UNIT 9 LANGUAGE DEVELOPMENT:
LEARNING TO SPEAK

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9.1 INTRODUCTION

Imagine how it would be if we did not have language to communicate our feelings and thoughts. We could use gestures of course, but that would be difficult and not as expressive. Imagine using gestures to discuss the political situation in the country! How would scientists and historians have recorded their findings?

In this Unit we will read about the functions of language. We will learn how the child acquires language in the first year of life. How do the biological and environmental factors influence the acquisition of language? How can parents help children learn language?

Objectives

After studying this Unit, you should be able to

• define the term 'language' and explain the uses of language
• describe the abilities of the newborn which help in language learning
• describe the stages in the acquisition of language from birth to one year of age
• discuss how biological and environmental factors interact to influence the development of language
• explain the role of the caregiver in helping children learn language.

9.2 WHAT IS LANGUAGE

Language is a system that consists of symbols (i.e. words) that stand for particular objects, relationships, actions and feelings and through which we can transmit and understand a large variety of messages.

The ability to communicate with each other using a language system is unique to human beings. Of course animals and birds also communicate with each other. Each species has its own calls and cries which constitute their language. Bird sounds are different when they are signaling the approach of a predator as compared to when they give their calls for mating. But animals and birds can make only a limited number of calls and cries. By contrast, the speech of humans is very diverse. We can make an infinite number of sentences. We are creative in our speech as well, i.e. we can combine words differently to produce sentences never uttered before. We can talk about events in the distant past or about imaginary situations. The languages of all human communities have a set of rules which each child learns during the course of growing up.
The ability to talk involves three basic processes: the ability to produce sounds the way we do, the ability of the ears to pick up these sounds and the ability of the brain to understand the meaning of these utterances. Human beings are very well equipped as regards these three processes. The mouth and the nasal cavity consisting of the lips, teeth, tongue, palate, nasal passage, the larynx, the wind pipe and the vocal cords help in regulation of air and are designed for production of sound. Our ears are particularly sensitive in picking up sounds. Our brain is specially developed to help us in acquiring language. There are two areas in the brain which are concerned with speech—one specialised for speech production and the other for speech comprehension. We know from research studies that from birth itself, the child is more responsive to human language as compared to any other sound. It is, therefore, not difficult to understand that every normal child will learn the basics of her native language within the first three or four years of life, without being especially taught to do so.

Functions of Language

How is language helpful to us? We use language for communication. Through language we express our thoughts, needs, feelings and ideas. Using language we relate our present as well as our past experiences and learn about those of others. Besides language, there are other ways of communicating with people such as using signs and gestures. Children who are hard of hearing learn to use sign language. Body movements and facial expressions also convey what one is thinking and feeling. But using speech, i.e. language, is the quickest and most effective way of communication. By enabling us to communicate, language helps us to interact with people and form relationships, i.e. it helps us to relate socially.

Language plays an important role in the development of thinking. It helps in organizing our thoughts because it gives labels (i.e. a name) to things, objects and ideas. You may have noticed that while busy in an activity, a child often speaks out aloud about what she is doing. While making a house from sand she may say, "Now I will make walls.... Oh! This break again......Put flag on top." This speaking out aloud helps her to direct her actions.

Our memory and perception are also influenced by language. If we have a name for something, we are more likely to focus on it, i.e. perceive it and recall it. Language also helps in concept formation since it gives a label for a set of objects. This does not mean that all thought, perception or memory takes place only because we have language. Language certainly aids in thought, but thinking is present even when there is no language. You will understand this if you recollect what you have learnt in the last Unit. The infant does not begin to speak till she is about one year of age but she certainly has had thoughts before that, as you have read in the earlier Unit. The intentional and goal-directed behaviour of the nine-month-old child shows that she is thinking, even though she is not able to speak as yet.

It is not that only language influences thought. The development of thinking also influences language development. As the child's thinking matures, so does her language. Thus there is a cyclical relationship between language and thought—language influences thinking, which, in turn, influences language.

9.3 DEVELOPMENT OF LANGUAGE

To learn language, the child must hear people speak and be able to discriminate between the different speech sounds and words. She must also be able to produce sounds and gradually learn to combine these sounds to produce words, i.e. acquire language. Let us read about the infant's skill in discriminating words before we go on to reading the stages in the acquisition of language.
9.3.1 Discriminating Speech Sounds

You know that the infant is able to hear at birth and can localise the sound source, *i.e.* she can make out from which direction the sound is coming. Her ability to hear and perceive the direction of sound improves with age. Newborns can discriminate the mother's voice from other voices as early as the first week of life. Newborns move their body in rhythm with adult speech as early as 12 hours after birth. If the pace of the adults speech is fast, the movements of the newborn became fast. If the rhythm of the speech slows down, so do the child's movements. They react in this manner to speech in any language, but do not move in rhythm to tapping sounds or to repetitive vowel sounds that do not resemble human speech. It has been found that neonates prefer to hear vocal music over instrumental music. This means that the human infant is more responsive to human speech as compared to any other sound.

Infants have a remarkable ability to discriminate sounds. You know that by three months of age, the infant has understood that speech sounds are matched by the speaker's lip movements and can also associate a particular voice with a particular face. You would know from your experience that the six-month-old is able to understand a few words and respond to simple questions like: "Where is the ball?", "No, don't do that!", even though she cannot speak. All this shows that the infant is born with a sensitivity to human speech. This helps her to interpret the speech of others and learn the skills needed to acquire language.

Most of us believe that language development starts only when the child utters the first word, which is usually around the first birthday. But this is not true. In the first year the infant is learning to discriminate speech sounds—an ability that helps in learning to speak later. She also makes sounds in response to the adults' talk and these sounds lead to words. It has been found that when parents speak to the child and respond to the sounds that she produces in the early months, her language development is fostered. Therefore, it is important to talk to babies right from the time they are born.

9.3.2 Beginnings of Speech

While the infant seems to perceive language from birth onwards, she does not produce words so early in life. Language development of all children follows a certain sequence. This means that there are stages in the learning of language that are universal. This means that all children go through the same stages while acquiring language and they do so at approximately the same ages, irrespective of the language they speak. Before we read about the stages in acquisition of language in the first year, there is one important aspect of communication we must consider and that is—turn-taking.

Turn-taking is critical for social interaction. In a dialogue between two or more people, one partner speaks while the other person listens. Then the first one pauses and waits for the other person to reply. Thus the partners in conversation take turns to speak and listen. It is very difficult to have any kind of social encounter with someone who does not take turns. The beginnings of turn-taking can be seen in very young infants, about a month old, in their feeding patterns. The neonate while feeding sucks for a while at the breast, then pauses, then sucks for a while, pauses and so on. When the infant stops sucking, the mother jiggles her. She does so because she believes that this will cause the infant to suck again. When the mother stops jiggling, the infant begins to suck. The mother and the baby thus 'enter into a conversation' which looks like this: suck-pause-jiggle-pause-suck-pause-jiggle-pause. They take turns—when the infant sucks, the mother pauses; when the infant pauses, the mother jiggles. This is the first non-verbal communication in which the infant participates and is the basis for all future interactions.

Such two-way communication and turn-taking can be seen in other interactions as well. When the infant's brother speaks to her, she is quiet and is busy looking at his face. Then the brother keeps quiet and waits for the infant to respond. This the infant does by moving her body, producing some sounds and gurgling. Then the
infant pauses and looks at her brother, who begins to talk and play again with her. Such interactions indicate that the infant has an inborn ability to take turns which helps in her language development.

Let us now read about the stages in language acquisition.

Crying: The earliest form of communication that a child uses is crying. From birth to one month of age, this is about the only sound the baby produces to communicate her distress and discomfort. Most mothers are able to make out what the baby's cry indicates—whether she is hungry, wet or just irritable.

Cooing: Around one month of age babies begin to make cooing sounds in addition to crying. This stage lasts till 4-5 months after birth. Cooing is a vowel-like sound, particularly like 'oooo...'. Babies make cooing sounds when they are content and satisfied. They seem to get pleasure out of it. When the infant coos, the people talk back to her by repeating the sound she produced and by making some new sounds. In turn, the infant responds with more cooing. Such 'dialogues' become more frequent with each passing day. Such interactions also promote the development of an emotional bond between the caregiver and the infant.

As the child grows, she spends more time awake and practises sounds. She delights in producing new sounds and repeats them. She experiments by varying the pitch and loudness of sounds. The infant seems to be exploring the possibilities of combining sounds. This experimentation is a very important stage in acquiring language since it gives the infant an opportunity to perfect sounds. The child first produces and practises the vowel sounds, (i.e. a, i, e, o, u) so that you can hear sound like, "aaa...", "iii...". Then she practises consonant sounds like p, t, b, m, d by combining them with vowels, so that you hear sounds like "beee...", "maaaa...".

Babbling: Between six and ten months, the infant begins to babble. She repeats syllables like 'ma', 'da', 'ki', and 'ne' over and over again so that we can hear sounds like "dadada...", "kikikiki...", "mamama...". This is referred to as babbling. As in the earlier stage, the infant continues to produce new sounds and experimenting with them. In the early stages of babbling, the infant may produce sounds like those in adult speech and it seems as if the baby has learnt some words. For example, when the baby babbles "mamama..." or "bababa...", the parents feel that the child is saying "mama" to mean the mother and "baba" to mean the father. But these are not really words because the child does not use them to refer only to parents. She makes these utterances in many different contexts and sometimes when the parents are not even present! The infant's utterances will become words only when she begins to use them consistently to refer to a particular object/person.

In the later stages of babbling, the infant combines babbling sounds into a 'sentence'. This sentence has the intonation and rhythm of adult speech. Sometimes the pitch of the sentence rises towards the end as if the child was asking a question and desires a response. Sometimes the babbling has a falling intonation which does not seem to require a response but seems as if the infant is trying to say something. Babbling may also have an emotional tone and may reveal the baby's anger, fear, pleasure or surprise. You may have observed this. The intonation in babbling helps the adult to guess what the child is trying to communicate. Thus the infant learns the rhythm or the tone of speech before she learns the specific words. She has comprehended that a rising pitch towards the end of sentences conveys a question.

About this time the infant begins to use gestures to ask for things she wants and points at objects. When babbling is accompanied with gestures, it helps to clarify the child's intention. Of course, the child still uses crying to make her wants known.

The First Words: Some time between ten and twelve months, often around the first birthday, the infant says the first word. This word may not match the words adults use but it is a word that the child uses consistently to refer to some thing, action or quality. One particular child used the word "mimi" to refer to the liquids that she was drinking, like milk and water. A twelve-month-old may have a vocabulary of
about three to eight words. The first words to be learnt are the ones that refer to familiar objects and people, everyday events and actions. These words are the ones which people around the child have been using consistently in their speech with her and have been encouraging her to speak. Some common first words are *mama*, *ball*, *come*, *bye-bye*.

The infant's single word utterances do the work of an entire sentence. When she says "bottle" and points to the bottle, she conveys a whole meaning. Depending upon the context, the infant's manner of saying the word and her gestures, the adult understands whether the child means: "Give me the bottle", "I want milk" or something else. When the infant points to the mother's saree and says: "Mummy", she is conveying: "This is mummy's saree." Thus while only one word is used, a sentence-like meaning is conveyed.

As you read this Unit, it is important to remember one thing: While the stages of language acquisition are universal (i.e., each child must go through these stages in a particular sequence), the age ranges which we have specified for the stages of language development are not rigid. It is not as if once the child begins to babble, she stops cooing. There is an overlap between the stages so that the child babbles as well as coos at the same age. Similarly, when the child begins to say her first words, she still continues to babble for some time. Besides, the ages specified for particular stages are only average ages. You know that there are individual differences among children in the rate of development. Therefore, while the average age of saying the first word is around the first birthday, some children may do so at ten months and others at fourteen months.

Check Your Progress Exercise 1

1) Answer the following questions briefly in the space provided below.

   a) Define what we mean by the term 'language'. How does language help us?

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b) What evidence is there to show that the child has an inborn sensitivity to human speech and can discriminate speech sounds?

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c) Explain the terms 'cooing' and 'babbling'.

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2) State whether the following statements are 'correct' or 'incorrect' in the brackets.

a) It is important to talk to babies during the first year of life because it gives them practice to discriminate speech sounds and this helps in their language development. ( )

b) Language helps in thought but thinking is present even when the child has no language. ( )

c) The speech of humans is not diverse. ( )

d) Turn-taking is crucial for social interactions and the child shows this ability very early in life. ( )

e) The child's ability to take turns develops only after the second year. ( )

f) Babbling is the earliest form of communication used by the child. ( )

g) While cooing and babbling the child experiments with sounds by varying their pitch and loudness and produces new sounds. ( )

h) The child's utterance will be considered a word only when she uses it consistently to refer to an object, action or quality. ( )

i) The gestures used by the child, the emotional tone and the rhythm of her babble and words help us to understand their meaning. ( )

j) The words that the infant learns first are those that refer to everyday objects, events, people and actions. ( )

k) The infant's single words do the work of an entire sentence. ( )

3) List the stages in language acquisition in the first year of life and state at which age does each stage begin.

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9.4 INFLUENCES ON LANGUAGE DEVELOPMENT

As in any other area of development, biological and environmental factors continuously interact to shape of the child's acquisition of language.
9.4.1 Biological Factors

The biological factors include the genetic make-up of the child and the maturational timetable. Basic to learning language is the ability to listen and to produce sounds. The following three facts point that we are biologically predisposed to acquire language. Firstly the human body, as you have read, is equipped for the purpose of speaking, hearing and understanding language. Secondly, all newborns are most responsive to the sound of the human voice which shows that we have an inborn ability to learn language. Thirdly, all children go through the same stages while acquiring language and they do so at approximately the same ages, irrespective of the language they speak. This universal sequence implies that no matter how hard you may try to teach a child of one year, she cannot be taught to speak sentences. She has to be maturationally ready to learn to speak. These facts emphasize the biological basis of language development.

9.4.2 Environmental Factors

Even though we have the sensory organs and the tendency to speak, no child can learn language until she hears it being spoken and practises speech. Each child learns the language of her group—the way she speaks, the words she uses and the accent of her speech. You have read in Unit 3 about the child who grew up without contact with people. She could not speak normally and it was difficult to teach her later. You also know that children who are hard of hearing or deaf, begin to babble at the same time as other children but after some time the amount of babbling decreases, since they do not get a feedback. If not provided a hearing aid, the child will grow up without learning to speak. This brings out the importance of environmental factors in language acquisition.

Research studies have shown that when parents are sensitive to the child's speech and respond to her utterances, the child's language develops. A rich language environment leads to better speech development. You know that children living in institutions generally show lower levels of language development compared to children in families. A positive emotional relationship with the parents helps the child to feel secure and lays the foundation for language acquisition.

From this discussion it is clear that the child must be maturationally ready to learn to speak and must get opportunities for hearing and practising speech. Let us now read how adults and older children help the infant in acquiring language, especially during the first year of the child's life.

Role of the Caregivers: Caregivers, whether adults or children, keep their language simple when they are talking to infants, especially those only a few months old. They use short and simple sentences, speak in an exaggerated manner and do not use pronouns like 'I' or 'you' since these are difficult for the infant to understand. Adults call out the child's name rather than saying 'you' and call themselves 'mummy', 'daddy' or 'aunty' rather than 'I'. They also produce nonsense sounds, i.e. those which have no meaning, but which the child delights to hear. They respond to the child's cooing and babbling by talking to her, imitating her and encouraging her. Most of this modification in the way of talking is instinctive. Caregivers also see what type of speech the infant responds to most and then use that in their interactions.

When the infant is around 4-5 months of age, the caregivers begin to show them toys and household objects. While showing these they refer to them by their names and describe them a little. Siblings delight in such activities with the baby and are untiring in their efforts to attract her attention to an object. By 6-7 months the infant also begins to point at objects, picks them up and shows them to people. This increases the interaction between caregivers and the child. By the time the infant is 7-8 months old, the family members also begin to talk about what is going on around the child. They refer to their own actions and the actions of the child. While walking with the infant on the road the father, on seeing a fruit seller, is likely to say: "Banto, look! Bananas! See, there! Banto, eats banana everyday, don't you? It tastes good, mm......?" While bathing the infant, her sister is likely to talk to her: "Now Meena will have her bath......Oh! Ho!. The water is too hot! Didi will mix cold water in it."
Thus in a normal environment, the child is continuously surrounded by people who talk to each other and her. The infant picks up new words from the context in which they are spoken and in this manner her language develops.

Lullabies and songs are a delightful part of the caregiver–child relationship. There is hardly any one of us who grew up without hearing them. Some of the songs refer to everyday events like eating, bathing and sleeping. Some of them are about myths and stories. Infants enjoy the rhythm of the lullabies greatly. In addition, they also learn new words.

In this way, by 6-7 months the infant begins to recognize the sound and meaning of commonly used words. The infant is able to understand language not because she understands all the words that we use. She may understand one or two words but she relies on the gestures used, the tone of the voice and the context in which they are spoken. When the father says: “No, don’t touch that!”, the child is able to understand because he points to the forbidden object, shakes his head and raises his voice to convey anger or anxiety. This brings us to another aspect of language development that we must keep in mind. At any age the child is able to comprehend more than she is able to speak.

When children are around 9-10 months of age, parents and relatives begin to play language games with them. They say a word like “bye-bye” and encourage the child to reproduce it. They also teach her to wave by showing her the gesture.

Increasing competency in language helps the baby to interact with more people and form relationships with them and this helps in her social and emotional development. You have seen that language helps her to learn about people and objects. Thus we see that language influences development of cognition and social relationships. This shows how development in one area influences development in other areas as well.

Check Your Progress Exercise 2

Answer the following questions briefly in the space provided below.

1) What are the aspects that establish a biological basis for language acquisition?
The Child: Development in the First Twelve Months

2) How can we say that the development of language is influenced by environmental factors?

Language is a system that consists of symbols (i.e. words) that stand for particular objects, relationships, actions and feelings. Through language we can transmit and understand an infinite variety of messages. Language helps us to communicate with each other and relate socially to people. It aids in the development of thought and plays an important role in perception and memory.

Every normal human child learns her native language during the course of growing up. To learn a language, the infant must be able to discriminate between various speech sounds and she is skilled in doing so from the time she is born. We have an inborn tendency to learn the sounds of human language. The stages of language acquisition are universal. However, there are individual differences in the ages at which each child reaches a particular stage. Initially the baby communicates through crying. By one month of age she begins to make cooing sounds. Babbling is common between six and ten months and the infant utters her first word around her first birthday. She is, however, able to understand quite a few words before this period. The infant relies on the gestures of the adults, their expressions and the context of the situation to understand what they are saying. The infant is skilled in turn-taking—a prerequisite for any dialogue between people.

As in any other aspect of development, the biological and environmental factors continuously interact to influence the development of language. Caregivers play an important role in helping the infant acquire language. They keep their language simple while talking to her and use an exaggerated tone while speaking. When the infant is around 4-5 months old, they show objects to her. When she is around 7-8 months old the adults begin to comment about what is going on around her. A little later they encourage the infant to pronounce words. In this way, the infant learns to recognize the sound and the meaning of words and acquires language.

3) List four ways in which caregivers help the infant to understand and acquire language.

9.5 SUMMING UP

Language is a system that consists of symbols (i.e. words) that stand for particular objects, relationships, actions and feelings. Through language we can transmit and understand an infinite variety of messages. Language helps us to communicate with each other and relate socially to people. It aids in the development of thought and plays an important role in perception and memory.
ANSWERS TO CHECK YOUR PROGRESS

EXERCISES

Check Your Progress Exercise 1

1) a) Language is a system that consists of symbols that stand for particular objects, relationships, actions and feelings and through which we can transmit and understand a large variety of messages. Language enables us to communicate with each other, relate socially to people and also helps in the development of thought, memory and perception.

b) Newborns are most responsive to the sound of human voice. They like to hear speech sounds over non-speech sounds. By three months of age, the child has understood that speech sounds are related to the speaker's lip movements. They can also associate a particular voice with a particular face. This shows that the child has an inborn sensitivity to human speech.

c) Cooing is a vowel-like sound, particularly like “ooo...” which babies produce around one month of age. When infants combine vowel and consonant sounds like “ma”, “da”, “ki” and repeat them over and over again to produce “mamama”, “dididi”, it is called babbling.

2) a) Correct
b) Correct
c) Incorrect. The speech of humans is varied and creative.
d) Correct
e) Incorrect. Turn-taking can be seen soon after the baby is born, during the time she feeds.
f) Incorrect. Crying is the earliest form of communication used by the infant.
g) Correct
h) Correct
i) Correct
j) Correct
k) Correct

3) The stages in language acquisition during the first year are:

- crying — from birth onwards
- cooing — one month of age
- babbling — from 6 to 12 months
- first words — around the first birthday

Check Your Progress Exercise 2

1) The three aspects that point towards the biological basis for language acquisition are: the human body is equipped for the purpose of speaking, hearing and understanding language; newborns are most responsive to the sound of the human voice; there is a universal sequence in language development.

2) The role of environment in language acquisition becomes clear when we consider the following facts. No child can learn language till she hears it being spoken. Each child learns the language she hears and she speaks it the way she hears it. Children living in institutions tend to show lower levels of language development. When caregivers stimulate the child, her language development is fostered.

3) i) The caregivers keep their language simple when talking to infants.
ii) They show and describe objects,
iii) They comment about what is going on around the child.
iv) They also play language games with the infant and encourage her to speak.