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# UNIT 6 THE PROCESS OF LEARNING

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## 6.1 INTRODUCTION

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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 cerebral palsy. **As parents and teachers, 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 him to apply the learnt skills in his 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 himself needs to know how well he is learning. This process is called 'giving feedback'. In this Unit, you shall also learn how to give feedback.

## Objectives

### How will this Unit help you?

This Unit will help you to understand and become familiar with

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

## 6.2 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 he is unaware that it can burn his fingers. Once he has had such an experience, he becomes careful in the future. He has ‘learnt’ that hot objects can burn his fingers.*

Let us take another example to understand how all children learn.

*A four-year-old was playing with a bucket full of water. As she was playing, her mother dissolved some soap flakes in the water and showed the child how to make bubbles by blowing air through a straw. Excited by this discovery, the child began to make bubbles. After playing in this*



Experimenting with the soapy solution

way for some time, she paused and looked at the bubbles for a while. Then she blew again, this time with more force. A large number of soap bubbles were formed and she called out to his mother to see them.

In this example, we see that the child has learnt that blowing air with force into the soapy solution leads to the formation of more bubbles. The child learnt this as *she had the opportunity of handling the soapy solution and experimenting with it.*

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 he 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 himself (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** (in this case, the mother dissolved soap flakes in water; this is also called ‘**guided learning**’).

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## 6.3 STAGES OF LEARNING

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**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, he is able to perform the task in situations other than the ones in which he 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.

### 6.3.1 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, he will learn to perform the activity more accurately.

## Strategies to be used during acquisition stage

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

- When teaching the child something new for the first time, show him how to do the task and then ask him to do it (demonstration);

OR

Do the task along with the child;

OR

Do one step of the task at a time and ask the child to imitate that step before you go on to the next one (modeling and imitation).

OR

Give the child verbal prompts (in other words, verbal explanations) at each step.

To understand this, let us take the example of teaching the child how to mix rice and *dal* (pulse) and eat it. You can use any of the following four strategies:

*Show the child how to mix the rice and dal by doing it yourself. Show him how to eat it. The child observes you doing the task and then does it by himself.*

OR

*You and the child mix rice and dal in separate plates and eat it. Thus, you and the child perform the activity together.*

OR

*Show each step and ask the child to follow you. As you mix rice and dal, ask the child to do the same; then you take the food to your mouth, and ask the child to do the same. Thus, the child follows your example step by step.*

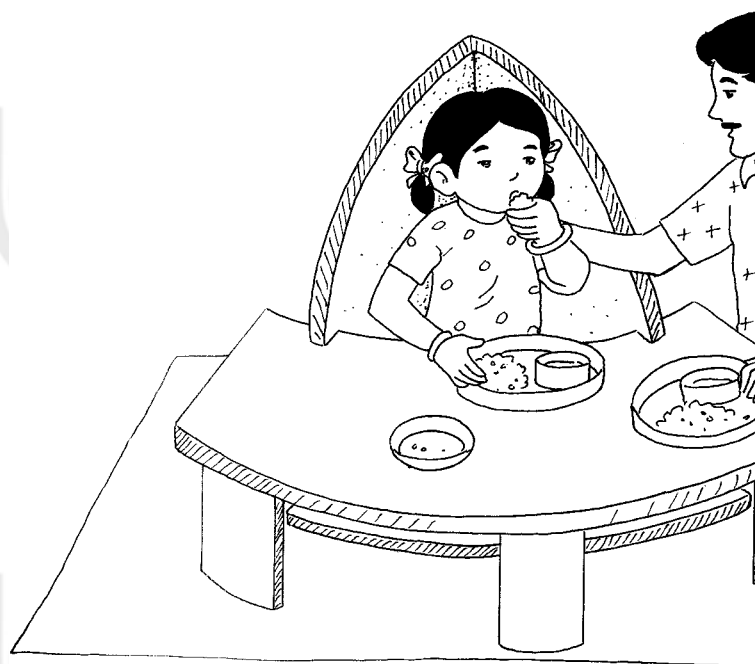
OR

*Give verbal prompts at each step. Tell him—“First you put some rice on the plate”. Once he does that, give him the next verbal prompt—“Now! Pour the dal over the rice.”*

- Depending upon the child’s ability, you might need to give him verbal instructions at each step along with the demonstration or you may need to give him physical help to do the task.



- Verbal instructions given during training the child to learn the new task should be the same or similar from one day to the next, as children get confused if the instructions are changed too often.
- Appreciate the child when he 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 7. Here we would briefly say that use praise as a reward as often as you can.



GOOD! YOU ARE EATING ON YOUR OWN.

Appreciate the child when she does the task appropriately.

- Give feedback to the child regarding how he performed the activity. You will learn about feedback in section 6.6.
- We may need to make certain adaptations/modifications in the items used by the child according to the abilities of the child with cerebral palsy. For example, if the child has limited hand function, then we may use a special plate or an adapted spoon to suit the needs of the child. We have described these adapted devices in Units 15-17 on ‘Training in Daily Living Skills’ and Units 27 on “Assistive Devices”.

### 6.3.2 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.

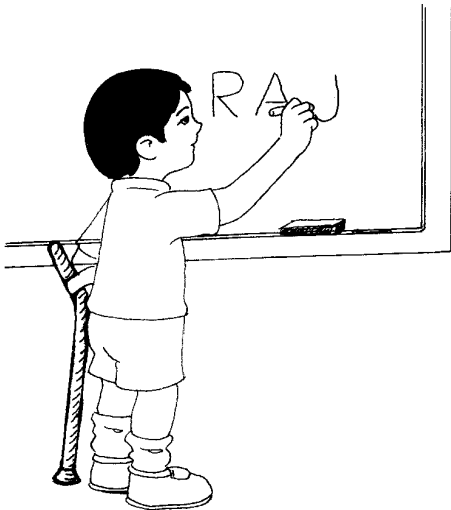
#### Strategies to be used during the fluency stage

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

*Raju has just learnt to write his name by himself after 12 sessions of teaching. In other words, he has acquired a skill. However, he needs to improve the formation of letters and he also 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 worksheet you give him, in his notebook or on the blackboard.
- 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

### 6.3.3 Maintenance Stage

We want the child to remember what he has learnt. We cannot afford to let him forget what he has learnt and to teach it to him 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, he 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 he has learnt before starting a new activity on that topic. Thus, ask him 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.

### 6.3.4 Generalization Stage

Once the child has learnt a new task with accuracy and fluency and he is able to maintain it without your help, you need to teach him to carry out the task in situations or settings other than the one in which he 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'.**

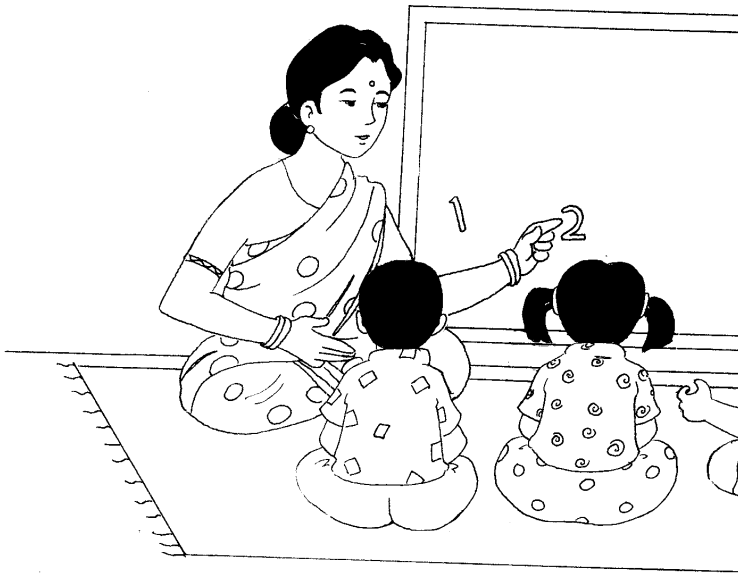
For example, you have taught the child to read numerals 1, 2 and 3 using flash cards - the number symbols were written in black and the background of the flash cards was red in colour. However, the child should be able to read the numbers 1, 2 and 3 in whichever colour, size or place they may be written. Thus, he should be able to read these numbers when written on the blackboard, on buses, on paper, on signboards and so on.

### Strategies to be used during generalization stage

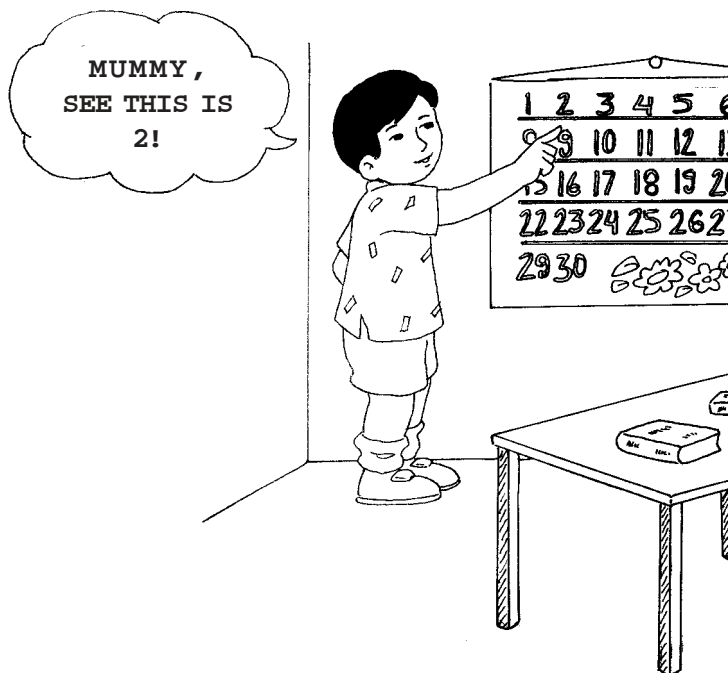
Usually, we learn to generalize a learnt task during day-to-day activities. The process is so automatic that we do not even think of it. However, **some children with cerebral palsy find it difficult to generalize on their own, because of limitations in their thinking ability. They need help in doing 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 him generalize his learning. Ask the child to read numbers on calendars, on pages of books, on cars, on the clock, on the bus and so on.



(a): Learning numbers in school



(b): Generalizing the learning—Reading numbers on the calendar at home

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 learnt to do this well. However, the same stirring skill is required for stirring any liquid or paint. The child may, or may not, automatically apply this skill in these situations. You will need to give the child opportunities to practice this acquired skill in a variety of situations using a variety of materials. Thus, let him stir sugar in a tea, coffee and other hot and cold liquids; let him stir water in the paint and so on.



### 6.3.5 Adaptation Stage

Once the child is able to generalize, then he can apply a learnt skill in a new area of application without assistance. In simple words, this skill may be referred to as 'problem solving'. This skill is achieved by those children who have learnt to generalize. **Some children with cerebral palsy 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 non-disabled child learns much by observing others and is motivated to try his newly learnt skills in other situations. However, **in the case of some children with cerebral palsy 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 he has learned.

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## 6.4 PRINCIPLES OF LEARNING

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**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.

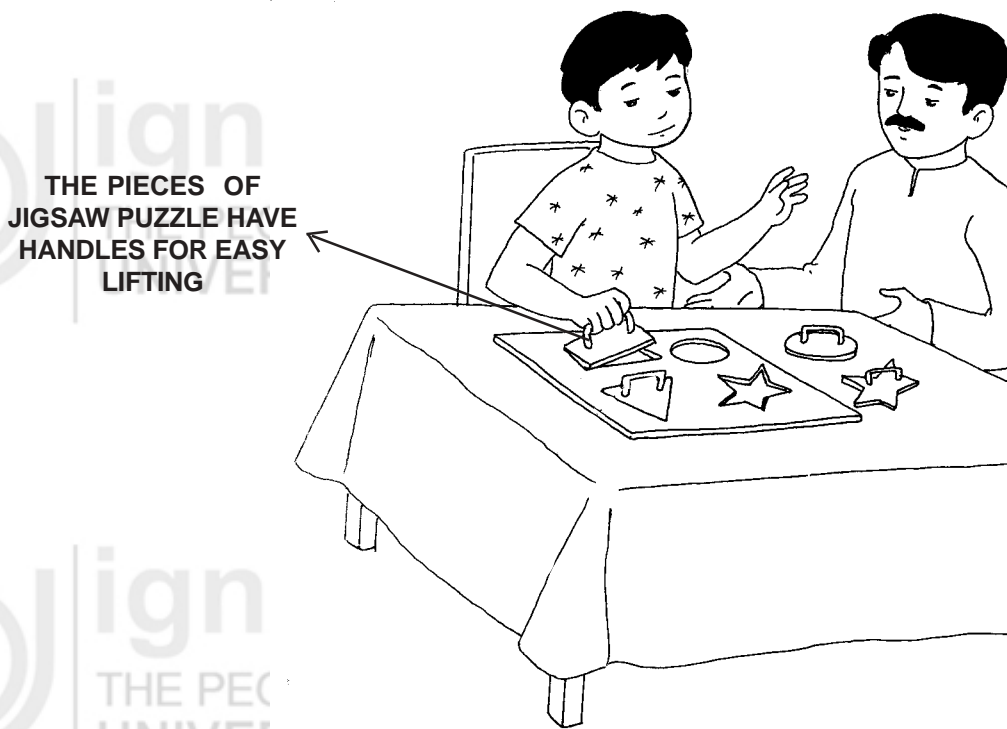
### 6.4.1 Children Learn by Doing – Learning is Experiential

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. His attention is drawn to the shapes of the blocks and so begins his understanding of shape. Of course, as he interacts with adults he will learn more about shapes. The adults will also specifically set up activities which will help him 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:**

- **discovery learning through the child's own efforts during play, and**
- **planned and systematic teaching by adults (structured learning) are the two major ways through which children learn.** 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 cerebral palsy, the balance shifts primarily towards planned and systematic instruction by adult (structured**

learning). Children with cerebral palsy are usually less able to initiate play and find it difficult to learn on their own by discovering things for themselves. For example, due to physical limitations, the child may not be able to sit on his own or move independently; or the child may not be able to play with toys because of limited hand function. Thus, it falls upon the adults to guide and facilitate the learning of children with cerebral palsy. We need to facilitate play by providing opportunities and adapting the environment and equipment so that the child can benefit from it.



Provide opportunities to play by adapting the environment and equipment

### 6.4.2 Learning Proceeds from Simple to Complex

You know that some children with cerebral palsy have a limited ability to understand and learn and need more time to learn a task as compared to other children. Hence, **we need to teach any task step by step, presenting the simpler step first.** For example, you may find that a seven-year-old child 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 he is able to learn the simpler task motivates him to learn further and builds his self-confidence. If you begin

with a task which is complex and beyond the ability of the child, he experiences failure every time which de-motivates him for learning. In such a situation, he 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.**

### 6.4.3 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 he 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 he had learned earlier) as a revision exercise. This would help the child in remembering and maintaining learned skills and will help him to learn the new task well.*

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 him to separate them into two piles.
- ☞ After a certain duration of teaching, when the child has learnt to sort (can also be 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 him to sort out onions and carrots - a task which he can already do. This will help the child to remember learned tasks (maintenance) and give him confidence to try the next more complex task - that of sorting three vegetables.

**Give an opportunity to the child to show you what he knows already before you start to teach him what he does not know.**

#### 6.4.4 Learning Proceeds from Concrete to Abstract

All of us first learn about things by seeing, touching, smelling and using them. If young children do not have opportunities to handle and explore objects and do things by themselves, they will not be able to form an idea about them. This is quite obvious. You cannot, for example, help the child to understand what an 'apple' is without showing it to him and letting him 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:**

- a) **Concrete stage:** The child learns about objects and events by handling them and experiencing them. As children hold objects and explore them, 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 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 he eats it).*

*Adult " Is it sweet"?*

*Child: "Yes"*

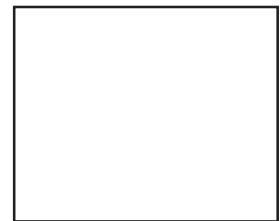
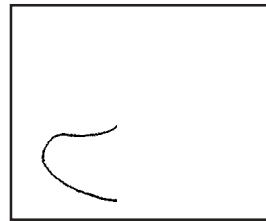
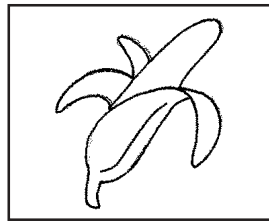
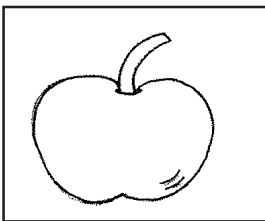
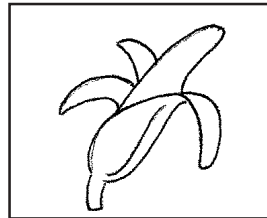
During the interaction, the child learnt new words such as 'banana', 'sweet', 'peel', 'big', 'small' and the meaning of these words by seeing, touching and tasting. Thus, he also learnt new words. Such interactions happen so spontaneously that we are often not aware that the child has picked up concepts during such activities.

- 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, he can relate to a picture of that object. The picture is two-dimensional and represents the object. He can recall the shape, size, texture and colour of the object on seeing its picture. Thus, at this stage, you can plan activities of matching different shapes, colours, fruits and objects



drawn on paper, drawing the missing part of the object and so on. Let us take the above example of the child's familiarity with the banana to understand this.

You can draw the picture of three or four fruits on a flash card. The picture of 'banana' should be drawn on two flash cards. Now if you give one flash card with 'banana' drawn on it to the child and ask him to pick out a similar picture from the group of flash cards, he would be able to do so.



#### Identifying the similar picture

- c) **Abstract stage:** This is the 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, he can recall all the characteristics of the object just by hearing its name, even though the object or its picture is not there before him. This is because he has formed a mental image of that object, based on his experiences during the concrete and pictorial stage. He can think about it without having to see it - in other words, he 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 incomplete? In the **case of children with cerebral palsy, it is all the more important to follow this sequence of 'concrete-pictorial-abstract'.**

**Use concrete objects as far as possible while teaching any concept. Create or use naturally occurring situations where you cannot use concrete things for teaching.**

### 6.4.5 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 him to recognize and name the banana on seeing it. Then introduce him to peeling it, naming its colour, the various food items that can be made using it and its varieties.

When teaching about a 'cow', first teach the child to recognize and name the cow as soon as he sees it. Later, the description of its body parts, 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 disability 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. Non-disabled children pick up many concepts and vocabulary without any conscious planning on our part to teach them. **In the case of some children with cerebral palsy, 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—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.

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## 6.5 GUIDELINES FOR EFFECTIVE LEARNING

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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, auditory and visual.
- Plan different activities to sustain the interest of the child.

- Provide feedback immediately - i.e., tell the child whether he is correct or not. You will learn about feedback in section 6.6.
- Use simple language to explain new concepts.
- Sustain motivation through reinforcement (You will learn about reinforcement in Unit 7).
- Talk and explain to the child about the activities that you are doing with him.
- 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 he already knows. He 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 him.

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## 6.6 FEEDBACK

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In this Training Package you have so far learnt how to make an assessment of the child's abilities; how to teach various activities to the child through the individualized programme plan and how to evaluate whether the child has learnt what you have taught and whether your training is effective.

There is one more aspect to be kept in mind when teaching and training the child and, that is – letting the child know about his own performance so that he can know how to improve it. This is referred to as '**giving feedback**'. **While evaluation lets you know how well the child is learning, feedback helps the child to know whether he 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, his 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. She said, "See, the back part is wet." She picked up the cloth and wiped the back 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?**

- “You are wiping the front part of the plate correctly.”

- “That is very good”.

- “But the back of the plate is wet”

- “You have to also turn the plate and wipe its back.”

**What it implies?**

She has told Raju what it is that he was doing correctly.

**Raju becomes aware of his strengths.**

She has praised him for what he was doing correctly.

**Raju feels motivated to go on.**

She has told him what was it that not complete about the wiping of the plates.

**Raju understands what he is doing incorrectly and knows that he has to learn something more.**

She specifically tells him what he needs to learn and shows him 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 his behaviour.** The information is given in such a way that it

- helps the individual to understand his basic strengths and abilities;
- tells him the behaviours that he should continue with;
- inform the areas that he needs to improve upon; and the specific behaviour he needs to learn; and
- things that he should not do, as they interfere with his 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 in the home, school or the workplace. This happens whether you are teaching a child or an adult, a non-disabled or a disabled person. 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 cerebral palsy.**



All of us need feedback in order to learn and it is all the more important in the case of children with cerebral palsy. 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 trainer to know what is the level of Raju's performance and what he 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.**

#### **6.6.1 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 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 cerebral palsy with the associated condition of mental retardation. Other children do not want to play or interact with her as she has the habit of spitting on 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. Seema was eager to perform her role as the others asked her to . 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 spat on 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 his performance and does not help him to improve upon his 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 from the adult to the child and makes the latter accountable for his own actions.** The child not only learns to take responsibility for his 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 trainer believes he is capable of improving his own behaviour. **The above two examples clearly bring out that in the absence of effective feedback, continuous improvement cannot be expected from the child.**

### 6.6.2 Types of Feedback

1) **Scoring Feedback (Quantitative Feedback):** Here you tell the child the number of times he did a certain thing correctly. For example, if the child had to write his name on five books and notebooks and he wrote it correctly on three books, you tell the child that he 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 his work. Thus, one emphasizes how the child did what he 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 argument 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 required size
- Cleaning up after the activity
- Time taken to do the activity

Feedback should be given with respect to each of these tasks and 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 he 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 him to do better.**

### 6.6.3 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 he can do well and what he 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, he will continue to repeat it several times, before the trainer gives feedback and corrects him. Thus, he would have learnt to do the task incorrectly. Now he has to unlearn this and learn to do it correctly - this learning, unlearning and relearning is difficult for some children with cerebral palsy. 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 he did that was good and how to improve the activity further. Similarly, simply saying that his 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 he 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 his improvement.

#### 5) Positive and Constructive

Simply stating what was the wrong with the child’s behaviour would not help him to learn. Along with stating what was wrong, the feedback should tell the child what would be right behaviour, so that he learns what he 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 he has to change. This does not hurt the child’s self-esteem. Give the child a feedback about the things that he did right (positive feedback), before you tell him about the things that he 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.

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### 6.7 LET US SUM UP

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- 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 cerebral palsy, 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 his actions.
- The feedback should be accurate, periodic, immediate, detailed, positive and constructive.