shapes, for example)	- tells the name of a certain shape - sorts out the name of a certain shape - identifies a particular shape - matches similar shapes among the given various shapes
• Listens (If the child had listened, he would be able to)	- repeat what he had heard - answer the question carry out the instruction - retell a part of the story from memory
• Understands (big and small) - recognize the 'big' and 'small' object	- picks up the 'big' object when the big and small objects are placed together. - names the big 'object'. - counts the number of objects pick up the pile containing a certain number of objects.
• Learns (say clearly what the child will learn)	- match - name - put into different piles - repeat aloud - follows directions

- Recognizes
- select through hearing and touch
- point to
- pick up

Appreciates

- Be curious
- Realizes fully
- Feels

3) Under what condition the behaviour will be shown? When you are deciding upon an objective, you have to also decide under what conditions will the child show that behaviour. Will she show that behaviour every day, during the daily routine or will she do it when specifically asked to do so?

Examples of the way to state the condition are the following:

- When hungry, Lalita will ask for food…..
- When shown the models of ten fruits and asked to identify and name, Kishore will identify and give the name……
- Mallika will do single addition sums when given a worksheet with 10 sums.
- Kamal will eat with spoon when asked to do so.

4) How much proficiency the child should achieve?

This part of the objective states the level of performance expected of the child after the training period is over. This is also referred to as criterion or degree of success. Thus this part of the objective will state

- for how long,
- or how many times, or
- how often, or
- how well a particular behaviour will occur.

Some examples of how to state the criteria in the objective are the following:

- When the sound ball is thrown to her, Gauri will catch it 8 times out of 10.
- Without being reminded, Maya will brush her teeth 5 days out of 7 in a week.
- When asked to stand, Susan will be able to balance herself in the standing position for one minute.

It is important to remember one thing here. Avoid writing a 100% level of performance. Keep that only for very important situations where there is a danger if the performance is not total. An example of such a situation would be:

- When pouring water from the electric kettle himself, Raghuvir will first switch it off every time.

However, if for other activities you put the condition as "daily" or "each time", or 10/1 0 times, then even if the child fails to do so once you would have to say that the child has failed in reaching the objective. This would be discouraging for you as well as the child. Therefore, set the condition which is practical as we have done in the examples stated above.

5) After how long the objective will be achieved (duration)?

The objective has to indicate the time period of the training after which the person will acquire the skill. This may be stated in the form of a certain date by which the child will achieve the objective, or in terms of the number of sessions or the number of months of training.

Examples of stating the duration of training are the following:

- When asked to write the names of five shapes, Kiran will write the names of five shapes after three months of training.
- After the school is over, Rakesh will be able to come back by himself by 30 June, 2024.
- Rajani will be able to write her name by himself after 15 sessions of training.

Having read in detail about the various components of a specific objective, can you now write a specific objective with respect to teaching Rajani to move into her home surroundings? Compare your version with ours provided below:

You can use any of the following formats to write the objective:

- Rajani will be able to move at every place of her house without any assistance (content and behaviour), 8 out of 10 times when required (condition), by herself (criteria), after 15 sessions of teaching (duration).
- When required (condition), Rajani will be able to move independently in her house (content and behaviour), 8 out of 10 times (criteria), after 3 months of training (duration).
- After 3 months of training (duration), Rajani will be able to move in her house (content and behaviour), by herself (criteria), 8 out of 10 times when required (condition).

Remember, that it is you as the teacher or the parent who will decide upon the condition, criteria and duration, based on the child's age and degree of visual impairment and the amount of time being devoted to training.

Some examples of specific behavioural objectives

Some examples of specific behavioural objectives are given below. Reading them will help you to set the behavioural objectives in your own case.

- When asked to answer questions after reading a story, Savita will answer three out of four questions based on the story read out to her, each time, after 2 months of training.
- When asked to wash a garment, Rajiv will wash it to look clean without any visible stain or dirt, after 10 training sessions.
- When shown objects of different sizes, Radha will identify the small object 9 times out of 10 by the end of one month of training.
- When other children ask for the play material, Rohit will share his play material, 5 times out of ten times, after 3 months of training.
- On being asked, Rajat arranges all numerals from 1 to 10, when not written sequentially on a taylor frame, 8 times out of 10, after three months of training.
- When required, Madhu makes 4 sandwiches in 20 minutes for breakfast, after 20 sessions of training.
    - Maya will brush her teeth 5 days out of seven in a week, without being reminded.
    - When asked to stand, Susan will be able to balance herself in the standing position for one minute.
    - When feeling toilet, Raghuvir will go to toilet by himself from his bedroom to the toilet place.
    - When asked to write Braille, Abha will punch simple shapes like ‘a’, ‘b’ and ‘c’ after three months of training.
    - Alka will be able to move from her house to the shop by herself after 15 sessions of training.
    - After 3 months of training, Rajni will be able to feed by herself each time when hungry.’
    - When asked to answer questions after reading a story, Savita will answer three out of four, questions based on the story read out to her, each time, after 2 months of training.
    - When asked to wash a garment, Rajiv will wash it so that it becomes clean without any dirty smell, after 10 training sessions.
    - When other children ask for the play material, Rohit will share his play material 5 out of 10 times, after 1 month of training.
    - When walking, Ayisha maintains proper gait after 3 months of training.
    - When talking, Meena sees the opponent face 8 out of 10 times, after 1 month training

6.2.6 Step 6 - Formulating the Teaching Plan

After deciding upon the specific behavioural objective, the teaching plan must be prepared. This means identifying the specific procedure, method and strategies that will be employed to teach that objective to the child and writing these out in the form of a plan. While we shall be discussing the specific teaching strategies in Unit 8 and 9, here we shall describe how to prepare the teaching plan.

A Teaching Plan includes:

- the task/activity which has to be taught to the child;
- the child's current level of performance with respect to that task;
- the material required for teaching;
- the procedure for teaching; and
- the procedure for evaluation.

You have read about the first two aspects in the discussion in the Unit till now. Let us describe the remaining aspects now.

Material: This refers to the material required for teaching the required objective.

Procedure: This means writing in detail how the task is going to be taught to the child using the selected material. It also includes stating what type of assistance (physical or verbal; also referred to as prompt), will be provided to the child to do the task; the reinforcement that will be used and the settings (classroom, playground, home, etc.) in which the training will take place. You will read about prompts and reinforces in Unit 9.

Evaluation: This mentions when and how the evaluation will be done to know whether the child has learnt what one has been teaching. In fact, this aspect has already been incorporated in the objective itself. For example, when we say that: "Rajat will be able to climb five steps on the stairs independently, 5 out of 6 times after 2 months of training", then '5 steps', 'independently' '5 out of 6 times' are the criteria for evaluation and this evaluation will be done after 2 months of training. We shall discuss evaluation in greater detail the next sub-section.

The following are two examples of teaching plans. The task stated in each of the two examples is actually the Annual Goal which has to be broken down into many short term goals and then each short term goal has to be converted into a specific behavioural objective. In these teaching plans, we are describing the procedure for teaching one of the specific behavioural objectives. . With respect to a particular child, an IEP would need to be prepared for each specific behavioural objective you want her to learn.

Teaching Plan Example 1

Task/activity(which is the Annual Goal) : *Brushes teeth independently.*

Current Level of Performance*: The child identifies brush and paste, can hold the brush and toothpaste; cannot apply toothpaste on the brush and cannot brush teeth independently; can rinse the mouth after brushing and clean the brush.*

Specific Behavioural Objective*: On waking up and before going to bed, Reena will brush her teeth independently , after the training period of three months, six days out of seven.*

Materials needed*: Tooth brush and toothpaste.*

Procedure: *The trainer (who would most likely be the parent) would take the child to the washbasin. The trainer will make the child hold the brush in one hand and the paste in the other hand, and then hold the hands of the child from behind using hand-under-hand technique. The trainer will apply pressure on the child's hand slightly so that paste comes out of the tube. The trainer would remove the pressure on the child's hand after the application of paste. Using hand under hand technique the trainer will provide help to the child to brush her teeth. Since the child can rinse her mouth the trainer will not support the child in doing so.*

Gradually the trainer will shift from hand-under-hand technique To hand-over-hand technique of providing physical support.

Slowly, as the child learns to apply paste and brush her teeth, the physical help (also referred to as physical prompt) provided by the trainer in applying the paste would be reduced. The trainer will then use verbal reminders (also referred to as verbal prompt) to tell the child to apply the paste and brush the teeth. Gradually, even the verbal prompts would be reduced. The child would be reinforced after every successful completion of the task by praising her.

Evaluation: *After three months of training period, the child is able to e brush independently, 5 days out of 7.*

Teaching Plan Example 2

Task/activity(which is the Annual Goal)*: Can read and write alphabets 'a' to m' in Braille.*

Current Level of Performance: Recognizes different shapes made by six Braille dots. He can recognize various things by touch (means his tactile sense is well trained). He follows the straight and curved line m Braille. He can also count the squares made by Braille dots.

Specific *Behavioural* Objective: The child will be able to identify and read letters 'a', 'b' and 'c' when asked in any situation, 4 out of 5 times, after two months.

Materials needed: Flash cards with letters 'a' and 'b' and 'c' written; on them in Braille; Braille blocks on which these letters are written.

Procedure: The trainer (can be the parent or the teacher) after revising different shapes made by 6 Braille dots with the help of worksheets or flash cards, will introduce the flash card with 'a' written on it. He will touch it, say the dot number and then name it and task the child to repeat the letter. The trainer will help the child to move his index finger on letter 'a' and after doing so, point to it saying 'a'. Once the child learns to recognize 'a' on the flash card, the trainer will show the same alphabet on a plain paper or on a worksheet, on a hard-paper, on his Braile slate, on the signboard, one by one, and ask the child to recognize it. Once the child begins to recognize the alphabet 'a', the trainer will introduce the letter 'b' along with revising shape position of the Braille dots and the letter 'a'. After the child learns'a' and 'b' the trainer will introduce alphabet 'c ' with the same process as he did earlier with 'a ' and 'b'.

Evaluation: After 2 months of training, the child is able to identify and read letters ‘a’, ‘b’ and ‘c’, 4 out of 5 times correctly.

Check Your Progress Exercise 1

1) Explain the importance of setting short-term goals in the development of an Individualized Education Plan (IEP).

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2) Compare and contrast the concepts of “understanding” and “observable behaviour” in the context of writing specific behavioural objectives.

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3) Describe the role of the teaching plan in the implementation of an IEP, using specific examples.

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6.3 TEACHING AND LEARNING IN APPROPRIATE CONTEXT

At this point it is very important to clarify one aspect and that is as follows:

Teaching any activity to the child should be done in the proper context and situation. For example, if the child is taught to wear and remove her shirt in the school/centre and this is done repeatedly during the day, often ‘in the presence of other children and adults, the child will think that it is appropriate to remove the shirt when others are present, and that he/she can do so anytime and anywhere. Thus, the child may remove the shirt in the drawing room in their house — when guests are present. When the child does so, we say that the child behaves inappropriately. But if we look at it carefully, who has created the problem — we, as trainers, or the child? Besides, do we ever wear or remove our clothes at any other time except when bathing in the morning or when getting ready to sleep in the night? Then why should we teach the child this activity at any other time of the day? When we do so, the activity does not become meaningful for the child.

The point that we are making is that the child should be trained to do a particular activity in the right situation. In this way, the activity becomes meaningful, and there is no fear of inappropriate generalization or fear of whether the child will be able to transfer the training given in one situation to another. This is particularly true when teaching the child self-help skills.

When you have the appropriate setting for training, your specific objective will by itself be stated appropriately. Thus, with respect to the activity of removing the shirt, your specific objective would be : "Before bathing, Naman will remove his shirt each day after three months of training". Contrast this specific objective with the one below which you would formulate if you were teaching Naman to remove his shirt in the afternoon in the school: "When asked, Naman will remove his shirt 8 times out of 10, after three months of training".

It is quite clear that the first objective makes more sense than the second one. Besides, the way you are assessing the child's learning in the second objective is also unnatural. You are asking him to wear the shirt ten times in one sitting and then seeing how many times he does it correctly. But do we wear our clothes like that in everyday life? No! On the contrary, in the first objective, you are automatically observing and evaluating the child's performance every day and assessing him in the right context.

Of course, certain activities would have to be taught to the child in the structured setting of the classroom — such as learning to read, write, concept of number and so on. But the attempt should be to relate whatever has been learnt in the classroom to real life and the appropriate context.

6.4 EVALUATION

As you would have understood by now, after the training period is over, the parent or the teacher sees whether or not the child has learnt what was being taught and whether she could do it in the time frame as stated in the objective. If she did not achieve the objective, i.e. if she could not learn the new activity as a result of training, what was the reason for it? **Thus, evaluation in context of IEP, refers to assessing the child being trained as well as taking a critical look at the training programme itself.**

For example, the teacher had set the following objective to be achieved by two children –

"Matches cut-outs of three different shapes correctly, after 15 sessions of training".

After 15 training sessions, the teacher tested the children. The result was the following:

- The first child could match the cut-outs of all three shapes without mistakes; in other words, he achieved the criteria.
- The second child could match only one shape correctly; in other words, he did not achieve the criteria, because he is yet to learn to match two more shapes. The discrepancy (difference) here is two shapes.

Thus, evaluation involves a comparison of the way things are to the way they should be.

Standard _____ **Behaviour**

(The way things should be) (The way things are)

Discrepancy

As the above example brings out, the second child still requires training in the activity even after the training period is over. Thus, you need to check the reason for this. Where could you have gone wrong? Is it that you were too ambitious in framing your objective and the child needed more time to learn? Were the training strategy and the material used for training not appropriate? Or were there some child's health related or family related problems that could have affected his learning?

6.4.1 Difference between Assessment and Evaluation

It is important to remember that evaluation is different from assessment of the child. Assessment is done before beginning training in order to find out the abilities and skills the child already has, that is, what is her current level of functioning. This will help you to select the activities in which the child needs training i.e., it will help you to identify 'the goals of training.'

Evaluation is done during or after the training period to know how much the child has learnt through your teaching. It helps you to decide whether to take up the next activity for teaching or does the child still require training in the current activity. When evaluation is done during the training period, it is called formative evaluation. For example, you have set the objective of teaching the child to eat food independently in a period of three months. You evaluate the performance of the child formally at regular intervals (after every session/every three sessions/every week) to see how the child is progressing towards the goal (eating food by himself). The evaluation of the child's performance helps you to know the positive or negative aspects of your teaching. It helps you to decide whether to continue the training as planned or whether to bring changes.

6.4.2 Types of Evaluation

Quantitative Evaluation

This means noting down the number of times the child did a certain activity correctly. For example, if you were evaluating the child's ability to recognize fruits, then the number of times the child identified and named a fruit correctly is noted; if you are evaluating the child's ability to brush her teeth, then evaluation will include the number of times the child remembered to brush her teeth on her own. You will have to decide upon a minimum response that is acceptable and then see how the child's performance compares to it. We are all familiar with this type of evaluation as this is the procedure which is used in most schools where we ourselves have studied.

Qualitative Evaluation

Noting the number of times the child performed a certain item is a quantitative way of depicting the performance. Apart from this, the

evaluation must also include a qualitative appraisal of the child's abilities. This means that you note down aspects such as: did the child seem to enjoy learning the task, could she concentrate, did she understand what you were saying, was she alert, did she take initiative, did she remember what was taught in the previous session. Being sensitive to these aspects of the child's personality will help you to make your IEP more appropriate. However, be careful to be objective about your observation regarding the child — these should not be influenced by your likes and dislikes of the child.

Remember, the evaluation should not be seen as a final judgment about the child. Rather, it should be seen as a process which leads to further planning regarding how to train the child. Evaluation is more an indication of how you planned your teaching than it is about the abilities of the child.

6.5 THE OVERALL PROCESS OF INDIVIDUALIZED EDUCATION PROGRAMME PLANNING

Thus, the three steps on which depends the education and training of children with visual impairment are the following:

Step 1: Functional Assessment

Step 2: Developing Individualized Education Programme

Includes

a) Setting Annual Goals
b) Formulating Short Term Goals
c) Formulating Behavioural Objectives
d) Preparing the Teaching Plan

Step 3: Evaluation

6.6 MAINTENANCE OF RECORDS

Report writing and record keeping are integral parts of each of the three phases of individualized programme planning. There are different types of formats for recording information, performance and progress in each of these three phases. The specific assessment tools used would have their own formats for recording the results of the assessment. Systematic documentation of information regarding the performance of a child is essential. As the educational needs of each child are different from the others and the teaching plan is individualized, documenting and maintaining individual records is important to report the child's progress.

While writing the reports, be careful to describe the performance of the child objectively so that any other individual reading it can understand clearly what the child was able to do before training and what the child has learned as a result of training. Generally, avoid using the words such as 'knows', 'good', 'nicely', 'well done', as they do not exactly tell you what the child can or cannot do. Thus, instead of saying: "The child knows shapes", state clearly what the child is able to do with regard to shapes. Similarly, instead of

saying: "The child speaks well" state what does 'well' means. It may mean that the child speaks in sentences or answers simple questions relating to herself and the family or narrates incidents which involve 4-5 sentences, with prompts.

Check Your Progress Exercise 2

1) Differentiate between: Evaluation and Assessment.

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2) List the steps being followed in training and educating the children with visual impairment.

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3) Explain the types of Evaluation, with examples.

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6.7 SUMMING UP

- The steps involved in developing an IEP are:

  Collecting general background information

  - Carrying our functional assessment
  - Identifying the annual goals
  - Setting short term goals
  - Formulating behavioural objectives
  - Formulating the teaching plan

- **Behavioural Objectives**

  i) Specific: Objectives should be clear and precise, detailing exactly what the student is expected to achieve. Avoid vague terms like "improve" or "increase"; instead, specify measurable behaviours.

ii) Measurable: Define how progress will be measured. Use quantitative criteria (e.g., number of times a behaviour occurs, percentage of correct responses) to make it easy to assess if the objective has been met.

iii) Achievable: Set realistic goals that are within the student's capacity to achieve, considering their current skill level and potential for growth.

iv) Relevant: Ensure objectives are meaningful and directly related to the student's educational needs and overall development. They should address areas where the student requires support or improvement.

v) Time-bound: Establish a timeframe for when the objective should be accomplished. This could be within a specific period, such as a semester or school year, to track progress and make adjustments as necessary.

vi) Functional: Objectives should focus on skills that will help the student in real-life scenarios, enhancing their ability to function independently and participate fully in their educational setting.

- **Teaching Plan**

i) Assessment of Current Abilities: Begin by assessing the student's current strengths and weaknesses. This provides a baseline for setting appropriate objectives and choosing suitable teaching strategies.

ii) Differentiated Instruction: Adapt teaching methods and materials to accommodate the student's learning style, pace, and any specific needs. This might include using visual aids, hands-on activities, or providing extra time for tasks.

iii) Evidence-Based Strategies: Employ teaching techniques supported by research and proven to be effective for the student's specific needs. This could involve specialized instruction in areas like reading, math, or social skills.

iv) Individualized Support: Tailor support to address specific challenges the student faces. This might involve one-on-one instruction, use of assistive technology, or specialized programs.

v) Regular Monitoring and Feedback: Continuously assess the student's progress towards the behavioural objectives. Provide regular feedback and adjust the teaching plan as needed based on the student's performance and evolving needs.

vi) Collaboration: Work with other professionals, such as speech therapists, occupational therapists, or counselors, to provide comprehensive support. Also, engage with the student's family to ensure consistency between school and home environments.

vii) Accommodations and Modifications: Implement necessary accommodations (e.g., extended test time, quiet work space) and modifications (e.g., altered assignments, different teaching methods) to support the student's learning.

viii) Skill Generalization: Ensure that skills taught in a controlled setting can be applied in various contexts. Practice skills in different environments to help the student transfer learning to real-life situations.

ix) Positive Reinforcement: Use strategies to motivate and encourage the student. Reinforce positive behaviours and achievements to build confidence and promote continued progress.

x) Review and Revise: Regularly review the teaching plan and behavioural objectives to ensure they remain relevant and effective. Make necessary revisions based on ongoing assessment and feedback.

- Teaching and training of the child should be done in the appropriate context. This means that we should train the child to do a particular activity in the situation in which he needs to show it.
- Evaluation helps to know whether the child is learning what we are teaching and also helps us to take a critical look at the training programme itself. Evaluation should be quantitative as well as qualitative.
- Proper records need to be maintained at each stage of the IEP process.

6.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) Setting short-term goals is crucial in an IEP because these break down larger annual goals into manageable short term targets. These short-term goals help track progress more effectively over shorter periods, typically three to four months. By achieving these smaller goals, educators can ensure continuous progress towards the broader educational objectives outlined in the IEP. Moreover, short-term goals allow for adjustments in teaching strategies and interventions based on ongoing assessments of the child's development.

2) In writing specific behavioural objectives, it is important to focus on observable behaviours rather than subjective terms like "understanding." Observable behaviours are actions or skills that can be seen, heard, or counted. For instance, instead of stating "the child will understand counting up to 5", a specific objective would be "the child will correctly count and point to sets of 5 objects out of a group." This shift ensures clarity and measurability in determining whether the objective has been achieved, thus guiding effective teaching and assessment practices.

3) A teaching plan plays a critical role in translating specific behavioural objectives into actionable steps for teaching and assessment. For example, if the objective is for a child to independently brush their teeth, the teaching plan would outline the materials needed (toothbrush, toothpaste), the procedure (initial physical support, gradual fading of support), and the evaluation criteria (number of days per week the task is

completed independently). This structured approach ensures consistency in teaching methods, facilitates monitoring of progress, and provides a framework for evaluating the child's achievements against the objectives set in the IEP.

Check Your Progress Exercise 2

1) **"Evaluation" and "assessment" of children with visual impairment are two different process.**

   Assessment is done before beginning training in order to find out the abilities and skills the child to know about the current level of functioning of the child. Evaluation is done during or after the training period to know how much the child has learnt through the training/teaching.

   Assessment helps us to identify the goals of training, Evaluation helps us to decide whether to take up the next activity for teaching or does the child still require training in the current activity.

2) The education and training of children with visual impairment involves three steps. These are:

   Step 1: Assessment, which is done is done before beginning the training, so that the current level of functioning of the child is known regarding her abilities which will enable us to identify the goals of training.

   Step 2: Individualized Education Programme. This includes Setting Annual Goals, Formulating Short Term Goals, Formulating behavioural s Objectives and Preparing the Teaching Plan.

   Step 3: Evaluation - to know/ analyze how much the child has learnt through the training/teaching.

3) When evaluation is done during the training period, it is called formative evaluation.

   When evaluation is done at the end of the training period, it is called summative evaluation.

   Example:

   Formative Evaluation: If we have set the objective of teaching the child to eat food independently in a period of three months, we evaluate the performance of the child formally at regular intervals to see how the child is progressing towards the goal. The evaluation of the child's performance helps us to know the positive or negative aspects of our teaching and helps us to decide whether to continue the training as planned or whether to bring changes.

   Summative Evaluation: The evaluation which will be conducted at the end of three months is referred to as summative evaluation.

UNIT 7 THE PROCESS OF LEARNING

Structure

7.1 INTRODUCTION

In this Unit, you will read about the stages of learning as well as the principles and steps to be followed when teaching any task or concept to persons with visual impairment. **As teachers and parents, we need to understand the process of learning.** Once we are clear about the process, then we can help the children in becoming purposeful, efficient and independent learners. **Follow the teaching principles and steps described in this Unit whenever you are teaching any task to the child.** These principles will not only help the child to learn better but will also help her to apply the learnt skills in her day-to-day routine. **These principles must be followed by anyone who is teaching and training the child – whether parent or teacher.**

A very important part of the learning process is giving feedback to the child about how he is learning. Apart from your evaluating the extent to which the child is learning, the child herself needs to know how well she is learning. This access is called 'giving feedback'. In this Unit, you shall also learn how to give feedback.

Objectives

After studying this unit, you will be able to:

- explain what is learning;
- describe the stages that a person (child/adult) goes through when learning a new task;
- state the strategies that you can use during each of the stages to teach the person the new task;
- list the principles to be followed when teaching any new task;
- plan learning activities for persons with visual impairment, keeping these principles in mind;
- explain what is feedback and its importance; and
- give feedback such that it helps the person in learning.

7.2 WHAT IS LEARNING?

'Learning' means a relatively permanent change in behaviour that occurs as a result of experience with the environment. For example, a child touches a hot pan placed near the gas stove in the kitchen because she is unaware that it can burn her fingers. Once she has had such an experience, she becomes careful in the future. She has 'learnt' that hot objects can burn her fingers.

It is clear that learning is not a passive process — in other words, it is not as if you tell something to the child and she will learn it. **Learning requires interaction with and experience of the environment. Experience can happen randomly, on its own**, when the child discovers things for herself (as in the case of the child touching the hot pan; this is also **called 'discovery learning') or a specific experience can be provided by someone who plans and structures the environment in such a way that it results in learning**.

Children with visual impairment also learn through experience with the environment and this learning will be visible as change in their behaviour. But a child with visual impairment will learn about the world in a different way from a sighted child. A child with visual impairment or low vision is not able to rely on vision to get information. Therefore the child needs to use other senses to get information. A sighted child learns the concept of 'dog' by looking at the dog. The sighted child looks at the shape of the dog and also the behaviour of the dog whereas a child with visual impairment needs to touch the dog to learn what a sighted child does learns by looking. The teacher and the parents can introduce a dog to the child to explore its body parts and the life and motion of the animal.

Both the above examples show us that learning requires interaction with and experience of the environment. Experience can happen randomly, on its own, when the child discovers things for herself, as in the case of the child touching the hot pan. **This is called 'discovery learning'.** It can also be that a specific experience can be provided by someone who plans and structures

the environment in such a way that it results in learning, as in the case of the teacher deliberately helping the child with visual impairment to form an in idea about the dog by introducing the dog to her and making her touch it and feel it. **This is called 'guided learning'.**

7.3 STAGES OF LEARNING

Learning, in case of all persons, proceeds through five stages. These are as follows:

- The first stage is **'acquisition'**. During this stage the person learns a new task.
- The second stage is **'fluency'/'proficiency'**. During this stage, the person learns to perform the new task to a higher degree of accuracy.
- The third stage is **'maintenance'**. During this stage, the person is able to perform the task independently, even after teaching has ended.
- The fourth stage is **'generalization'**. During this stage, the person learns to generalize the learned skills/tasks to other situations or environments. In other words, she is able to perform the task in situations other than the ones in which she had learnt it.
- The last stage is **'adaptation'.** During this stage, the learner applies a previously learnt skill in a new area of application without direct instruction or guidance.

Let us now read about each of these stages in details.

7.3.1 Acquisition Stage

'Acquisition' means learning to do something new. During this stage, a new task is introduced to the child. Remember that initially the child will make errors. Gradually, over a period of time, she will learn to perform the activity more accurately.

Strategies to be used during acquisition stage

Follow the strategies described below while teaching a new task to the child.

- Children with visual impairment do not learn a task or a skill through observation or hearing about an object or thing. The sighted child imitates elders. But child with visual impairment cannot imitate. The teachers need to adopt different ways of learning.
  - ✓ When teaching the child something new for the first time, provide the real object in her hand and allow the child to explore the object. Provide real objects like fruits/ vegetables instead of giving plastic fruit/ vegetable. Hence provide the object Teachers can guide the child to explore the object systematically.
  - ✓ Whenever it is not possible to provide real objects, models. The skill to discriminate can be taught through the sense of touch. By giving a model of a dog and a model of crow, we can explain 'dog' is an

animal and 'crow' is a bird. Crow has two legs and dog has four legs. Now teach the concept of animal and bird and the difference between the two. The concept such as birds fly and animals do not fly can be taught step by step depending on the age and understanding level. Next help the child to compare a 'dog' and a 'cat.' Both have four legs and are animals. Help the child to discriminate the shape of dog with that of cat.

- ✓ Teach the child whole and/ part relationship. For example, the child's knowledge of evening snack time may be eating biscuits and drinking milk. This knowledge is a part of the snack time. But the child has to know the whole activity of snack time which includes taking biscuits from the biscuit box, boiling the milk, setting-up of snack items on the table, then pouring the milk in the cup and drinking it then eating the biscuit and and then cleaning up the table and washing the cup used for drinking. So you make the child familiar with each activity involved in the task step by step. Another example of part-whole relationship is regarding the child's idea of fruits. For example, when you ask the child about her idea of 'apple', the child may describe apple as 'slices of apples'. The child might have only experienced eating apple in the form of slices. When the opportunities are given to the child to pick up apples from the fruit bowl or from a vegetable seller or /store, the child will form a complete idea of an apple in terms of its size, shape and texture. Subsequently, the child can be made aware of apple juice, fruit salad with fruits and apple pieces in the salad. In this way, the child will understand the various dimension of the concept of. In order to learn to identify and eat food items, teach the child to use the fingers and the hand. When teaching the child the task of mixing rice with dal, teach the child holding her fingers. Let the child touch the rice in a plate and dal in a bowl. By holding her fingers, you help the child to mix the rice with the dal. Step by step you can teach child as: how to mix the rice with dal, hold the food using the fingers, take the food to the mouth, push the food in to the mouth and chew and swallow.

- Appreciate the child when she does the task appropriately. It helps in motivating the child to carry on with the learning. This is also called giving **reinforcement.** You will read about reinforcement and reward in Unit 9. Here we would briefly say that use praise as a reward as often as you can.

Appreciate the child when she does the task appropriately.

- Give feedback to the child regarding how she performed the activity. You will learn about feedback in section 7.7.
- We may need to make certain adaptations/modifications in the items used by the child according to the abilities of the child with visual impairment. For example, if the child has limited visual function, then we may use a special magnifying glass or an adapted spoon (tactile sensitive) or tactile pictures to suit the needs of the child. We have described these adapted devices in Units 21 and 22 on 'Training in Daily Living Skills'.

7.3.2 Fluency/Proficiency Stage

Once the child learns to do the activity, **we need to train the child to achieve a higher level of accuracy or efficiency in doing the task or to do the task more smoothly and quickly.** The aim is that the child should learn to do the task both accurately and quickly. **This is referred to as fluency.**

Strategies to be used during the fluency stage

Let us understand the strategies that you can use at this stage through an example.

Raju has just learnt to write his name using Braille after 12 sessions of teaching. In other words, he has acquired a skill. However, he needs to be quicker in writing his name. In other words, he needs to be proficient/fluent in doing the task.

You could help him to be fluent in the following ways:

- Give him opportunities to practice the task. You can ask Raju to write his name on the Braille Slate you give him, or on the Brailler.
- Reduce the number of verbal prompts as he gets practice.
- Give feedback and reward the child suitably.
- Monitor his progress in terms of accuracy and speed.

Give the child opportunities to practice the task

7.3.3 Maintenance Stage

We want the child to remember what she has learnt. We cannot afford to let her forget what she has learnt and to teach it to her all over again. Therefore, we need to use specific strategies which would enable the child to remember the learnt tasks. **During the maintenance stage, the child is expected to perform an activity with accuracy and fluency without your assistance—in other words, she must remember the task once direct instruction and reinforcement are no longer being given.**

Strategies to be used during maintenance stage

The strategies at this stage concentrate on maintaining high levels of learning. The following strategy can be helpful in this regard.

- **Periodic Practice** — Ask the child to do the task she has learnt before starting a new activity on that topic. Thus, ask her to write the numbers from 1 to 10 (tasks learnt earlier) before teaching single digit addition (new task); or saying the names of four fruits (already learnt) before learning the names of two new fruits. This sort of revision helps in remembering and recalling learned tasks.

7.3.4 Generalization Stage

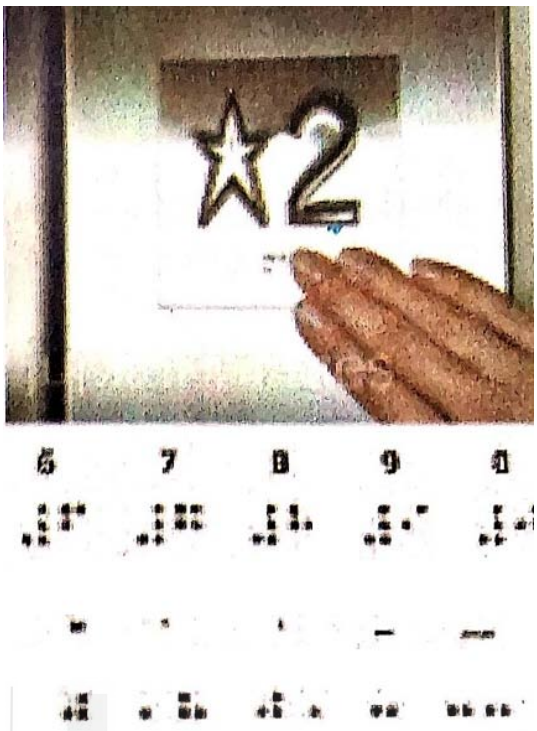
Once the child has learnt a new task with accuracy and fluency and she is able to maintain it without your help, you need to teach her to carry out the task in situations or settings other than the one in which she has been taught the task. This is referred to as 'generalization'. **'Generalization' means being able to carry out a particular task in a different situation or with objects different from the one using which the task was learnt.** This process is also referred to as **'transfer of training'**.

For example, you have taught the child to read numerals 1, 2 and 3 (in Braille) using flash cards. However, the child should be able to read the numbers 1, 2 and 3 wherever it is written i.e. either in her Braille Book, or a sheet of a paper, or on a calendar. Strategies to be used during generalization stage.

Usually, we learn to generalize a learnt task during day-to-day activities. The process is so automatic that we do not even think of it. However, some children find it difficult to generalize on their own. They need help in doing so.

The following strategy will be helpful in teaching the child to generalize:

- Plan a variety of activities related to the task that the child has learnt. To take the above example of reading numbers, you will have to plan activities which involve reading numbers written in different ways and on different backgrounds in different situations in order to help her to generalize her learning. Ask the child to read numbers on calendars, on pages of books, on the Brailler, on the Taylor Frame, and so on.



Reading numbers in different situations

Let us take another example. Suppose you have taught the child to stir sugar in a glass of juice with a spoon. The child has to learnt to do this well. However, the same stirring skill is required for stirring skill is required for stirring any liquid or paint. The child may, or may not automatically apply her skill in these situations. You will need to give the child opportunities to practice her acquired skill in a variety of situations using a variety of materials. Thus, let her stir sugar in a tea, coffee and other hot and cold liquids, let her stir water in the paint and so on.

7.3.5 Adaptation Stage

Once the child is able to generalize, then she can apply the learnt skill in a new area of application without assistance. In simple words, she has now developed the skill of **'problem solving'**, since she is able to apply a learnt skill in situations she has not encountered before. This skill is achieved by those children who have learnt to generalize. Some children with visual impairment along with additional disabilities (such as intellectual disability) find it difficult to reach this stage of learning since for them even the process of generalization poses a difficulty.

Each of these five stages in the process of learning seem to proceed so automatically in the case of children without disability that we do not even realize that the child is passing through these stages. The child without disability learns much by observing others and is motivated to try her newly acquired kill in other situation. In the case of some children visual impairment assistance may be required at some of the stages of the learning process. Appropriate positive reinforcement is also needed to sustain motivation so as to complete learning from acquisition stage to adaptation stage. Experience with varied material needs to be provided by you to help the child generalize what she has learned.

7.4 PRINCIPLES OF LEARNING

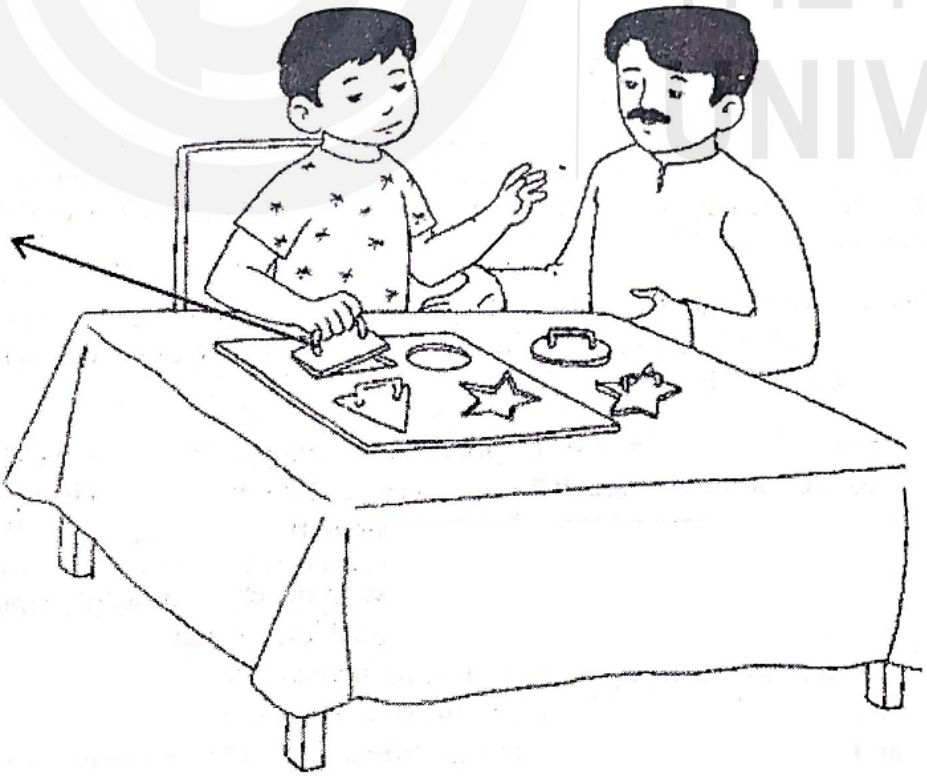
To help the child learn, we need to keep certain principles of learning in mind. In fact, these principles are to be followed when teaching any child — with or without disability. Let us read about these in detail.

7.4.1 Children Learn by Doing – Learning is Experiential

One of the ways in which children learn is by discovering things for themselves. Thus, when trying to fit different shapes in a shape board, the child finds out that the square block does not fit into the round hole. Her attention is drawn to the shapes of the blocks and so begins her understanding of shape. Of course, as she interacts with adults she will learn more about shapes. The adults will also specifically set up activities which will help her to acquire the concept of shape. Thus, the second major way how children learn is when the adult sets up a situation where the children get an opportunity to do something. On the basis of this discussion, we can say that the two major ways through which children learn are:

- Discovery learning through the child's own efforts during play, and
- Planned and systematic teaching by adults (structured learning) using the child's play as the basis for creating the structured learning situation are.

When adults understand the value of children's play, they are more likely to provide the children the time as well as the opportunities to explore the environment and learn. In the case of children with visual impairment, the balance shifts primarily towards planned and systematic instruction by adult (structured learning) using the play-based pedagogy.



Provide opportunities to play by adapting the environment and equipment

Children with visual impairment in general are less able to initiate play and find it difficult to learn on their own by discovering things for themselves. They need adult's initiation and help to involve themselves in play. For example, due to visual limitations, the child may not be able to move independently; or the child may not be able to see others playing with toys. Thus, it falls upon the adults to guide and facilitate the play of children with visual impairment. We need to facilitate play by providing opportunities and adapting the environment and equipment so that the child can benefit from it. In Units 10, 16 and 17 we have provided many examples how materials can be adapted for children with visual impairment.

7.4.2 Learning Proceeds from Simple to Complex

We need to teach any task step by step, presenting the simpler step first. For example, you may find that a five-year-old boy (low vision) is not able to match objects of a similar colour from a group of different coloured objects. You decide to take up the task 'matching of colours' for teaching. If you take four colours — such as red, yellow, blue and green — for teaching matching right at the beginning, the child may have difficulty in learning to match all the four colours. If you begin with two colours (red and yellow), it will be easy for the child to see the difference between them. Once he learns to match red and yellow coloured objects, you can add one more colour (blue) to the group. In this process, we are beginning with a task which is simple for the child and then we are making it more complex.

The success the child experiences when she is able to learn the simpler task motivates her to learn further and builds her self-confidence. If you begin with a task which is complex and beyond the ability of the child, she experiences failure every time which de-motivates her for learning. In such a situation, she may give up learning that task altogether.

Let children experience success while learning. This will build up their self-confidence.

In fact, this process of breaking up a complex task into simple tasks and arranging these simpler tasks in an order from the least difficult to the most difficult is referred to as **'task analysis'**. Then the child is taught step by step, beginning with the least difficult task first, so that learning becomes easy. Task analysis is an extensively used strategy in teaching children with or without disability. You will read more about how to use this strategy in Unit 7.

7.4.3 Learning Proceeds from Known to Unknown

The third principle is to start teaching from what the child already knows and then proceed to teaching what she does not know. For this, you will need to know what skills or abilities the child has and the tasks the child is able to do presently. Based on that information, you select the new skills and tasks for teaching. Before teaching a new task, revise previously learned tasks related to the new task. For example, suppose that you have planned to teach two-digit addition without carry over. Before starting to teach this, give the child single-digit sums to do (which she had learned earlier) as a revision exercise.

This would help the child in remembering and maintaining learned skills and will help her to learn the new task welt.

Let us take another example — that of matching and grouping of vegetables and understand how we can apply the principle of 'known to unknown' in teaching this task to the child.

Using the first principle, i.e., principle of 'simple to complex', we select the task of sorting two vegetables for teaching. Thus, we give the child onion and carrots together and teach her to separate them into two piles.

After a certain duration of teaching, when the child has learnt to sort (also called 'grouping') the two vegetables, we add one more vegetable (potato) to the group to be sorted, to increase the complexity of the task. Before teaching the child to sort three vegetables, ask her to sort out onions and carrots — a task which she can already do. This will help the child to remember learned tasks (maintenance) and give her confidence to try the next more complex task — that of sorting three vegetables.

Give an opportunity to the child to show you what she knows already before you start to teach her what she does not know.

7.4.4 Learning Proceeds from Concrete to Abstract

All of us first learn about things by seeing, touching, smelling, hearing, tasting and using them. If young children, including children with visual impairment do not have opportunities to handle and explore objects and do things by themselves, they will not be able to form an idea about these. This is quite obvious. You cannot, for example, help the child to understand what an 'apple' is without showing it to her and giving it to her and letting her feel it. Similarly, talking about grouping (sorting) objects will not be of help till the child actually gets an opportunity to sort objects. **Once we become familiar with objects and events through concrete and direct experience, we can think and talk about them even when these objects are not present before us.**

Thus, the learning of any concept right from infancy to adulthood proceeds through the following three stages. These stages are applicable for all of us, including children with visual impairment.

a) Concrete stage: The child learns about objects and events by using all the senses together. In other words, she has to handle and experience the objects. As children see, hold and explore objects , they learn about their shape, size, colour, texture, taste and weight.

There is a lot of opportunity during the day-to-day routine to handle and explore objects. For example, the following is a common interaction between a child with low vision and an adult and it provides a good opportunity to the child to learn.

-Adult (point to banana): "Do you want a banana?"

Child: "Yes"

Adult (pointing to each): “Do you want a big one or a small one”? Child: “Small one ”.

(On receiving the banana, the child begins to peel the banana. The adult helps the child to peel the banana and she eats it).

Adult “Is it sweet”?

Child: “Yes”

In the case of child who cannot see, the adult can give the banana to the child and ask her, “What it is?’ The adult can give one big and one small banana and ask her, “Do you want a big one or small one?”. This stage is also called **hands-on learning.**

During the interaction, the child learnt new words such as ‘banana’, ‘sweet’, ‘peel’, ‘big’, ‘small’ and the meaning of these words by seeing (in case low vision), touching (in case of children who cannot see) and tasting. Thus, she also learnt new words. In case of children without disabilities, such interactions happen so spontaneously that we are often not aware that the child has picked up concepts during such activities. In case of children with visual impairment, we have to make deliberate and systematic efforts to provide the child opportunities for hands-on learning.

b) **Pictorial stage (also called semi-concrete or iconic stage)**: This could also be called the semi-concrete stage. When the child has had sufficient opportunities of handling and exploring actual objects, she can relate to a picture of that object. The picture is two-dimensional and represents the object. In case of children who cannot see, the picture will need to converted into a tactile picture by providing raised lines/ tactile lines to pictures or drawings. This can be done by pasting a thread along the boundary and other materials to enable the child to feel different parts of the object represented in the picture. The child can recall the shape, size, texture and colour of the actual object on seeing (in case of children with low vision) and touching (in case of children who cannot see) its picture.

Thus, at this stage, you can plan activities of matching different shapes (e.g. geometrical shapes), different textures, different patterns prepared in tactile format (e.g.: patterns created by using straight, curved and slanting lines). You can paste four pictures on a flash card and repeat one of the pictures on the fifth flash cards. Give all the flash cards to the child and ask her to identify the similar cards.

Learning to identify objects based on the tactile picture or diagrammay take a long time for children with visual impairment and will require systematic and structured instruction. Using high contrast materials, for example bold black colour lines on a white/ yellow paper or creating large print handouts will be helpful for children with low vision.

c) **Abstract stage**: This is a final stage in the acquisition of any concept. If the child has had adequate experiences of handling objects directly as well as of pictorial activities, she can recall all the characteristics of the object just by hearing its name, even though the object or the picture is not there before her. This is because she has formed a mental image of

that object, based on her experiences during the concrete and pictorial stage. She can think about the object without having to see it – in other words, she can think of it in abstraction.

All of us proceed through these stages when acquiring a concept in childhood as well as during adulthood. Recall some experiences during your adult life when someone told you something about which you had no experience earlier. Did you not feel the need to see the object or experience the situation about which this person was talking? In the absence of direct experience, did you not feel that your understanding was complete? In the case of children with visual impairment, it is all the more important to follow this sequence of 'concrete-pictorial- abstract'.

For children with visual impairment touch is the main way of learning. All objects cannot be brought within the child's touch. For example, stars, mountains, sun, the idea of a river or ocean is understood because we can see these. Of course we touch the water on the beach and hear the sound of the waves, and feel the heat of the sun, but we get a full idea only when we see these. So these concepts, which are concrete for us, become abstract for the child. In other words, the objects which are actual physical things for the sighted, are only ideas for the child with visual impairment. This is what we mean when we say the concept becomes abstract for the child. Teaching about these concepts to children with visual impairment is challenging. But it is possible to give an idea of abstract concept. The child can be helped to develop an idea about these things. Tactile models and verbal descriptions are helpful to teach these concepts which are abstract for the child. For example the concept of 'star' can be taught using tactile model. When the children become older, one way to teach 'universe' is through tactile models and oral description. Children will listen to the description of the universe and its components such as stars and galaxies. Engaging all the intact senses of the child will help them develop deeper understanding of the abstract concepts.

You must have understood that we have used the word 'abstract' in two ways:

- One is when we become familiar with an object and now we can think of the object without it being present before us. This means our thinking has become abstract — we can think of the object by bringing its idea or image in our mind.
- The other way we have used the word 'abstract' is to convey that some concepts which are concrete for the sighted are abstract for the child because the child cannot experience those concepts. These exist only in the form of an idea for the child because we can never fully convey what the object is through its model or picture or verbal description.

7.4.5 Learning Proceeds from Whole to Part

The fourth principle in teaching is to proceed from 'whole' to 'part'. Let children learn about the object or the concept as a whole. Introduce the details later.

For example, when teaching the child about 'banana', first teach her to recognize and name the banana on seeing/ touching it. Then introduce her to peeling it, name its colour (for low vision) and after that talk about its varieties and the various food items that can be made using it. When teaching about a 'dog ', first teach the child to recognize and name the dog as soon as she sees/touches/ hears it. Later, the description of its body pans, the food it eats, its habitat, its young ones and how it is useful to us can be given.

Let children first learn the concept as a whole. Introduce the details later.

If you reflect upon it, you will realize that these are the principles we follow when teaching children without disabilities as well. The difference is that these stages take place at a much quicker pace in their case and a lot of learning takes place spontaneously and incidentally (i.e., without specific planning to teach them) as part of day-to-day activities. Children without disabilities pick up many concepts and vocabulary without any conscious planning on our part to teach them. In the case of children with visual impairment, each step takes a much longer time and you as a parent or the teacher have to take care to plan activities for each step of learning — in other words, learning cannot be left to chance. You will have to set up activities in a planned manner so that the child gets to experience a variety of objects and events.

Check Your Progress Exercise 1

1) What do you understand by learning? Explain with an example.

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2) List and briefly explain the stages of learning.

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3) Read each situation and state which principle of learning each situation represents.

   Situation 1*: The teacher first asks Sunita to separate round shaped cut-outs from square shaped cut-outs. After the child could do so successfully, she added triangle shaped cut-outs.*

   Situation 2*: The teacher gives a round object to the child in her hand and then tells her to identify other round objects among the group of*

objects placed before her. The child does this successfully. The next day the teacher simply tells the child verbally to identify the round objects among the group of objects placed before her.

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7.5 GUIDELINES FOR EFFECTIVE LEARNING

Learning is a process of acquiring knowledge and remembering information so that it may be applied to life situations. Learning is fostered when the learner has opportunities to practice the new information, receive feedback and apply the knowledge or skill in familiar and unfamiliar situations, with less and less assistance from others. **Some general guidelines to help children learn effectively are as follows:**

- Give the child ample time for practice and repetition. Even if the skill has been mastered, it must be practiced at regular intervals.
- Use a variety of teaching materials — concrete, pictorial in enlarged form/ tactile, auditory and visual.
- Plan different activities to sustain the interest of the child.
- Provide feedback immediately — i.e., tell the child whether she is correct or not. You will learn about feedback in section 5.7.
- Use simple language to explain new concepts.
- Sustain motivation through reinforcement (You will learn about reinforcement in Unit 8).
- Talk and explain to the child about the activities that you are doing with her.
- There may be times when the child cannot learn new activities, even when you try teaching them. At this time, let the child continue doing the activities which she already knows. She will become better at them and get the confidence to learn new things.
- Your efforts to teach the child will be most effective if you are patient and speak to the child slowly. The child will not learn if you raise your voice and frighten her.

7.6 FEEDBACK

There is one more aspect to be kept in mind when teaching the child and that is — letting the child know about her own performance so that she can know how to improve it. This is referred to as **'giving feedback'**. While evaluation and assessment lets you know how well the child is learning, feedback helps the child to know whether she is carrying out the activity as it should be done. Let us understand what we mean by 'feedback' through an example.

Raju's mother was training him to help with the tasks in the kitchen. She was specifically teaching him to wipe the plates dry after they had been washed. She showed Raju how to wipe the dishes and then gave him plates and cloth to wipe. After Raju had wiped three or four plates, him mother noticed that he was wiping the front of the plate but was not turning it around to wipe its back. She told Raju, "You are wiping the front of the plate well — it is totally dry. That's very good. But the back of the plate is wet.You have to also turn the plate and wipe its back." Then she picked up a plate and showed Raju that it was still wet and said, "See, the back part is wet." She picked up the cloth and wiped the back a of the plate, showed it to Raju for him to see that it was dry, and kept it back. Then she asked Raju to pick up the plates, one by one, and wipe them dry himself.

Let us analyze this example to see what the mother has done.

What the mother said?	**What it implies?**
• "You are wiping the front part of the plate well."	She has told Raju what he was doing correctly. **Raju becomes aware of strengths.**
• "That is very good."	She has praised him for he was doing correctly. **Raju feels motivated to go on.**
• "But the back of the plate is wet."	She has told him what it was that was not complete about the wiping of the plates. **Raju understands what he is doing incorrectly and knows that he has to learn something more.**
• "You have to also turn the plate and wipe its back."	She specifically tells him what he needs to learn and shows how he can correct or improve upon what he is doing. **Raju gets to know how he can improve upon the task.**

In this way, the mother has given feedback to Raju. We can say that **feedback means giving a person information about a particular aspect of her behaviour.** The information is given in such a way that it

- helps the individual to understand her basic strengths and abilities; tells her the behaviours that she should continue with;
- inform the areas that she needs to improve upon, and the specific behaviour she needs to learn; and
- things that she should not do, as they interfere with her learning or are not acceptable.

If you pause for a moment and reflect, you will realize that we naturally and spontaneously give feedback whenever we are teaching someone — whether

at home, school or the workplace. This happens whether you are teaching a child or an adult. This process is so spontaneous that we are often not aware of it. **The purpose of explaining the process of feedback here is to make you aware of it, so that you use it more consciously while teaching children with visual impairment.**

All of us need feedback in order to learn and it is all the more important in the case of children with visual impairment. They may not be able to pick up subtle hints from the environment to know whether what they are doing is appropriate or not. They may not be able to analyse and judge for themselves whether the way they are doing an activity is the way it should be done. So giving feedback becomes very important in their case.

Difference between Evaluation and Feedback

In the above example, if you were evaluating Raju's performance, what would you say? You would have observed Raju doing the task and then you would have said: "Raju wipes the front of the plate but not its back."

This information helps the teacher to know what the level of Raju's performance is and what she has to teach Raju, but it does not give any information to Raju about his performance and what he needs to learn next. **Thus, evaluation is oriented towards the person who is training the child, whereas feedback is meant for the person who is learning the task.**

7.6.1 Importance of Feedback

1) **Feedback helps to guide future behaviour.** When the feedback is positive (i.e., when the person's action or behaviour is praised), then it motivates the person to continue with the behaviour. The person understands his/her basic abilities in the area and gains confidence for doing the same activity in future. The above example, when Raju's mother praised him, was an example of positive feedback.

   When the feedback is negative, it causes the person to discontinue the specific behaviour. The following is an example of how negative feedback helps to decrease unacceptable behaviour.

   Seema is a 10-year-old girl with visual impairment. Other children do not want to play or interact with her as she has the habit of hitting them. The class teacher is trying to teach Seema to interact with other children in an appropriate manner. In one such situation, Seema was with a group of children and they were enacting an imaginary scene together. Seems was eager to perform her role. In the meantime, one of the girls came and asked Seema give her the toy doll she had with her. Seema refused to give it and hit the girl. At this point, the teacher interrupted and said, "That was a wrong thing to do, Seema. If you do that, nobody will play with you. Do not do it again." Thus, Seema was told what was it that was wrong and that she should not do it again.

2) As we have explained earlier, evaluation does not provide any information to the individual regarding her performance and does not help her to improve upon her behaviour. In such a situation, modifying

the behaviour would always be the responsibility of the adult and not that of the child. **Feedback, in a way, transfers this responsibility of hanging ones behaviour from the adult to the child and makes the latter accountable for her own actions.** The child not only learns to take responsibility for her own actions but, in the process, also learns to think and reason and devise strategies for better behaviour in the future. Feedback also conveys to the child the message that the teacher/ parent believes she is capable of improving her own behaviour. The above two examples clearly bring out that in the absence of effective feedback, continuous improvement cannot be expected from the child.

7.6.2 Types of Feedback

1) **Scoring Feedback (Quantitative Feedback)**: Here you tell the child the number of times she did a certain thing correctly. For example, if the child had to write her name on five books and she wrote it correctly on three books, you tell the child that she wrote correctly three times out of five.

   The disadvantage of this type of feedback is that it tends to underestimate the child's achievement and does not give useful information regarding what the child can or cannot do. The next point clarifies this further.

2) **Descriptive Feedback (Qualitative feedback)**: Here the emphasis is not on how many times the child did a certain thing correctly, but on the quality of her work. Thus, one emphasizes how the child did what she was supposed to do. For example, if a child is asked to give three reasons for maintaining hygiene and the child is able to give only one, the scoring feedback would rate the child's performance as 'one out of three'. In such a case, descriptive feedback would try to look for the quality of the one reason that was given — whether it was persuasive, appropriate and reasonable. In descriptive feedback, the emphasis is on quality, not quantity. In many cases, though the numbers may be low, the quality will tell about the child's abilities.

3) **Analytic Feedback**: Analytic feedback is given by dividing the task done by the child into its simpler sub-tasks and then feedback is given with respect to each sub-task. For example, let us take the sub-task of cutting vegetables for making a salad. This task involves the following component tasks:

   - Attending to and concentrating on the activity
   - Holding the knife appropriately
   - Posture during cutting the vegetables
   - Cutting the vegetables of the reqired size
   - Cleaning up after the activity
   - Time taken to do re activity.

Feedback should be with respect to each of these tasks not only with respect to how the vegetables were cut.

The benefit of this approach is that it provides specific feedback on each component of the activity and tells the child about specific areas in which improvement is required.

Feedback can also be classified on the basis of the frequency with which it is given. If the feedback is given every time the child performs a given task, it is called **continuous feedback**. However, if the child is given feedback only when she performs better on a given task, it is called **differential feedback**. Thus, differential feedback is only given when there is change in the present performance from the last performance. When the child is learning a new concept, feedback is generally given after each response so as to motivate the child. When the child has learnt the concept and is practicing it, differential feedback can be given so as to motivate her to do better.

7.6.3 Characteristics of Effective Feedback

A feedback which motivates as well as guides the individual for future performance can be termed as effective feedback. The following are some characteristics which make a feedback an effective one.

1) Accurate

Since feedback is a way of telling the person what she can do well and what she needs to improve upon, it is necessary that feedback gives the facts as they are. In other words, feedback has to be precise and accurate.

2) Periodicity

One can provide feedback when the child is in the process of learning to do a task or/and in the end, after the completion of the task. In-between feedback helps to correct the wrong behaviour there and then. After-completion feedback helps to motivate the person and serves as a guide for future actions.

3) Immediate

Feedback must be given immediately following the task. Immediate feedback is more effective than delayed feedback. Feedback is said to be delayed, if it is not given before the child performs the same response again. For example, if a child does a task in an incorrect manner, and feedback is delayed, she will continue to repeat it several times, before the teacher gives feedback and corrects her. Thus, she would have learnt to do the task incorrectly. Now she has to unlearn this and learn to do it correctly – this learning, unlearning and relearning is difficult for some children with visual impairment. Thus, the feedback should be 'fed back' as the child performs an activity to ensure correct kind of learning.

4) Detailed

Feedback should be given in detail. Merely praising by saying: "Good job" or saying: "This is wrong", does not help. Praise motivates the child to work but does not tell the child what was it that she did that was good and how to improve the activity further. Similarly, simply saying that her actions are wrong without explaining how to correct them is not of much help. Also, the child must be told how and to what extent she has

improved as compared to earlier. For example, saying: "Good, you have recognized five fruits today — two more than yesterday", helps the child to see and measure her improvement.

5) Positive and Constructive

Simply stating what was the wrong with the child's behaviour would not help her to learn. Along with stating what was wrong, the feedback should tell the child what would be right behaviour, so that she learns what she has to do. This will make the feedback constructive. As far as possible, instead of saying what was wrong, word your feedback in such a way that it tells the child what she has to change. This does not hurt the child's self-esteem. Give the child a feedback about the things that she did right (positive feedback) before you tell her about the things that she needs to change. Positive feedback helps the children to feel good and they also tend to like those who provided the positive feedback.

Remember to provide all this information in simple language which the child can understand.

Check Your Progress Exercise 2

1) How you can guide children with visual impairment for effective learning? List any five points.

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2) What is the importance of feedback in the process of learning?

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3) Identify if the statement is 'correct' or 'incorrect'.

i) Scoring feedback is more effective than descriptive feedback for understanding the quality of a child's work. ( )

ii) Analytic feedback provides specific information about each component of a task rather than just the overall performance. ( )

iii) Differential feedback is given after every task performance to motivate the child. ( )

iv) Effective feedback should be immediate and detailed to help the child correct mistakes and improve future performance. ( )

v) Positive feedback should be given only after pointing out what is wrong with the child's performance. ( )

7.7 SUMMING UP

- Learning means a relatively permanent change in behaviour that occurs as a result of experience with the environment.
- Learning proceeds through five stages — acquisition, fluency, maintenance, generalization and adaptation. Using specific strategies, you can help the child to progress through these stages.
- When teaching any child, including those with visual impairment, you need to keep certain principles in mind. These are:
  - Children learn by doing
  - Learning proceeds from simple to complex
  - Learning proceeds from known to unknown
  - Learning proceeds from concrete to abstract
  - Learning proceeds from whole to part
- It is important to give the child feedback during the learning process. Feedback serves as a guide for future behaviour and makes the child responsible for her actions.
- The feedback should be accurate, periodic, immediate, detailed, positive and constructive.

7.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) **Learning** is defined as a relatively permanent change in behaviour that results from experience with the environment. It is an active process that involves interaction with and experience of the environment. Learning is not merely about receiving information passively; rather, it requires engaging with the environment to understand and adapt.

Example: Consider a child who touches a hot pan on the stove. Initially, the child does not know that hot objects can cause burns. After the experience of being burned, the child learns to avoid touching hot objects in the future. This experience changes the child's behaviour, demonstrating that learning occurs through direct experience.

Explanation: In this example, the child's understanding of the concept of "hot" and "burning" is developed through personal interaction with the environment. This process of learning from direct experiences is known as **discovery learning**. Alternatively, a teacher might guide a child with visual impairment to touch and explore a dog to learn about it, which is an example of **guided learning**.

2) **Learning** proceeds through five key stages, each contributing to the process of acquiring and mastering new skills or knowledge. Here are the stages, along with brief explanations:

i) **Acquisition Stage**:

Definition: This is the initial stage where the learner is introduced to a new task or concept.

Explanation: During this stage, the learner is exposed to a new skill and may make errors as they start to grasp the basics. For example, a child first learns to write their name in Braille.

Strategies: Use real objects for exploration, provide models, teach part-whole relationships, and offer praise and feedback.

ii) **Fluency/Proficiency Stage**:

Definition: At this stage, the learner focuses on performing the new task with higher accuracy and efficiency.

Explanation: The learner practices the new skill to achieve smooth and accurate execution. For instance, the child practices writing their name in Braille until they can do it quickly and correctly.

Strategies: Provide practice opportunities, reduce verbal prompts, give feedback, and monitor progress.

iii) **Maintenance Stage**:

Definition: This stage is about ensuring the learner retains the skill over time.

Explanation: The learner continues to practice the skill independently to maintain their level of accuracy and fluency. For example, the child is asked to review writing Braille letters regularly.

Strategies: Incorporate periodic practice of previously learned tasks to reinforce retention.

iv) **Generalization Stage**:

Definition: At this stage, the learner applies the acquired skills to different situations or environments.

Explanation: The learner is able to transfer the learned skill to new contexts or settings. For example, the child reads numbers in various formats like books, calendars, and Braille cards.

Strategies: Plan activities that involve different scenarios and materials to help the child apply the skill broadly.

v) **Adaptation Stage**:

Definition: This final stage involves applying learned skills to new and unfamiliar situations.

Explanation: The learner uses the skills in innovative ways or new situations without direct guidance. For example, the child uses Braille reading skills to explore new types of texts.

Strategies: Encourage independent problem-solving and application of skills in novel situations.

3) i) Principle of learning proceeds from simple to complex

ii) Principle of learning proceeds from concrete to abstract

Check Your Progress Exercise 2

1) To guide children with visual impairment for effective learning, you can follow these five strategies:

i) Use a Variety of Teaching Materials: Incorporate diverse teaching materials that engage different senses — such as tactile, auditory, and visual resources — to cater to the child's learning needs.

Example: Use textured books, audio descriptions, and tactile diagrams to teach concepts like shapes or textures.

ii) Give Immediate and Detailed Feedback: Provide feedback right after the task to help the child understand what they did well and where they need improvement, with specific details on what needs to be changed.

Example: If a child is practicing braille, immediately point out which letters they read correctly and which ones need more practice, explaining the correct technique.

iii) Use Simple Language to Explain New Concepts: Break down complex ideas into simpler, manageable parts and explain them in straightforward terms to avoid confusion and aid understanding.

Example: Instead of saying, "Use the correct braille contractions," say, "Here's how to write the word 'cat' in braille, one dot pattern at a time."

iv) Provide Ample Practice and Repetition: Ensure that the child has enough time to practice and repeat the new skills regularly, even after mastery, to reinforce learning and retention.

Example: If teaching braille reading, set aside daily practice sessions to keep the child's skills sharp and build confidence.

v) Sustain Motivation Through Reinforcement: Use positive reinforcement and rewards to keep the child motivated and enthusiastic about learning.

Example: Praise the child for successfully completing a task or use a sticker chart to track their progress and celebrate achievements.

2) Feedback plays a crucial role in the learning process by providing the following benefits:

i) Guides Future Behaviour: Feedback helps learners understand what they did correctly and what they need to improve. Positive feedback encourages continued effort, while constructive criticism guides them on how to adjust their behavior for better outcomes.

Example: Praising a child for correctly identifying colours in a lesson reinforces their success, while gently pointing out mistakes and showing the correct approach helps them learn the right way.

ii) **Helps in Self-Assessment:** Feedback enables learners to assess their performance and understand their strengths and weaknesses. It shifts some responsibility for learning from the teacher to the learner, promoting self-reflection and improvement.

Example: If a child receives feedback on their essay that highlights both strengths and areas for improvement, they can learn to recognize what makes good writing and what needs work.

iii) **Encourages Motivation and Confidence:** Constructive feedback builds the learner's confidence by acknowledging their efforts and achievements, which motivates them to continue learning.

Example: Telling a child they did a great job solving a problem and showing them how their approach was correct helps them feel proud and motivated to tackle more challenges.

iv) **Facilitates Learning Adjustments:** By detailing what needs to be changed, feedback helps learners make specific adjustments in their approach or technique, leading to better learning outcomes.

Example: If a child is told they need to focus more on the proper posture while sitting at their desk, they can adjust their posture and improve their ability to complete tasks.

v) **Supports Effective Learning:** Immediate and detailed feedback ensures that learners can correct errors as they occur, preventing the reinforcement of incorrect methods and promoting accurate learning.

Example: If a child is shown the correct method for tying shoelaces right after they make a mistake, they can adjust their technique before developing incorrect habits.

3) i) **Incorrect (**Scoring feedback focuses on the quantity of correct responses (e.g., "three out of five"), which does not provide detailed information about the quality of the work. Descriptive feedback, on the other hand, evaluates the quality and details of the child's performance, making it more effective for understanding what the child can or cannot do.)

ii) **Correct (**Analytic feedback breaks a task into smaller sub-tasks and provides feedback on each one, helping the child understand specific areas for improvement.)

iii) **Incorrect (**Differential feedback is provided only when there is a change in the child's performance from previous attempts. Continuous feedback is given after every task performance, especially when learning a new concept.)

iv) **Correct (**Immediate and detailed feedback helps the child understand their mistakes and how to correct them right away, which is crucial for effective learning.)

v) **Incorrect (**Effective feedback should include both positive feedback and constructive criticism. It is important to first acknowledge what was done well to maintain the child's self-esteem before addressing areas for improvement.)

UNIT 8 TEACHING STRATEGIES: TASK ANALYSIS

Structure

8.1 INTRODUCTION

"I have been trying to teach my 4 year-old son how to read and write letters in print. I could not bear to hear people say that my son is blind. I wanted to prove that he could read and write print as other sighted children do. But my son not able to do so even wearing refractive glasses prescribed by the doctor. I used to scream at my dear son and blamed him that he was careless and did not want to see his mother happy. I was disheartened but did not lose my hope and tried to explore how my dream could be true that my son be able to read and write print. Fortunately I found a way. I provided him a wooden frame which helped to keep the book higher and so my son was able to see the book without bending his neck too low. I managed to get a study lamp which provided enough light for him to see closely. All these modifications helped him a lot and now he is doing able to read print."

"My five year old daughter was very keen to run even after having complete visual loss. She used to run in the compound and got hurt many times. I tried to convince her many times not to run here and there but she continued to do so and injured herself. Finally I created a 'corridor' by tying two ropes parallel to each other and asked her to run within the space created by the two ropes. This modification by creating a 'corridor' helped a lot to reduce her injury and trained her in running. Now she is able to run safely in familiar environment even without the use of any ropes."

"I was having difficulty in teaching my three-year-old daughter the concept of big and small. She would not pay attention to what I was trying to tell her or look at what I was showing. I felt stuck. Then my husband suggested that why not teach her the concept through things in which she is interested — her toys! I used her toys - her dolls, their cups and saucers of different sizes. She learnt the concept within a few days."

The above are examples of some situations which a parent or a teacher of a child with visual impairment may experience. The examples bring out how a slight change in the teaching method or the teaching material can make all the difference and can help the child to learn. Thus, children's learning depends not only what they are taught, but also how they are taught.

In this Unit and in the next one, we shall describe how to help persons with visual impairment in learning a skill. **You will learn about the specific strategies and methods that can be followed while teaching a skill or a task to persons with visual impairment — both children as well as adults. These strategies can be used by parents, teachers, community workers — anybody who is involved in teaching and training the child**.

Objectives

After studying this Unit, you will be able to:

- explain the strategy of 'task analysis';
- describe the concept of forward chaining and backward chaining while using task analysis; and
- carry out task analysis and use this strategy in teaching skills to a child with visual impairment.

8.2 WHAT ARE TEACHING STRATEGIES?

A 'strategy' is an organized approach to a task. "**Teaching Strategy", therefore, is an approach a teacher or a parent may adopt to give information, teach a skill or a concept to the child or adult with visual impairment**.

Do children with disabilities require a special or unique set of teaching strategies? Not really! **The strategies used to teach children with disabilities are not special in themselves — they are simply more evident while teaching children with disabilities because the strategies are broken down into steps and each step is emphasized. For the most part, strategies we are describing here to be used with children with visual impairment are also applicable to children without disabilities. Some strategies are based on direct teaching while others are based on discovery learning**.

In direct teaching, the teacher 'directs' the child's learning and students are, for most of the their time, given demonstration or are supervised by the teachers and told what to do and what to learn, rather than being given the time for working on their own and finding out about objects, events and concepts on their own. In direct teaching to the children with visual impairment, the teacher decides what hands-on and meaningful experiences to provide to children and she provides a variety of such experiences. In this way when she gives them real world experience, they can have a direct, first-hand understanding of something and not only a verbal explanation. For instance, a real dog or a flower or anything that can be touched can be given to the child and the child's concept developed through real experience. This direct teaching provides many opportunities for the children to explore and interact with a wide range of materials and real objects. This helps children compare size, shape, texture and other features.

In discovery learning, the teacher does not 'directly' teach the children. Instead, the teacher arranges a learning environment, keeping in mind the skills/information which the students needed to learn, so that students get an

opportunity to explore the environment on their own and discover facts and concepts as well as acquire skills, by building upon their prior knowledge. We name this method as play-and-activity-based learning. Do you recall reading about how children learn through play and play-based pedagogy in Course 1 – BCD -102, Unit 15? In this method, the teacher takes a back seat after arranging the environment for discovery learning and lets children discover, understand and acquire knowledge through participating in activities on their own instead of directing them what to do and how to do. Of course, the teacher is always present to help children make meaning of their discovery and activity but the children's actions that guide how learning will take place, rather than direct instruction by teacher. This is a child-centred and participatory approach and the children with visual impairment are physically and mentally involved in learning, which leads to better learning .

Both direct teaching and discovery learning are useful for children with visual impairment. Sometimes to teach a concept or a skill both the methods are required. In general, while teaching motor skills, language and social studies, direct instruction is useful whereas for Science and Math learning, discovery method will be a participatory approach and children will develop knowledge of the concepts.

How a teacher teaches and what strategies she employs depends on a number of factors like: previous training, her areas of interest, the models she has observed, her values and, above all, common sense!

In this Unit and the next one, we shall describe the three aspects that a parent or a teacher must look into while teaching any task or skill to the child:

1) Firstly, the parent or the teacher must break down the task or the skill to be taught into teachable sub-tasks. This process is called 'task analysis' and has been discussed in this Unit .
2) Secondly, we need to use appropriate strategies and materials to help the child learn the task. There various strategies that can be used and these are discussed in Unit 8.
3) Thirdly, we have to provide reinforcement and feedback to the child as she is learning the task, so that she remains motivated to learn it. There are various ways of providing reward and reinforcement and these have been discussed in Unit 8.

We will take up these aspects — task analysis, teaching strategies and reinforcement — one by one in thus Unit and in the next one.

Check Your Progress Exercise 1

1) What do you understand by the term 'teaching strategies'? Are there some special teaching strategies to teach children with disabilities?

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2) What are the three aspects involved when teaching a child task or a skill?

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3) Differentiate between 'direct teaching' and 'discovery learning'?

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8.3 TASK ANALYSIS

Some children with visual impairment have difficulty in learning a skill or an activity or a task as a whole. This may be due to different reasons as discussed further. Firstly, because of absence of vision, the child is not able to view the task visually and so cannot see all the steps at one time. Hence, she needs direct (first hand) experience of all the steps of the task through her other intact senses and all the steps need to be taught practically by actual doing on part of the child. Visual demonstration will not help. Secondly, because of her orientation and mobility limitations, she may get tired and fatigued by doing the entire task in one go. In fact, trying to teach a skill or a task in one attempt to the child may result in failure on the child's part to learn it. This then becomes very discouraging for both the child and the trainer (the trainer may be the parent or the teacher or the community worker).

Most of us are so used to performing the various tasks that we do during the day, that we do not think of these as tasks which comprise a number of sub-component tasks (also called sub-tasks). We wake up in the morning, brush our teeth, bathe, wear our clothes, eat breakfast, take a public transport and go to work, without even thinking about how we are doing these tasks. Yet, each of these tasks consists of sub-component tasks which we have learnt to do so well, one after the other, so that the entire task looks like one skillful action. Some children learn the steps involved in a task of their own. Some children need initiation to do every step in a task. **Some persons with visual impairment may learn these tasks without difficulty; on the other hand, for some persons with visual impairment, many of these tasks may pose a difficulty.**

If a child is having a difficulty in learning a task or a skill because of her visual disability, then the task can be broken into smaller and simpler sub-tasks. She can be taught these steps (sub-tasks) one by one, till she learns the last sub-task and, thus, acquires the task/skill. **This strategy of dividing or**

breaking up of a task into simple steps (its sub-tasks) and arranging the sub-tasks in a sequential order as they occur, from the first to the last sub-task, which when learnt will enable the child to perform the task independently, is referred to as task analysis. Each step or sub-task represents a teaching step — i.e., a step which has to be taught.

Task analysis, is one of the strategies that is used in teaching people with visual impairment. It can be used for teaching any task or any skill from any area of development (whether gross or fine motor development, communication, activities of daily living or learning concepts) and it can be used by any person who is training the child – be it the parent, the teacher, the family member, the community worker or the therapist.

8.3.1 How to do Task Analysis? (Procedure for Task Analysis)

The following are the steps involved in analyzing a task into sub-tasks:

Step 1

Identify and describe the task which you want the child to learn.

Step 2

Break up the task into as many small steps as you feel are appropriate for a particular child. Each of these steps is referred to as a sub-task. Try to keep each sub-tasks simple and small enough, so that each sub-task can be attained in a short time by the child.

In other words, a task can be broken up into more or less number of steps, depending upon the mental and physical ability of the child — more steps for a child with low ability and fewer steps for a child with high ability. This aspect will become clear to you as you read Sub-section 5.3.2.

Step 3

Arrange the sub-tasks in the sequential order in which they occur when doing the activity. **This is also called 'chaining'**, i.e., listing the steps one after the other in a sequence. Observe the child as she performs the various sub-tasks and identify the sub-tasks in which she experiences some difficulty. These are the sub-tasks you have to teach the child.

Step 4

Decide upon the teaching sequence. **The teaching sequence has to be developed keeping the child as the focus and not the task as the focus**.

What this means is that the order in which the activity is taught to the child may not be the order in which the activity actually occurs. Task analysis should not become a rigid sequencing of activities where you do not proceed further till the earlier activities have been mastered.

The following teaching aspects need to be kept in mind while deciding on the teaching sequence:

1) **See what the child can do presently**

   Teaching strategies build from what the child is able to do presently, rather than insisting upon teaching the activity in the sequence in which it occurs. Thus, if during bathing, the child shows the ability and interest in wiping herself with the towel, you begin by teaching the child that sub-task even though it is the last task in the sequence. Do not insist that she first learn to pour water, then apply soap on the body, then bathe and then wipe her body. Once the child can towel herself dry and begins to take an interest in bathing, these sub-tasks can also be taught.

2) **Begin by teaching the simpler sub-tasks first before you move on to the more difficult ones.**

   If the simpler tasks occur first in the sequence, then use the technique of forward chaining; if they occur later in the sequence, then use the technique of backward chaining.

Let us understand what we mean by these two terms.

- **Forward Chaining**

  When you use forward chaining, you start teaching from the first step in the chain. Once the child learns to do the first step, teach the next step and so on, till the last step. For example, when training the child to eat food on her own, you start by teaching her how to break the chappati into pieces, then to mix the chappati into the 'dal' or vegetable, then to take it to her mouth, then chew and then swallow.

- **Backward Chaining**

  In backward chaining, the last step is taught first. Then you teach the next step in backward fashion, and so on, till you reach the first step. **When the last step is taught first and first step is taught last, it is called 'backward chaining**'. To take the example of eating food: we can teach the later step (i.e., putting the chappati soaked in dal into the mouth) first. This will act as reinforcer for the child to learn the earlier step. To give another example, while teaching the child to wear pants, you can assist the child in all the steps (such as identifying the back and front, holding the pants in front in the correct position, putting legs inside the pants one by one) except the last step, which is pulling up the pants. This is so because the last step in this case is easiest to accomplish; the child can easily do it and she will feel motivated and confident to learn the other steps. Thus, being able to do the last steps acts as a reinforcer to the person to learn the earlier steps.

  Thus, it may happen that the simpler steps may be occurring later in the sequence the way the activity actually occurs, but they are the ones which may be taught to the child first.

- Sometimes, none of these two strategies — forward chairing and backward chaining — may work. The easier sub-tasks may be occurring.

Somewhere in the middle of the sequence. Thus, you begin by teaching the child these tasks. The great thing about Task Analysis is that you list the steps involved in the activity before beginning the activity and then decide the sequence in which the child can learn the activity easily. Let us understand this with respect to the activity of brushing, given in Table 8.1. The items needed for brushing teeth are: Tooth brush, tooth paste, cup to keep water (in case sink is not available) and a towel.

Table 8.1: Teaching Sequence and Activity Sequence for the Task: Brushing the teeth using toothpaste and brush

Teaching sequence for the Child	Sub-Tasks sequenced in the way in which they actually occur
Level III	1) Go to the sink. 2) Take the toothpaste tube from the shelf or holder with one hand. 3) Open the cap with the other hand and keep it on one side. 4) Take the brush in the other hand and touch the bristles of the brush with the tip of the thumb at one end and the tip of the forefinger at the other end. The thumb covers the end of the bristles and the forefinger is placed at the starting tip of the bristle. 5) Squeeze the paste with the thumb and the fore finger of the hand which is holding the paste. 6) Squeeze the paste on the bristles of the brush starting from the bottom of the bristle (where the thumb is touching the bristle) to the top of the bristle (where the forefinger is touching the bristle). 7) Since the forefinger is touching the end tip of the bristle, you can stop squeezing when you touch the forefinger of the other hand. 8) Keep the tooth paste near the cap.
Level I	9) Hold the brush at 45 degree and brush the front teeth. 10) Move the brush to the left side and brush the left teeth. 11) Move the brush to the right side and brush the right teeth. 12) Open the mouth. 13) Brush the insides of the teeth on the left side, the front teeth and the teeth on the right side. 14) Remove the brush from the mouth.
Level II	15) Open the tap. 16) Spit the foam in the sink.

	17) Cup the hand and take water. 18) Rinse the mouth four or five times with water. 19) Wash mouth and face with water. 20) Clean the brush with water and keep it on the shelf/holder. 21) Take the cap and the toothpaste place on the left/right side and close the paste tube with the cap. 22) Place the tooth paste in the shelf/ holder.

In this activity of brushing, we have grouped the sub-tasks which seem to go together. Thus, the task of brushing can be grouped into three levels — the tasks prior to brushing; the actual tasks of brushing; and the tasks immediately after brushing the teeth. Teach the child the tasks of Level I first, even though these tasks form the second set in the sequence the way the activity actually occurs. This is because these are the easier tasks. Then teach Level II task and then Level III tasks. Finally, however, you will have to link up all the tasks so that the child perceives theeas a continuous chain.

It is also possible that a particular child is able to do the cluster of activities labeled as Level III because she has good motor coordination but finds it difficult to do Level I & II tasks. In that case, you would begin by practicing Level III activities first. Thus, what we are trying to say is that **while task analysis serves as a guide for teaching, you have to keep the child as the focus** and plan your teaching based on her abilities**. Thus, the teaching sequence for a particular activity may vary from child to child**.

Let us now read about how task analysis helps us. We have broadly stated that its main purpose is to help the person in acquiring a skill. Let us read how it helps in doing so.

8.3.2 How does Task Analysis Help Us? (The Need/Purpose of Task Analysis)

Task analysis serves three purposes:

1) To assess the person's current level of functioning

By now, you have learnt that task analysis is the process of dividing a task into sub-tasks, dividing/slicing these sub-tasks further into simpler steps (if required) and arranging them in the order in which they occur. When you do so, you get a checklist. This checklist helps you to pinpoint exactly what the person's level of functioning is, at the present moment, with respect to that activity. On the basis of this information, you can plan the next step that you need to teach. Let us take the example of 'eating rice and dal by mixing them' to make this clear. We can divide this activity into the following tasks and write these in the form of a checklist, as given in Table 8.2.

Then you can observe the child to see what are the steps (sub-tasks) that she can carry out. This indicates her **present level of functioning**, also referred to as **'entry level performance'** or **'baseline performance'**. The steps where the child faces a difficulty are the ones you have to

teach the child. For example, as shown in Table 8.2, in the case of a particular child, we find that she can do the first step independently but needs to be physically helped in doing the second and the third step. Then, she needs to be verbally reminded to do the fourth step and has to be physically helped to do the fifth step. She can carry out the sixth and seventh steps independently. Task analysis clearly tells you what the child can do, and what he needs to learn.

Table 8.2: Task analysis checklist Task: "Mixing rice and dal and eating by self using a spoon"

Sub-task	Child's Performance					
	Before after beginning training	After 1 week after training		Week 2	Week 3	Week 4
1) Take a proper sitting position	+	+				
2) Serve some dal from the dish over a little bit of rice in the plate	PP	PP				
3) Mix the rice and the dal well, with the spoon	PP	PP				
4) Scoop up a spoonful of mixed rice with a spoon	VP	+				
5) Take the spoon to the mouth and put food in the mouth	PP	PP				
6) Chew the food	+	+				
7) Swallow the food	+	+				

(VP - Verbal prompt, PP- Physical prompt, "+" independent. You will read about these in detail in the sub-section 9.4.3 on "Prompting and Fading" in the next Unit 9.)

2) To plan the sequence of the child's learning as per her individual needs

It is quite clear from the above description that task analysis helps you to decide what the child needs to learn. You can also come to know from which step onwards you have to teach the child. But task analysis does more than that. **It helps in adding or deleting the tasks as per the individual child's needs and abilities.** You know that there are great variations in abilities, understanding and learning among children with visual impairment. The same task or skill may need to be broken down into more number of steps for some children. For example, the task "mixing rice and dal and eating without spilling" has been analyzed into eight steps for child 'B' and into 11 steps for child 'A' in Table 8.3 because child 'A' has a much lower rate of learning and understanding. For her, these nine steps, which are appropriate for child 'B', may have to be further divided, making a total of 11 steps that need to be taught (Refer to Table 8.3). In Table 8.2, we had analyzed the same task—

'mixing rice and dal and eating without spilling' — into seven sub-tasks. Hence, **the number of steps into which a particular task would be divided would depend on the physical abilities as well as the learning ability of the child. This, in turn, would depend upon the severity of the condition (i.e., visual impairment) and associated disabilities, if any.**

The difference in the abilities of Child A and Child B is in terms of how well each child is able to locate the food on the plate, mix it and scoop it up in the spoon and put it in the mouth without spilling. Therefore, the number of steps for Child A are more as compared to the number of steps for Child B.

Table 8.3: Task analysis of the activity of 'Mixing rice and dal and eating it with a spoon without spilling' for two children with different ability levels

Child A - Low Ability	Child B - High Ability
1) Assume the proper position for eating.	1) Assume the proper position for eating.
2) Hold the spoon with the fist.	2) Hold the spoon properly between thumb and forefinger.
3) Identify the rice with dal served on the plate using the spoon and also use the other hand to touch the food simultaneously to find the location of the food.	3) View (identify) the rice with dal served on the plate with the spoon and find the location of the food. There is no need to use the hands or fingers to locate the food.
4) Mix dal and rice with spoon holding the spoon with fist.	4) Mix dal and rice with spoon holding the spoon between thumb and the fore finger. Mix the food and gather all the food together using the spoon.
5) Mix the food. The child may not be able to gather all the food together and may need help.	5) Take spoonful of the mixed food in the spoon from one side of the plate without spreading the food here and there.
6) Take spoonful of the mixed food in the spoon from any where in the plate.	6) Lift the filled spoon. When the filled spoon reaches near the mouth, open the mouth and place the spoon into the mouth and close mouth with no spilling of the food
7) Lift the filled spoon.	7) Chew closing the mouth properly
8) Open the mouth before the spoon reaches near the mouth	8) Swallow the food
9) While putting the spoon with the food in to the mouth, the food may spill.	
10) Chew the food and the mouth may not close properly.	.
11) Swallow the food.	

3) To assess the child's progress

The task analysis checklist can be used to assess how the child is progressing from one week to the next. With reference to the example of mixing rice and dal for eating (see Table 8.2), the parent after finding out the steps in which the child was having a difficulty, started training the child. After one week of training, the child still needed physical help in mixing rice and dal, but could scoop a spoonful of the mixture into the spoon, without needing to be reminded, i.e., he did not need verbal prompting which was being given in the previous week. He still needed physical help in taking the spoon to the mouth (refer to Column 2 in Table 8.2). In this way, the child's progress was recorded each week.

Identify the step/steps where the child is not showing progress. These may require to be broken down (sliced) further in order to help the child learn them. Or you may require certain modifications in the equipment/material you are using. For example, in the 'mixing dal and rice' example, the child maybe unable to hold the spoon properly because of lack of ability in learning through direct observation (due to visual limitation). She may get stuck at the step where he has to hold the spoon — you can provide an adapted spoon where the handle of the spoon has been made thicker or tactile by wrapping cloth around it — this will help the child to hold it/grasp it more easily. You will read more about such adaptations in Units 20 and 21 'Training in Daily Living Skills'.

You would have realized that even when we teach children who do not have a disability or even when we learn a new task ourselves, we divide it into sub-tasks and learn it. This means we are also using the method of task analysis in our learning. The difference is that in case of people without disability, the movement from learning one task to another task is so quick that we do not realize that we are learning the task by breaking it up into sub-tasks. In the case of people with disabilities, it becomes obvious that we are breaking down the activity into steps.

Check Your Progress Exercise 2

1) Define 'Task Analysis'? Explain its importance.

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2) Explain how you will do 'task analysis'?

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3) What aspects will you keep in mind while deciding on the teaching sequence after doing task analysis?

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4) Choose a task you want to teach a child. Analyze the task into sub-tasks and arrange them in a sequential order as you will teach the child. Give reasons for the way you have sequenced the sub-tasks.

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5) Differentiate between forward and backward chaining

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8.4 SUMMING UP

- Teaching strategies are methods of imparting skills, knowledge or concepts to a learner.
- Task analysis is a commonly used teaching strategy. It involves dividing or breaking up of a task into simple steps (its sub-tasks) and arranging the sub tasks in a sequential order as they occur, from the first to the last step.
- The teaching sequence, after breaking up the task into sub-tasks, has to be developed keeping the child as the focus.
- The common ways of sequencing tasks which often prove helpful are forward chaining and backward chaining.

8.5 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) 'Teaching Strategy' is an approach a teacher or a parent may adopt to give information, teach a skill or a concept to the child or adult.

2) There are three aspects involved when teaching a child a specific task or skill. They are:

   - Initially, the task or the skill which is to be taught should be broken up into simple sub-tasks. This process is called task analysis.
   - Then, appropriate strategies and materials need to be used to help the child to learn the sub-tasks.
   - Finally, the child has to be provided reinforcement as she is learning the task, so that she remains motivated to learn it.

3) In direct teaching, the teacher 'directs', the child's learning and the children are given demonstration or are supervised by the teachers and told what to do, how to learn and what to learn. In discovery learning, the students get an opportunity to explore the environment on their own and discover facts and concepts as well as acquire skills, by building upon their prior knowledge. Of course, the teacher arranges the learning environment in such a way that the children get opportunities to discover.

Check Your Progress Exercise 2

1) The strategy of dividing or breaking up of a task into simple steps (its sub-tasks) and arranging the sub-tasks in a sequential order as they occur, from the first to the last sub-task, which when learnt will enable the child to perform the task independently, is referred to as 'task analysis', Task analysis serves three purposes:

   a) To assess the person's current level of functioning: When a task is divided into sub-task or simpler steps, we get a Checklist, which helps us to pinpoint exactly what the child can do with respect to that activity. Thus, we get to know the child's level of functioning at that time, with respect to that activity. On the basis of this information, we can plan the next step that has to be taught to the child.

   b) To plan the sequence of the child's learning as per her individual needs. Every child is unique and there are great variations in abilities, understanding and pace of learning among children. The same task or skill may need to be broken down into more or lesser number of steps for some children, depending on the physical abilities as well as the learning ability of the child. This, in turn, would depend upon the severity centre disabling condition and associated disabilities, if any. Thus, depending upon the abilities of a particular child, you can sub-divide the task as required.

   c) To assess the child's progress: The checklist developed on the basis of the task analysis can be used to assess how the child is progressing from one week to the next.

2) The steps involved in task analysis are:

   Step 1: Identifying and describing the task you want the child to learn.

   Step 2: Breaking up the task into sub-tasks, depending on the child's abilities.

Step 3: Arranging the steps in the sequential order in which they occur in the activity.

Step 4: Deciding upon the teaching sequence.

3) To decide upon the teaching sequence, the following points will need to be kept in mind.

i) Build upon what the child can do at present, rather than teaching the activity in the sequence in which it occurs.

ii) Begin by teaching the child simpler sub-tasks before moving on to the more difficult ones.

4) i) Identify a task you wants the child to learn

ii) Divide it into sub-tasks. Depending on child's abilities to learn the task.

iii) Decide a teaching sequence.

Now explain the reason for your teaching sequence, which should be based on the child's learning abilities.

5) Chaining is listing the sub-tasks in a task in the sequential order in which they occur during the activity. Forward chaining is teaching from the first step in the chain. Backward chaining is teaching the last step first.

UNIT 9 TEACHING STRATEGIES: REINFORCEMENT AND OTHERS

Structure

9.1 INTRODUCTION

In the last Unit, we explained that there are three aspects that a parent or a teacher must look into while teaching any task or skill to the child:

1) Firstly, the parent or the teacher must break down the task or the skill to be taught into teachable sub-tasks. This process is called 'task analysis' and has been discussed in the previous Unit.

2) Secondly, we need to use appropriate strategies and materials to help the child learn the task. There various strategies that can be used and these are discussed in this Unit 8.

3) Thirdly, we have to provide reinforcement and feedback to the child as she is learning the task, so that she remains motivated to learn it. There are various ways of providing reward and reinforcement and these have also been discussed in this Unit 8.

Task analysis describes what has to be taught to the child. It is a blue print for teaching, which describes the content of teaching and lists the steps through which the person must proceed to reach the desired objective — in other words, the methodology and procedure for teaching or the teaching materials required. In the case of people with disabilities, it becomes obvious that we are breaking down the activity into steps.

In this Unit, we will learn how to teach the task and sub-tasks to the child; in other words, **we will learn about some teaching strategies.**

Objectives

After studying this Unit, you will be able to:

- describe the strategy of 'modeling' and use it as a teaching strategy;
- explain the meaning of 'shaping' and use it for teaching a skill;
- state the different types of 'prompts' and use these appropriately during teaching-learning;
- explicate the meaning of 'scaffolding' and how to use it in teaching-learning;
- impart 'study skills training' to the child;
- use the strategy of 'co-operative learning' for teaching; and
- describe the meaning of reinforcement and reinforcers know about the different ways of providing reinforcement and use reinforcement during teaching-learning.

9.2 MODELING / DEMONSTRATION

For sighted young children, modelling method is considered as one of the successful methods of teaching. In simple words, **'modeling' means teaching through demonstration**.

Through modeling, the parent/teacher provides a sample behaviour/response which the child is to observe and then repeat. For example, the teacher wanted to teach Rahul how to make a tower of two blocks. She repeated the instructions, "Rahul make a tower of two blocks" a few times, but Rahul did not know what a tower was. So he did not do anything. Then the teacher prompted by saying, "Put this block on top of the other block" but Rahul did not follow these verbal instructions either. Then the teacher made the tower of two blocks in front of him (in other words, the teacher demonstrated what had to be done; she modeled the behaviour). Rahul then followed what the teacher did — and managed to make the tower! The teacher reinforced him by clapping. Once the teacher clapped, Rahul made another tower this time totally on his own and said, "Tower".

In case of child with visual impairment, observation through vision or imitation is challenging. Hence modeling cannot be used with them. Hence we use hand-over hand technique to teach skills to children with visual impairment. The hand-over-hand technique is a tactile teaching method (based on touch). In this method the parent/ teacher/adult provides physical guidance to the child. The parent/ teacher guides the child's hand to perform an activity. The parent holds the back of the child's hand and guides the child to touch or explore the objects. Also, the adult guides the child to explore the motion of an activity to be performed. The adult can use this method when the child is not independent in her activity or the child shows resistance to learning with other methods. For example, hand over -hand -technique can be used to teach hand washing, tying shoes, writing braille in braille slate using stylus. The adult who is training the child would place her own hands over the child's hands and prompt the child step-by-step of the activity to be

learnt. For example, while teaching writing using the braille slate, the teacher would first teach the child to hold the stylus guiding the child to wrap it with her thumb and the first three fingers of the right hand (for a right handed child). The next step is to place the forefinger on the top the stylus, then the forefinger of the left hand to identify the first line and first cell in the braille slate, then punch the dots in the cell. All the activities involved in braille writing are guide through hand-over- hand technique. Over a period of time the child will learn to write braille independently. This method of teaching is useful in learning many skills such as buttoning, brushing teeth, using spoon and utensils etc.

In the hand-under-hand technique, the child's hand is placed over the adult's hand and the activity is performed mainly by the adult while the child's hand over the adult's hand helps the child to feel the movement to be carried out while doing the activity.

Details about how to use the hand-over-hand and hand-under-hand techniques in carrying out various activities are given in Unit 21 on Training in Daily Living Skills.

9.3 SHAPING

'Shaping' is another commonly used teaching strategy. Shaping behaviour is an aspect of behaviour modification that slowly teaches new behaviour through the use of reinforcement. In the early stages of learning, it may happen that the child does not entirely show the particular behaviour which you want the child to learn. **However, you encourage and reinforce her even if she shows a part of that behaviour or an approximation of that behaviour. As the teaching and training progress, you reinforce the child for closer approximations of the final behaviour. This process is referred to as 'shaping'.** Let us understand this through some examples.

Example 1

Many children with visual impairment show some unacceptable behaviour. These behaviours are in general self-stimulatory behaviours (that is, the child shows these behaviours to provide stimulation to her own self). We term these as stereotyped behaviours. Some of these unacceptable behaviours are eye-poking (pressing one's own eyes with fingers), flopping/ fluttering hands, rocking the body, shaking the head. Shaping technique would help in eliminating these behavious. Let us understand this through some examples.

Karan is a five year old child with visual impairment. He shakes his head from side to side repeatedly even though he is not saying 'no'. Karan is not getting as much stimulation as his sighted peers are getting, and so he seeks stimulation within himself and hence this behaviour of head rotation or shaking of the head. He is not playing with toys because toys are not as stimulating for him as these are stimulating and attractive to sighted children. He may need appropriate toys to stimulate his other senses of hearing and touch but he was not provided with these. So Karan engaged in this self-stimulatory behaviour from time to time and this behaviour was not corrected by his parents and thus became a habit. Shaping technique was helpful to change this behaviour. Let us understand how to use this technique?

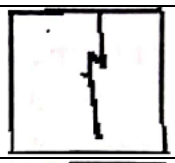
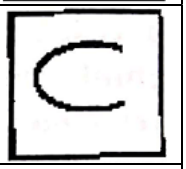
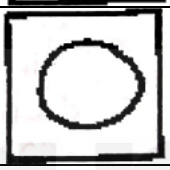
The objective is to make the child change this head shaking behaviour. The first thing you need to know is that the child's brain needs some visual stimulation. Because of absence of visual stimuli, he engages in self-stimulatory behaviour to fulfill his need. You have to replace this behaviour with another activity. The activity which you are giving must be a pleasurable physical activity which is interesting avoiding boredom.

So for example, you can engage the child in teaching the concept of direction. Say to the child, "I am sitting in front of you a little far away. Please come to me keeping your head straight. If you come to me with your head straight, you will receive this food item from me (select a food item which the child likes to eat. The food item is the reinforcer)." The child will try to come. Even if the child comes and does not completely stop shaking his head, give the child the food item. Also praise the child and do this activity two three times. Describe to the child how the head should be. Let the child understand that others are keeping head straight, not shaking it, which is not acceptable. Allow the child to explore your head to see how you are keeping your head straight and allow her to explore the head of one or two children head. Do not make him feel inferior that he is exhibiting an unacceptable behaviour. Next day, you continue this behaviour modification technique using some other activity. For example, you can explain to the child that you are going to keep a small light wooden block, on his head, and he has to walk to the teacher who is in front of him. If he walks without dropping the block, he will get his favourite food item and also get to play with his favourite toy (so you have increased the reinforcement) The child will show great interest in such activity. When you start the activity, explain to him one or two times and then proceed to his independence performance. Even if the child drops the block while walking, but he tries to perform it, you give him a part of the reinforcement – so you let him eta the food item but do not lt himplay with the favourite topy. Next time when his performance improve you can let him play with the favoutite toy as well. In this way, the unacceptable behaviour can be slowly replaced. The point to note is that each time you provide the reinforcement only when the child shows improvement from the previous time.

You reinforced the child, even though he initially did not show the desired behaviour fully (which was your target), because the behavior which he did show was in the direction in which you ultimately wanted him to progress. In other words, you shaped his behavior.

Example 2

You want Lakshmi (a child with low vision) to be able to draw a circle at the end of three months of training. However, at present, she is only able to hold a pencil and make some marks on paper. It would take some time for Lakshmi to learn to draw a circle. Therefore, you break up the activity of drawing a circle into smaller steps, with each step being a closer approximation of drawing a circle. You reinforce each step in the sequence and, once it is established, you move to the next step. Thus, your reinforcement criteria could be the following:

Lakshmi holds the pencil and makes any mark on paper – present behaviour	
Lakshmi makes circular motion with pencil	
Lakshmi makes spirals	
Lakshmi makes circle even though they are not proper	
Lakshmi makes an appropriate circle	

Thus, you have gradually shaped Lakshmi's behaviour and ultimately, she is able to draw a complete circle.

Example 3

Rahul is a shy 7-year-old boy with visual impairment who does not like to play with other children. He likes to play alone by himself. You have set up a short term objective as follows: "Rahul will play with other children in his class for duration of 5-10 minutes." Obviously, Rahul will not show this behaviour at once. So you break up the behaviour into the following steps and reinforce Rahul for each of the following steps successfully, till he acquires the objectives:

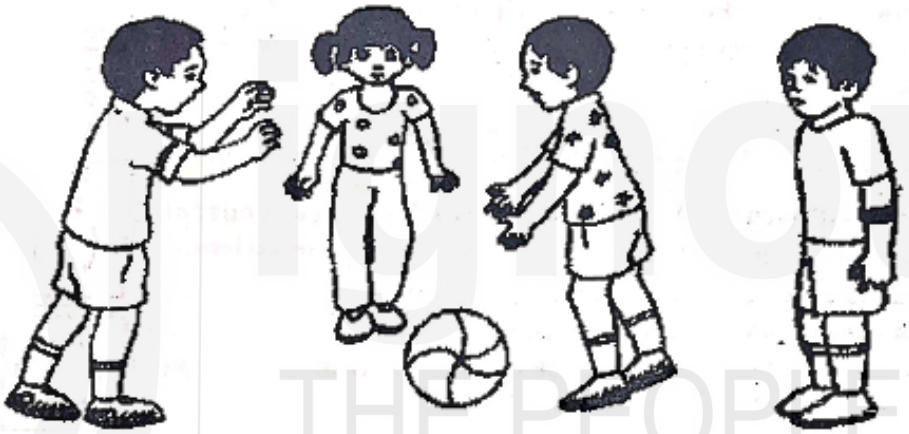
— *Rahul sits comfortably but alone in the play ground near the place where other children playing – present behaviour*

— *Rahul is near the group of children who are playing. He responds to some of them who come near to him and touch or talk to him but does not join them.*

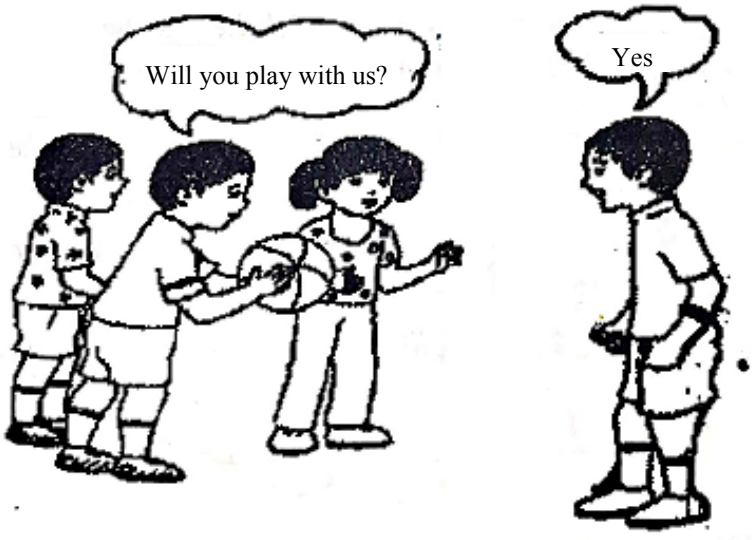
— *Rahul joins the play when someone asks him to join Rahul is a member of the play group and makes suggestions during play as well as initiates interaction*

Thus 'shaping' can be defined as follows: **'Shaping' refer to the process of giving rewards in a step by step manner, to minor but correct approximations of behaviour towards a particular objective.**

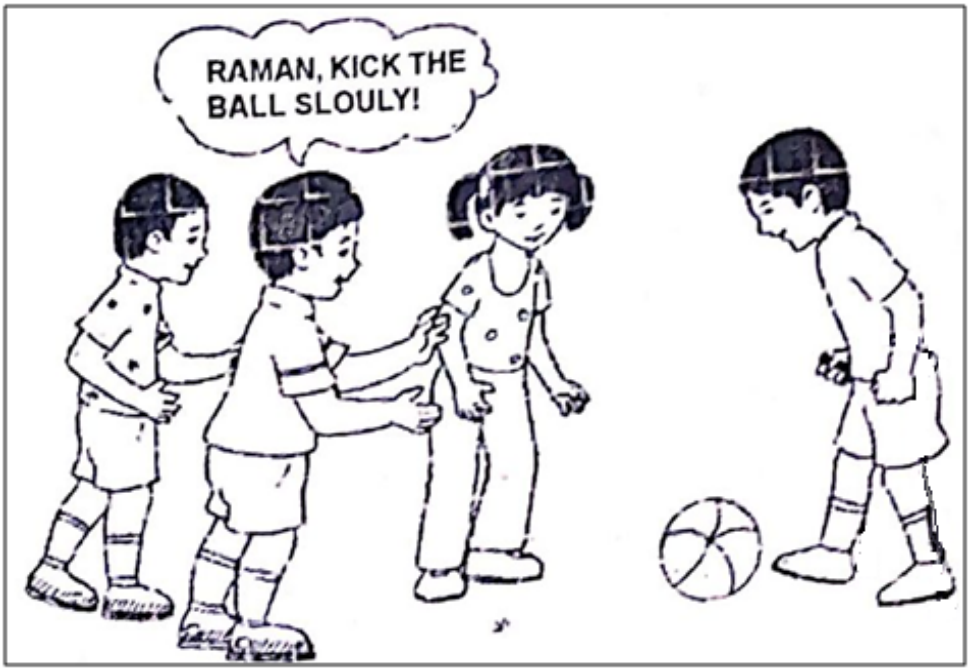
a) **Watching from far**



b) **Looking with interest without joint**



c) **Responds to quest**



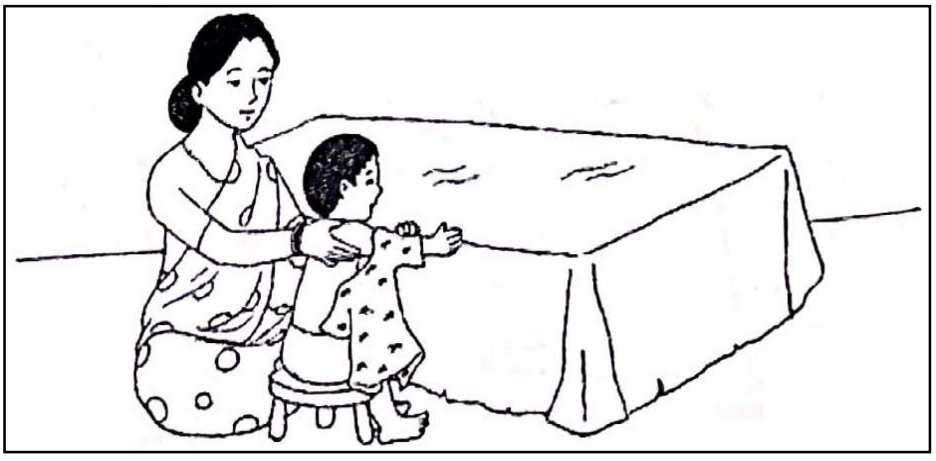
9.4 PROMPTING AND FADING

This is another useful strategy for teaching new concepts or skills, 'Prompting' refers of giving help or assistance to enable the child to carry out a task in a desired manner. If you think about it, you will realize that we often help the child when she is learning a new task whether or not the child has a disbaility. So we use techniques of prompting in our day-to-day life.

The various types of prompts are as follows:

- **Physical Prompt**

  This refers to providing physical or manual help to the child to do a task. You may five complete physical support/partial physical support, depending on the ability of the child. For example, while teaching the child to balance herself on the see-saw, you may hold her body so that she does not fall. When teaching the child to wear the shirt, the mother may have to hold the child's arm and put it into the shirt. Thus, in these examples, you are physically helping the child. Physical prompts are usually needed when beginning to teach a new task to the child.



- **Gestural prompts**

  Gestural prompts means using gestures to provide help to the child. Some of the gestural prompts are: pointing to the place where the response is to be made (for example, pointing to the bathroom to remind the child that she had to go to the toilet), making a sound by tapping the finger where the response is to be made (e.g., tapping the sink to remind the child to keep the plate there).

- **Verbal prompt**

  Some children may not need physical help but they may need **help in the form of verbal statements or instructions, which describe every step of the task that is required to be performed. This is called 'verbal prompt'.**

  Giving additional instructions, emphasizing important words by saying them louder or longer, giving single word reminders, drawing attention to each important part of the instruction by pausing — these are some of the verbal prompts used in teaching tasks.

  For example, when the mother says: "Rani, please wear — the red coloured shirt — kept on your bed" she is using a verbal prompt. She may need to repeat the instruction by saying, "Rani, wear the shirt."

  Gestures can be used along with a verbal prompt. In this example, the mother in addition to the verbal prompt, may also point to the shirt, (helpful for children with low vision) or let the child touch the shirt.

- **Verbal request**

  As the child learns to do the task more and more on her own, you may only need to give verbal hints or verbal requests, instead of complete verbal instructions. Thus, you may say, "Raju, please go for a wash", instead of verbally stating the complete task of bathing. Or you may say. "Please wear your shirt" to remind the child about the behaviour that is to be performed.

  What type of prompt you will use, will depend on the abilities of the child. A child with physical limitations may need physical prompts for quite some time Thus, if a child requires verbal prompt during leaning, it means that she needs less help from you and if she requires physical prompt during learning, it means that she needs more help from you.

- **Fading**

  As the child learns to perform a task, the prompt is slowly removed. **The process of gradual decrease in the assistance or help by you, so that the child begins to perform the activity or behaviour independently, is called 'fading'.**

Thus, for example, when the child learns to wear the shirt with your physical assistance, gradually lessen your help (i.e, fade the physical prompt), and use verbal or gestural prompt. Once the child learns to wear the shirt with verbal

or gestural prompt, reduce detailed verbal instructions and gestures and only give hints. Slowly, stop using hints as well, so that ultimately the child wears the shirt independently when asked.

Let us learn how prompting and fading as a strategy helps children with visual impairment.

Let us consider teaching 'clapping hands' to a three- yearold child with visual impairment. This child is a totally blind. So for this child gestural prompt cannot be provided which can be used with a child who has has residual or low vision.

With a totally blind child start with physical prompting step by step. Physical prompting can be accompanied with verbal instruction. Hold the wrists of the two hands and bring to the centre of the child's body in front of the chest. The fingers of hands may not be straight. It may be like 'fist'. Pull out the fingers and make these straight in both hands. Help the child to keep the hands straight and palms facing each other. Your hands are still holding the wrists of the child. After practising keep the hands facing palms each other, move the child's hand back and forth. After using physical prompt two or three times, you can move to verbal prompt and say to the child, "Bring your hands together, open the fingers and bring the palms together to clap." When the child learns this, the next time you may only need to use verbal request by simply saying, "Clap your hand." Ultimately you have to stop making the verbal request as well (i.e., fading the prompt) and the child should spontaneously clap in appropriate situations.

9.5 SCAFFOLDING

Scaffolding is a strategy in which the parent or the teacher combines new information with what the child already knows to produce a more general, higher order skill. In other words, the teacher or parent builds upon what the child already knows. For example, four-year-old Megha was playing with her doll while her mother was sitting next to her. Megha looked at her mother and said, "Dolly wants the ball". The mother gave her the ball and said. "Yes, the dolly wants the red ball. Red, just like your frock.." The mother had observed what the child knew and added one new concept along with it, i.e. 'red'

Next time when Megha asked for the red ball, the mother added. "Yes. the Dolly wants the red ball - it is soft, just like your cheeks!". Thus, the child is introduced to another new word and concept—soft.

9.6 STUDY SKILLS TRAINING

In study skills training, the focus is to help children learn "how to learn".

It enables children to know how to systematically plan, organize, record, access and use information on their own. These skills should be incorporated into everyday life/all areas both by parents as well as teachers. The aim is to become independent, self-directed learners through repeated practice.

Some of the study skills which are helpful in learning are described below:

a) **Organizing Information**: This means arranging information into structures. For example, while teaching a concept which has a number of steps, the parent or the teacher can organize the steps by using words like 'First', 'Second'.... and 'lastly.'

We can also organize information visually. For example, if she wants how to assist her mother in laying the table and gets confused as to what should be put where, we can present this information visually in the form of a picture or a drawing (for low vision) or tactile (for totally blind).

b) **Mnemonic techniques**

Sometimes, when children are expected to 'learn' 'memorize' information in a certain sequence, we can use associations or special memory tricks. For example, if we want the child to learn the names of the planets in a sequence, we can make sequence, we can make a sentence to form a mnemonic, such as: My Very Educated Mother Just Showed Us Nine Planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune. Pluto).

c) **Self-monitoring/selfcorrection**

Self-monitoring gives the child immediate feedback without the involvement of the parent/teacher or classmates. It also motivates the child to do better, enhances her self-concept as the child seeks be independent in her behaviour.

One example of self-monitoring would be to provide the answer to the sum at the end of the worksheet. Let the child do the sum independently and check the answer by looking at the end of the worksheet.

Another example of self-monitoring would be to develop a checklist for the tasks that the child is required to do at home/school. The child reads the various items in the checklist during different periods of the day and sees whether the activity has been done or not.

See the box below for an example of checklist.

My daily checklist	Mon	Tue	Wed	Thur	Fri
1. I got my school diary signed by parents.					
2. I did the home work without reminders					
3. I packed my school bag for the next day					
4. I took bath in time.					
5. I ate dinner independently.					

9.7 COOPERATIVE LEARNING

Cooperative learning is a group teaching strategy where the students work together to achieve a shared goal. This does not mean that the teacher has no other role except divide the students into groups. The teacher's role is much more than this. The teacher needs to:

— plan the groups and tasks, keeping the students' individual styles in mind;

— monitor the activities of the groups;

— intervene as required and promote positive interdependence among the group members.

The various types of co-opertaive learning startegies are discussed further:

- **Peer tutoring**

  When fellow students/classmates support each other in learning and acquiring a skill, it is referred to as peer tutoring.

  For example, the teacher gives an assignment or a creative writing topic to groups of two students each. A child with visual impairment may have a difficulty in writing. So, her partner can take on the role of writing down her responses. On another occasion, the child with visual impairment may know some answers, which the other child does not know — so she can support the other child by explaining the concepts or solving the problems verbally. The teacher will need to ensure that the children with visual impairment are not always the ones who are getting support—they should also get the opportunity to provide support to their classmates.

- **Joint projects**

  This strategy emphasizes cooperation rather than competition, by having the students work on learning activities together in small groups and receive rewards based on the group's performance. This approach facilitates positive interdependence. It also teaches children accountability and how to work together to get a job done. To make joint projects successful, the teacher will have to:

  1) Provide clarity while explaining the learning activity, the material needed and what the students must do to accomplish it.

  2) Place the students in different learning groups based on how well the teacher thinks they will work together. The teacher will have to assign them tasks keeping their learning styles/strengths in mind. For example, all the groups may work on the same topic but the outcome expected from each group may differ. For example, one group may present their work in the form of a chart, another group can do a role play/drama, a third group can make a model, fourth group can write a report.

  3) Monitor each group and when needed, answer questions and help them to work effectively with each other.

Thus, we conclude by saying that there are no 'magic' or 'special teaching strategies to be used with children with visual impairment. The strategies we have described in this section will be useful for teaching and child whether disabled or not.

Check Your Progress Exercise 1

1) Match Column A with Column B

a)	Modeling	i)	Gradual decrease of help to carry out a task
b)	Shaping	ii)	Teaching the child to show the desired behaviour by repeated reinforcement of close approximations of that behaviour
c)	Prompting	iii)	Joining a new concept or information with the child already knows
d)	Scaffolding	iv)	Demonstrate a particular activity to the child
e)	Fading	v)	Practice of giving help to enable the child to carry out a task

2. Fill in the blanks with appropriate words

   i) ……refers to the list of reinforcers arranged in an order of 'most preferred' to 'least preferred'.

   ii) A group teaching strategy where students support each other in learning skill is called ……

3) Explain the meaning of 'prompts' and describe the different types of prompts?

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4) What do you understand by 'study skills training'? Describe some of the study skills which help children in learning?

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5) What do you understand by 'joint projects'? How can you make joint projects successful?.

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9.8 REINFORCEMENT

When we teach the child a new skill, we want the child to show that skill whenever it is required. Also, we want to keep the child motivated in order to learn that skill. How can we ensure that the child will do so? We can do this by reinforcing the child — in other words, by rewarding the child when she shows that skill.

'Reinforcement' is another important strategy followed while teaching children — whether or not they have a disability. Let us understand what it means.

If you think about your day-to-day life, you will notice that we continue to carry out and perform those behaviours and actions where the results are encouraging or motivating. We lessen and gradually stop those behaviours, where the results are negative or not rewarding.

We continue with those behaviours for which we are appreciated

For example, when our parents appreciated us for doing good work, we made efforts to continue doing it. If, in spite of our efforts, the parents did not appreciate us. it had the effect of lowering our motivation and we did not work that hard.

Let us take some more examples. Supposing you tried out a new recipe. If the dish prepared was tasty and others expressed their appreciation, you will try to prepare the item again; if the family members did not like the dish, you will not prepare it again.

If you look at all these examples, you notice that we continue the behaviour which leads to pleasant results/consequences (appreciation, tasty) and we discontinue those behaviours which have negative consequences (no appreciation, not tasty, scolding). This process governs our behaviour all throughout life, though often we do not realize it. **This is the process of reinforcement. 'Reinforcement is any event which strengthens and increases the chances of occurrence of that behaviour.** We use this as a strategy for teaching children and adults all the time — usually without our realizing that we are doing so. It is a powerful tool for teaching desired behaviour to all children and adults.

Sometimes, the natural and spontaneous reinforcement that we receive when we do activities may be insufficient to motivate us to continue with the activities. This is particularly true in the case of persons with visual impairment. Many times, children may not be able to do certain activities, even though they may want to, due to physical limitations. The child has put in a lot of effort to do the activity, but because she did not complete the activity as we think she should have, we do not give enough reinforcement. This is de-motivating for the child. Many times, we have to reinforce the child for the effort she has put in and not only for the result of the activity, but we often forget this. For example, a child may have limited mobility and even after repeated attempts, she may not be able to go from her house to the nearby park independently. In this case, her attempts to go from her house to the park with parent's guidance should be reinforced, rather than focusing on that she did not do so independently. If we do not reinforce child's attempts to be mobile with parental guidance, the chances of the child making further efforts get reduced and learning new behaviours and skills becomes difficult. Thus, **children have to be provided with planned and systematic reinforcement**. In this Section, we shall read about reinforcement in detail.

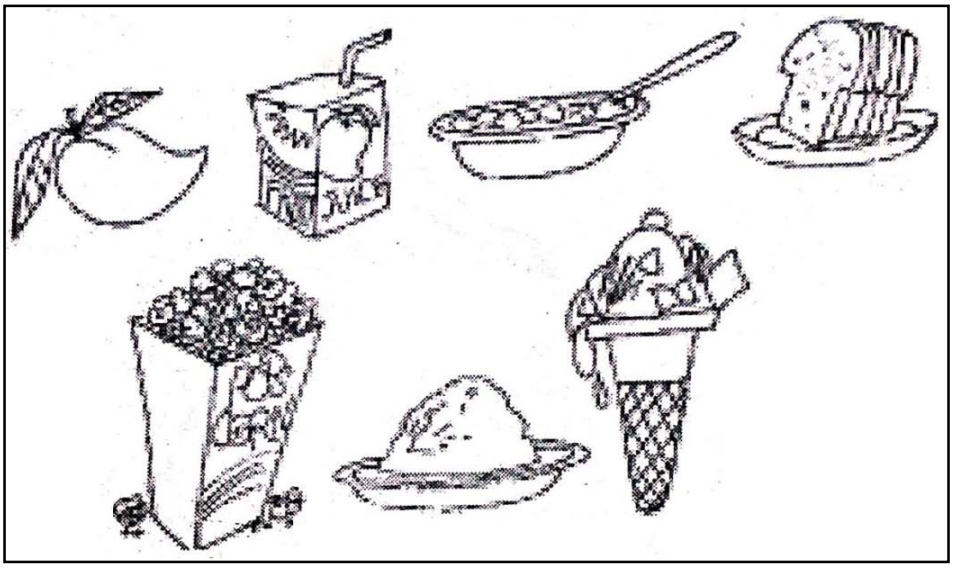
9.8.1 Types of Reinforcers

You will find that different people find different types of things rewarding and motivating. Thus, you will have to choose different types of reinforcers for different people. Given below are examples of some types of reinforcers.

- **Edible or primary reinforcers**

  Edible reinforcers include food and drink. They are called 'primary' reinforcers because they are essential for life. They are usually used with young children with low cognitive ability. These are used when teaching new skills to children, as they have higher motivational value. Thus, when the child performs a behaviour which is desirable, she is rewarded with fruit, or a sweet dish or anything else that the child likes. You need to remember the following points while using edible reinforces in order for these to be effective:

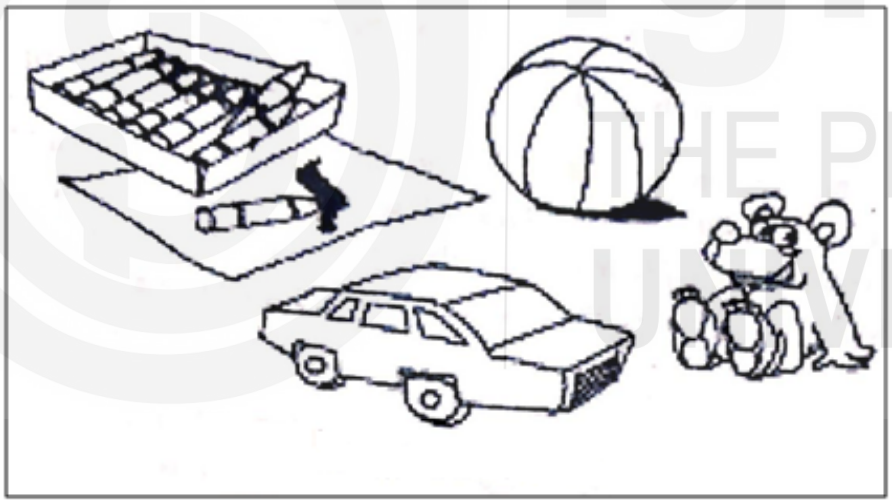
  1) Select a food or drink which the child likes very much — only then will she be motivated to do something in order to get it.
  2) Select something which will not harm her in any way (not too many sweets, chocolates or cold drinks).
  3) See that the child is hungry before using the reinforcer (food item). If you give the reinforcer after the child has had lunch, the child will not look forward to receiving the reinforcer. Then the reinforcer will not be effective in increasing the chances of the child showing the desired behavior.



Edible Reinforcers

- **Tangible reinforcers**

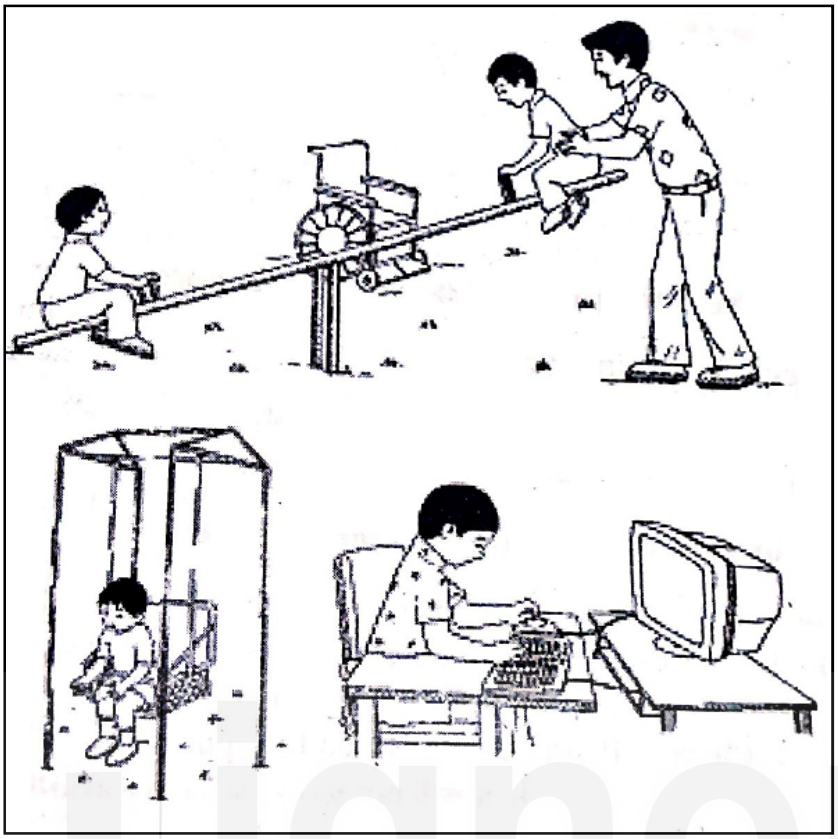
  Tangible reinforcers are those which are immediately desirable for the child (such as pen, pencil, crayons, games, money, food and toys) or are objects which have achieved reinforcing properties, such as getting stars for correct response. You would remember getting such rewards from your teacher in school.



Tangible reinforcers

- **Activity reinforcers**

  Activity reinforcers are activities that are of interest to the child. Thus, if the child completes the task given, she can go on to her favourite activity. These activities maybe painting, colouring, playing a specific game or playing with a certain toy, listening to a specific song, or write a Braille .



Activities enjoyed by children

- **Token or Exchangeable reinforcers**

  Exchangeable reinforcers are those which may be traded or exchanged for a more valued reinforcer. For example, tokens or stars are used as reinforcers which can be exchanged for other things. Thus, each time a child does something right, she gets a token or a star. If she gets five stars in a week, she gets an ice cream (which is her favourite edible reinforcer). The exchangeable reinforcers are also referred to as 'secondary' reinforcers, since they are those events and things, which have acquired reinforcing properties through being paired with (associated) tangible or primary reinforcers.

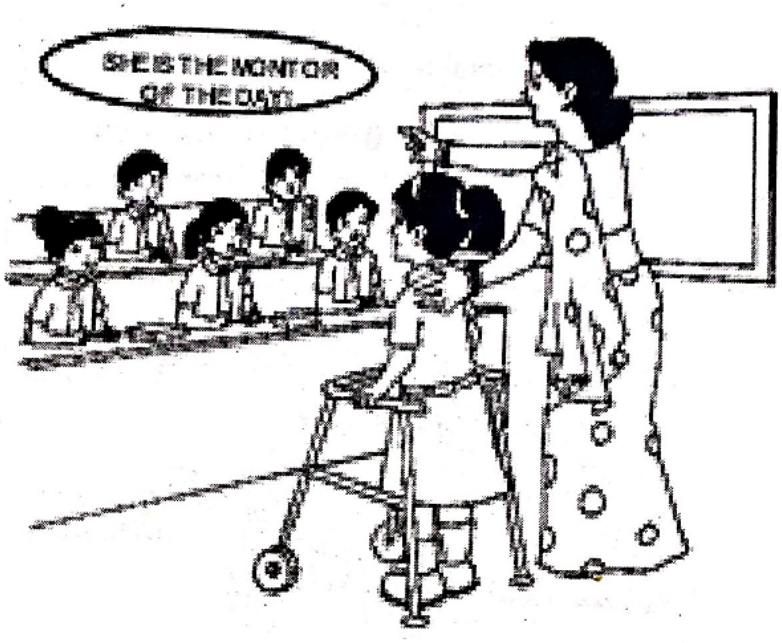
  (**Note:** The difference between using stars as tangible reinforcers and using them as exchangeable reinforcers is that when they are used as the former they are seen as a reward in themselves. In the latter, they are traded for something else which is considered a reward).

- **Social reinforcers**

  Social reinforcers include words of praise, a smile, a nod, clapping, a pat on the back and so on. These are most often used by us as reinforcers.

- **Privileges as reinforcers**

  Making the child the monitor of a class or the leader of a group are privileges which can serve as reinforcers. A child will show the desirable behaviour in the future if she is given these privileges. For example, when the child keeps her belongings in a tidy way in school, she is made the monitor of the class. This motivates her continue being tidy.



The child enjoys the privilege of being the monitor

9.8.2 Selecting Reinforcers

The following points must be kept in mind when selecting a reinforcer for a particular child:

1) **The reinforcer must be appropriate for the child**

   What you can use as a reinforcer will vary from a child to child (person to person). This is because different people find different things and events rewarding. For example. Karan's favourite game is 'snakes and ladders' and Simran's is carrom. If you reward Karan for appropriate behaviour by giving him carrom to play with, it will not work, since the activity does not interest him. Therefore, we need to select and identify rewards/reinforcers according to the likes and dislikes of each child and which are appropriate to his or her age and individual interests.

2) **Choose reinforcers which are easily available and can be given easily in the training setting.**

   Usually, social reinforcers are most easily available and can be readily given. However, social reinforcers alone may not work with very young children and children with limited cognitive abilities. You may have to pair them up with other reinforcers. Often, we do use social reinforcers along with other reinforcers. For example, you praise the child (social reinforce) for showing desirable behaviour before you allow her to play with her favourite game (tangible reinforcer).

3) **Be aware of the changes in the child's preference for rewards.**

   A person's likes and dislikes are not fixed. What a child likes one day, may not be preferred by her sometime later. Watch out for changes in the child's preferences.

9.8.3 Methods of Selecting Reinforcers

You can find out what works as a reward for a particular child in the following ways:

1) **By observing the child's behaviour**: Observe the child to see what are the things or activities which are appropriate and which she likes to do or demands again and again.

2) You can also make a list of things yourself which most children find interesting or rewarding. Now use these items one by one with a particular child and see what items she prefers or wants more often. These can be used as rewards for that child.

3) **By asking the child directly**: Some children may directly be able to tell you what they like or dislike, when you ask them.

4) **By asking the parents or family members:** This is an effective way of finding out though sometimes it may happen that what the parent (or others) think the child likes, may not be actually what she likes.

   Once you have identified the events and things that work as reward for a child, list the reinforcers and arrange these in order of 'most preferred' to 'least preferred' item. This list is called a 'reinforcer menu'.

9.8.4 How to Give Reinforcement?

Having selected the right reinforcers, it is also equally important to use these appropriately when teaching the child — in other words, you need to present (use) the selected reinforcer (reward) appropriately. **Remember the following points when giving reinforcement:**

1) **Give the reinforcer only when the child shows the desirable behaviour**

   Therefore, decide clearly what are the behaviours to be rewarded and which are not to be rewarded. Also, explain to the child the behaviour that will be rewarded. For instance, tell the child that: "if you do not hit your sister today, then you can go out and play." If the child hits her sister even once, she is not allowed to go out to play.

2) **Give the reinforcer immediately after the child shows the desirable behviour.**

   Supposing you have decided to reinforce the child for showing helping behaviour with classmates. If you do not give the reinforcer as soon as the child shows helping behaviour and the child performs some other activity in between, then that activity would get reinforced and not the which you want to reinforce. Apart from this, the more the delay between giving the reinforcer and the desirable behaviour shown by the child, the less will be the effect of the reward. Therefore, if you are planning to use edible reinforcers or activity reinforces, ensure that they are with you right there so that you can reinforce the child there and then (within 2-3 seconds).

3) **Reward clearly:** Be specific and clear while rewarding. For example, when the child identifies the correct colour say that: "I am happy you recognized the colour 'Red'. This is your star". This clearly tells the child what was the good thing that she did and that she should continue doing so in the future. It also helps her to learn the relationship between the specific behaviour and the reward. Avoid using general statements: "Great! That is wonderful." The child may not understand what was it that she did which was great and wonderful.

4) **Combine other types of rewards with social rewards.**

   When giving edible tangible or activity rewards, simultaneously use social rewards as well. We ultimately want the child to perform a desirable behaviour in anticipation of the social reward and not because she will get something to eat or do after she shows the desirable behaviour. Therefore, when you begin using social rewards along with other rewards, the child begins to value the social rewards as well. Gradually, as the child begins to work for rewards, the other rewards can be gradually reduced and, finally, eliminated.

5) **Change the rewards as children (and even adults) tend to lose interest with the same reward being given each time.** So if you are using an edible reward, you could shift to activity reward and then come back to edible reward after some time.

As mentioned earlier, you need to make a list of reinforcers / rewards for each child. When you notice that the child is losing interest with a specific reward, change to another one.

9.8.5 When to Give Reinforcement ? (Schedules of Reinforcement)

Reinforcement schedules are of two types. Let us understand when to give reinforcement.

1) **Continuous schedule of reinforcement**

   When the reinforcement is given each time the desired behviour occurs (i.e. after each appropriate response), it is called a continuous schedule of reinforcement. **You need to give continuous reinforcement when you are teaching a new behaviour or a skill.**

2) **Intermittent schedule of reinforcement**

   When the reinforcement is given after some appropriate responses and not after other appropriate responses, then it is called intermittent schedule of reinforcement. **When the child has learnt the skill or behaviour sufficiently, switch over from continuous reinforcement to intermittent reinforcement.** This is because we ultimately want the child to show the desired behaviour because it feels good when she does it, and not because she always gets a reward on doing it. **If you continue rewarding the child even after she learns the behaviour, then the child will not learn to value or like the behaviour for itself.** Thus, rewards must be gradually faded.

If you think about it, you will realize that in everyday life, we use intermittent reinforcement. We do not praise or reward people each time they do something good. Intermittent schedule of reinforcement is more natural (in other words, this is what we usually do) and it helps in maintaining the acquired behaviour, generalizing it and maintaining its proficiency.

Check Your Progress Exercise 2

1) Define reinforcement? Describe the different types of reinforcers?

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2) How can you select reinforcement for a child? What is reinforcer menu?

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3) Differentiate between 'continuous' and 'intermittent' schedule of reinforcement?

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9.9 SUMMING UP

- Teaching strategies are methods of imparting skills, knowledge or concepts to a learner.
- Modeling is 'teaching by demonstration'. Here you show the child what you want the child to do and then she performs the task.
- Shaping, where you reinforce the child even if she shows a part of the behviour, is also a useful strategy for teaching.
- Co-operative learning is a group teaching strategy where the students work together to help each other learn.
- 'Prompt' refers to giving help and 'fading' refers to gradually withdrawing help.
- Scaffolding is a strategy in which the parent or the teacher combines new information with what the child already knows to proceduce a more general, higher order skill.

- Reinforcement is another strategy that is used during teaching. It can be used to teach new skills and behaviours or increase the frequency of desirable behaviours. to teach new skills and behaviours.
- The reinforce selected must be appropriate for the child and must be given keeping certain principles in mind.
- You need to give continuous reinforcement when teaching a new behaviour or skill. Once the child has learnt it sufficiently, give intermittent reinforcement.

9.10 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) Match the following
   a) iv
   b) ii
   c) v
   d) iii
   e) i
2) Fill in the Blanks:
   i) Reinforcer menu
   ii) Cooperative learning.
3) 'Prompting' refers to the process of giving help or assistance to enable the child to carry out a task in a desired manner. The various types of prompts are as follows:
   a) **Physical prompt:** refers to providing physical or manual help to the child to do a task. This may be complete physical support or partial physical support, depending on the ability of the child. Physical prompts are usually needed when beginning to teach a new skill.
   b) **Gestural prompts:** Gestural prompts means using gestures to provide help to the child. Some of the gestural prompts are: pointing to the place where the response is to be made or making a sound by tapping the finger where the response is to be made.
   c) **Verbal prompt:** This refers to help in the form of verbal statements or instructions, which describe every step of the task that is required to be performed. This is called 'verbal prompt'. Giving additional instructions, emphasizing important words by saying them louder or longer, giving single word reminders, drawing attention to each important part of the instruction by pausing are some of the verbal prompts used in teaching tasks.
   d) **Verbal and gestural prompts used together:** At times, gestures can be used along with a verbal prompt.
4) Study skills training focuses on helping children learn 'how to learn'.

It helps the children to know how to systematically plan, organize, record, access and use information on their own, so that they become independent, self-directed learners through repeated practice. Some of the study skills are as follows:

i) **Organizing Information:** This means arranging information into meaningful structures, visually or verbally. For example, while teaching a concept which has a number of steps, we organize the steps by using words like 'First', 'Second'.... and 'lastly.' This information can also be organized visually in the form of a picture or a series of drawing.

ii) **Mnemonic techniques:** When children are expected to 'learn' or 'memorize' information in a certain sequence, we can use associations or special memory tricks.

iii) **Self-monitoring/self-correction:** Self-monitoring gives the child immediate feedback without the involvement of the parent/ teacher or classmates. For example, providing the answer to the sum at the end of the worksheet, which the child can check independently.

iv) **Cooperative Learning:** Cooperative learning is a group teaching strategy where the students work together to achieve a shared goal. The teacher

   a) plans the groups and tasks;

   b) monitors the activities of the groups;

   c) intervenes as and when required to promote positive interdependence among the group members.

v) **Peer tutoring:** In this strategy, classmates support each other in learning and acquiring a skill. A child who is better at a task helps another child in learning it and vice-versa.

5) In joint projects, students work on learning activities together in small groups and receive rewards based on the group's performance. This strategy emphasizes cooperation rather than competition and facilitates positive interdependence. It also teaches children accountability and how to work together to get a job done. To make joint projects successful, the following points have to be taken into consideration:

   1) Explain clearly that the children need to do.

   2) Place the students in different learning groups based on how well you think they will work together. Assign tasks to each child keeping each child's learning styles/ strengths in mind.

   3) Monitor each group as and when needed, answer questions and provide help to enable them to work effectively with each other.

Check Your Progress Exercise 2

1) 'Reinforcement' is defined as an event which strengthens and increases the chances of occurrence of a behaviour, when it is followed by that behaviour. For-example, when we are appreciated for doing good work we make efforts to continue doing it. So praise is a reinforcer. Different

people find different types of things rewarding and motivating. Children have to be provided with planned and systematic reinforcers. Some of the different types of reinforcement are:

i) **Edible or primary reinforcers:** Edible reinforcers include food and drink. They are called 'primary' reinforcers because they are essential for life. They are usually used with young children and children with low cognitive ability, and when teaching new skills to children, as they have motivational value.

ii) **Tangible reinforcers:** Tangible reinforcers are those which are immediately desirable for the child (such as pen, crayon, games, money, food and toys) or are objects which have achieved reinforcing properties, such as getting stars for correct response.

iii) **Activity reinforcers:** Activity reinforcers are activities that are of interest to the child. For example, painting, colouring or playing a specific game.

iv) **Token or Exchangeable reinforcers:** Exchangeable reinforcers are those which may be traded or exchanged for other more valued reinforcers. For example, tokens or stars are used as reinforcers which can be exchanged for other things. The exchangeable reinforcers are also referred to as 'secondary' reinforcers.

v) **Privileges as reinforcers:** Making the child the monitor of a class or the leader of a group are privileges which can serve as reinforcers. A child will show the desirable behavior if she is given these privileges.

2) Each and every child is unique and the following ways can help you to find the appropriate reinforcers for a particular child.

   i) By observing the child's behviour

   ii) Making a list of things yourself which most children find interesting or rewarding. Then using these items one by one with a particular child and seeing what items she prefers or wants more often. These can be used as rewards for that child.

   iii) By asking the parents or family members.

   Once the appropriate reinforcers that work as reward for a child are identified, list the reinfocers and arrange them in order of 'most preferred' to 'least preferred' item. T This list is called a 'reinforcer menu'

3) When reinforcement is given each time the desirable behaviour occurs, it is called continuous reinforcement. When reinforcement is given after some appropriate responses and not after some others, it is called intermittent reinforcement. The former is usually used when teaching a new skill to the child and the latter is used when the child has learnt the skill and we need her to maintain it.

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