
UNIT 5 SPEECH PROBLEMS

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5.1 INTRODUCTION

In earlier courses, you have learnt of interpersonal communication, normal development of language and problem in learning related to different sensory and physical impairments. In Unit 1 'Introduction to Socio-Emotional Development in Children' of this course you have studied the normal social and emotional needs and blocks that could be caused by various impairments. Specific to this concern is the topic of speech among children.

In this Unit you will study the nature of a speech problem, the variety of speech problems, the various symptoms of speech problems, the causes or factors leading to such problems and the availability of remedial procedure for such speech problems. After going through this Unit you will be in a position to select and suggest remedial help from a center near your school or house.

Let us first understand what is speech and what is a speech problem. Speech refers to the act of speaking that essentially involves processes of respiration, phonation

or voice production, articulation (or pronunciation irrespective of the language) of specific speech sounds and language (comprehension and expression). Any kind of disturbance in any of these processes would lead to a speech problem. These disturbances could be due to various causes or factors, as we will see shortly.

5.2 OBJECTIVES

After going through this Unit, you will be able to:

- identify a speech problem;
- identify and distinguish between different types of speech problems in children like stammering, misarticulations, cleft palate speech, etc.;
- relate the possible causes/factors leading to such speech problems;
- suggest remedial procedures for each of these speech problems;
- make correct/proper referrals for seeking professional help for each of these speech problems; and
- suggest ways of improving parental/teacher participation in remediation of speech problems.

5.3 CAUSES OF SPEECH PROBLEMS

5.3.1 Manifestation and Causes

The following case illustrations would help you to understand the causes of speech problems.

Case 1

'Shafiq was a 5 year old boy who understood everything spoken to him. But when he started speaking he would hesitate, stumble, repeat words/sounds and in the process he would not be understood by others. His classmates in the school ridiculed him, imitated him and laughed at him. He would feel extremely anxious about the way he spoke and so he would speak less or avoid speaking altogether and isolate himself. He would get angry at the smallest of happenings at home and beat his younger sister with smallest of provocation.

Case 2

Bimla, a 5 year old girl, was a very healthy and pretty child. Whenever she spoke, it sounded different, as though speech was coming directly through the nose. Her speech therefore was not clearly understood by others.

What do you think the problems could be in case of Shafiq and Bimla? Can you list a couple of probable causes?

Have you thought of the following factors causing the above speech problems?

1. Stuttering or stammering is a fluency problem. We will be discussing about other fluency problems later in Section 5.7.

Table 5.1: Causes and manifestations of speech problems

Manifestation	Mutism	Inadequate speech and language	Aphasia in Children	Articulation problem	Hypernasality with or without articulation problem	Voice problem	Fluency problems
1. Brain injury (focal or widespread).	+	+	+	+			
2. Cerebral Palsy due to Brain damage (with or without mental retardation)	+	+	+	+	+	+	+
3. Mental retardation	+	+		+		+	+
4. Hearing loss	+	+		+	+	—	+
5. Oral structural defects:					+	—	+
a) Cleft palate		—				—	+
b) Short soft palate					+		
c) Tongue tie				+			
d) Tongue thrust				+			
e) Microglossia				+			
f) Macroglossia				+			
g) Dental abnormalities				+			
6. Problems in the larynx (voice box)						+	+
Non-organic Causes							
A. Environmental factors							
1. Lack of stimulation	+	+		+			
2. Faulty parental reaction	+	+		+		+	+
3. Over protection	+	+		+			+
4. Poor modeling				+			+
5. Sibling rivalry	+			+		+	+
6. Social, cultural & linguistic influences	+	+		+		+	+
B. Functional causes							
1. Faulty learning and habits	+	+		+		+	+
2. Emotional disturbances etc.	+	+		+			+

2. **Cleft palate:** a defect or a gap/hole in the roof of the mouth. There are different defects in the physical structures that give rise to speech problems. We will be dealing with them later in this section.

There are many speech problems caused by organic i.e. physical and physiological factors and/or non-organic or functional factors. Have a look at Table 5.1 of causes and their manifestations.

Let us now briefly go into each of the causes listed.

5.3.2 Organic Causes

1. **Brain injury or brain damage:** An injury to central nervous system may occur before birth (Prenatal), during birth (Perinatal) or after birth (Post-natal). These lesions or damages could be focal to a specific small area or could be widespread involving several areas or could be widespread involving several areas within the brain. **Congenital lesion involving motor areas of brain may give rise to a condition called cerebral palsy.**
2. **Mental Retardation:** Also referred to as **mental disability, this is a condition (not an illness or a disease) when there is lowered capacity for mental work.** This can be caused due to damage to or inadequate development of the brain. It can co-exist with other conditions like hearing loss, cerebral palsy. Development in many areas including motor, social, cognitive, self care and language are affected. The child has difficulty in connecting with others, both through speech and action. She learns to speak later than other children and has poor vocabulary and articulation problems.
3. **Hearing loss hearing ability:** It can occur while the baby is in the mother's womb, during the time when the baby is born or after birth. Damage to any part of the ear or to the area in the brain concerned with hearing can cause hearing impairment.

Being able to hear language is basic to being able to speak it. Children with hearing loss find it difficult to learn to speak. How much difficulty they face will depend on the degree of hearing loss as well as the age when hearing loss occurred.

Hearing loss affects development of speech and language and can hamper the child in developing social relationships and in educational achievement as both are heavily dependent on language.

4. **Cerebral Palsy** is characterised by physical incoordination, imbalances and poor posture with a delay in crawling, sitting, standing and walking, problems in speech as misarticulations, poor prosody and poor voice leading to unclear speech. This unclear speech due to brain injury is also termed as Dysarthria.

Brain damage may also be restricted to language areas of the brain which may give rise to aphasia, a language disorder affecting expressing and /or understanding of speech. See Section 5.5 for details.

5. Oral structural and functional defects

- i) **Cleft lip and palate** refers to a condition where there is a congenital opening or hole (cleft) in the roof of the mouth involving lip, palate, (hard and soft palate) and uvula.

These could be due to prenatal factors such as malnutrition in the mother, vitamin deficiencies, other factors, etc.

- ii) **Short soft palate:** The soft palate is shorter than normal and hence there is no sufficient closure of nasal cavity from the oral cavity thereby resulting in excessive nasality or hyper nasality in speech.

- iii) **Submucous cleft:** Cleft in palate may be concealed by a thin skin covering. The result is hypernasality in speech.

All the above three can be corrected with the help of a team including pediatrician, plastic surgeon, ENT specialist, speech pathologist, etc. If

untreated, these problems would give rise to misarticulations besides hypernasality, language problems such as delay in the onset of speech, hearing loss, etc., which in turn would give rise to emotional problems.

- iv) **Tongue tie** refers to a condition where the small band of tissue that anchors the tongue to the floor of the mouth is too tight leading to problems in lifting and protruding the tongue and on protrusion the tongue will appear heart-shaped, indented at the top.

This can be easily corrected by a surgeon or an ENT specialist.

If untreated, it may give rise to misarticulation of tongue tip sounds as /l/ r/t/s/z/ etc.

- v) **Tongue thrust** refers to a condition where the tongue is kept against the front teeth with a continuous pressure being applied interiorly against the front teeth. It gives an open mouth picture with the tongue protruding in between the teeth.

It can easily be reduced or eliminated by drawing attention to it and discouraging it in the child by giving instructions to the child to keep it well behind the teeth.

If untreated, it may give rise to misarticulation of /s/z/ch/t/ and other sounds. This misarticulation is also called as **lisp**.

There are many other problems as **big tongue** (macroglossia) very **small tongue** (microglossia) that may give rise to misarticulations.

Dental abnormalities like overbite, open-bite, small jaw. etc. are also suspected to contribute to misarticulations. Note, however, some of these can be easily treated by a dental surgeon.

- vi) **Laryngeal abnormalities:** Problems in the Larynx (Voice box) like vocal nodule (small nodes or mass of tissue on the vocal cords by whose vibration voice is produced) and vocal cord thickening arise out of misuse or abuse of voice such as unnecessary screaming and yelling. These may give rise to hoarseness or breathiness as seen in case illustration. Usually counselling the parents and working with the child to curb the extreme use of voice has yielded beneficial results. But an examination from an ENT specialist is a must before any sort of parent counselling is attempted.

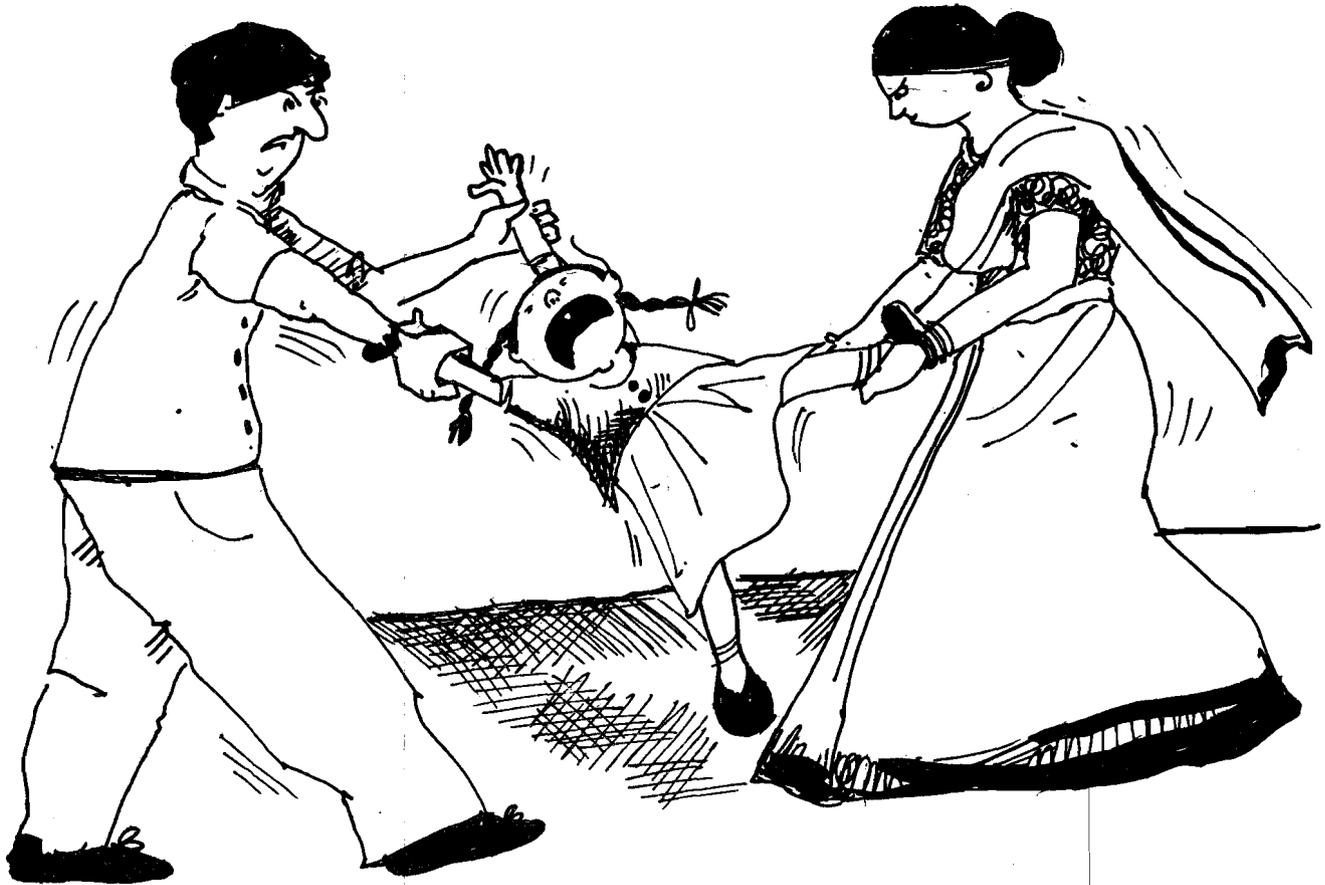
5.3.3 Functional or Non-organic Causes

1. Environmental Factors

- i) **Lack of stimulation:** A child who receives no encouragement to talk; a child in a silent environment where he does not hear any speech or a child who is spoken to minimally may exhibit severe delay in the onset of speech and may speak very less.
- ii) **Faulty parental reaction:** A child who is punished every time he or she speaks or opens his or her mouth to speak or a child who is asked to keep quiet all the time are examples of faulty parental response. The child who is always punished or scolded at whenever he or she stammers has more chances of continuing with stuttering than a child who is in a more accepting environment where his or her self-esteem is not injured. Other environmental factors like unfavourable parental attitude, highly critical and over demanding parents, overprotective parents who keep pampering and fulfilling child's needs without him or her demanding for it are not creating a need in the child

to speak. Parents may well be instrumental in bringing about a speech delay or speech problem like stuttering/stammering. Failure of identification with parents (child's needs to love and look upto parents with a sense of belonging and sense of identity) and lack of motivation to speak on the part of the child may bring about a speech delay as well.

- iii) **Poor modelling :** Children learn by imitating parents and others around. If there is a poor model in the environment for imitation naturally child may develop defective speech. Stammering and misarticulations may sometimes develop this way.



- iv) **Social, cultural and linguistic influences:** Pressures of learning or adapting to two or more languages may sometimes lead to such speech problems as stuttering, inadequate speech and language, mutism, etc. Similarly a shift from one linguistic environment to another which may be baffling to the child may bring about a speech problem besides emotional problems. Refer to Sub-section 5.5.1 for illustration.

Other environmental causes like sibling rivalry (a child who sees his or her younger sister getting all the attention and pampering may feel jealous and try to draw parent's attention) and jealousy also may contribute to bring about a speech problem. Babyish talk and stammering are a couple of such examples.

2. Functional factors

- i) **Faulty habits:** Incorrect speaking of the children learnt consciously/ unconsciously may lead to or precipitate speech problems as lisping, stuttering, etc. Similarly continuous screaming and yelling may give rise to vocal abuse or misuse which in turn may give rise to voice problems as hoarseness.

3. Other factors

- i) **Emotional disturbances:** Severe disturbances like Autism (extreme withdrawal into fantasy) or schizophrenia (a psychosis marked by withdrawn and odd behaviour and emotional deterioration) may bring about mutism (unable to utter words) with speech delay, highly inadequate speech and language misarticulations. They may also result in abnormal language use such as repetition of a phrase or sentence or a question (called echolalia). Another manifestation of such disturbance can be the incorrect use of pronouns as in use of 'you' for 'I' etc.

Note that it is possible to identify the severity of these problems early in life during pre-school period and provide appropriate interventions. Only those children with mild and occasionally moderate degree of speech problems like voice problem, stammering, misarticulation etc., get identified during school period, i.e., around 5 years of age. For maximum benefits, early identification and intervention are absolutely necessary.

The following illustrations would help you to understand the variety of speech problems and their causes. Refer to Table given in the section and think about their probable causes.

Case 3

Ajay, a 5 year old boy, could not walk or move his hands properly. He could not hold a cup or eat his lunch with his fingers properly. He was a clumsy child. His breathing was irregular and noisy. His speech could not be properly understood by others. When started speaking he had all sort of facial twisting and grimacing. Strangers, especially his peer group laughed at him, mocked and made fun of him. So he would stop attempting at any speech and withdraw himself and try to be alone as much as possible. He would resort to clumsy gestures to indicate his basic needs of hunger, thirst etc.

Case 4

Rita was a 7 year old girl who always spoke very loudly, screamed and shouted on the playground and bullied her friends in schools. Gradually her friends noticed that her voice was becoming hoarse and gruff and her speech was not clear at all. She would start off correctly but her speech would slowly get down to a whisper within a few minutes of continuous speaking.

Case 5

Ahmed an 8 years old boy was very active and playful. He liked by friends for his sweet nature. But whenever he spoke, he sounded baby like/babyish because his speech did not have sounds like /r/l/d//n. He said kaal for /car/, kuul for / skuul, attar for/ dustar/ etc.

Case 6

Pinto was a 6 years old lovable student who always stood first in class, who always was the first one to give correct answers to question in class. Suddenly he was absent from school for 15 days because he had a head injury due to an accident on the road when a car hit him. The big wound on his forehead healed but when he came to school again it was seen that he could not speak. All his friends and teachers were surprised at the total change in his behaviour.

Now compare your answers with the following:

Table 5.2

No. of the Cases	Name	Causes
3	Ajay	Cerebral palsy due to brain damage
4	Rita	Vocal abuse leading to laryngeal problems
5	Ahmed	Misarticulations due to faulty learning
6	Pinto	Mutism (Aphasia) after brain damage.

5.4 LANGUAGE DISORDERS IN CHILDREN

Children may exhibit difficulties in acquiring and using language. Most of these difficulties occur in early childhood. As you have seen in Course NES-101 : **Understanding the Elementary School Child**, language development takes place from birth, say approximately at around 6 years of age. A language disorder in a young child is basically determined by comparing the child's language function with that of a normal child of the same age.

Language problems can manifest in several ways. Most common of them are:

- i) Delayed onset of speech, which could be seen as total or partial mutism, highly inadequate speech output restricted to a few/ sounds or words.
- ii) Aphasia in children.
- iii) Learning problems in school as reading and writing disability, dealt in Unit 3 Communication and 'I' Messages of the Course NES -103 : **Guiding Children's Learning**. The first two problems we will be discussing in the following sections.

5.4.1 Mutism

Mutism refers to total absence of speech. There could be complete or partial mutism depending on the absence or decreased speech output. There could be children with very little speech as in cases of mental retardation. There could be children with hearing impairment who have delayed speech and language development. There may also be cases of children keeping quiet and mute for specific periods of time due to some hidden psychological reasons which are referred to as elective mutism cases. While this latter instance is rarely encountered, the former may be quite common in children.

So, there could be complete or partial mutism which are usually cases of delayed onset of speech or delayed speech and language development. These cases could be due to various reasons as enumerated in the Table 1. Delayed speech could be due to brain damage (see sub-section 5.5.2), hearing loss, mental retardation or due to functional or non-organic causes such as severe emotional disturbances, conscious or sub-conscious reasons and environmental factors like lack of stimulation from parents and shift in the socio-cultural background, etc. Let us see the following case.

Case 7

Baisakhi, a 5 year old girl came from a very poor background. She belonged to a tribal community who lived at remote place away from any sort of civilization. Her language was different from what her peer group spoke. The school teacher happened to visit their place once, and stressed the importance of education. Baisakhi's father

finally agreed and admitted her to school. When she came to school/ she found everything very strange. She had problems in understanding what her classmates spoke but more frequently whenever she spoke her classmates laughed and made fun of her because they could not understand her dialect (a variation from the standard language). Hence, she grew silent and withdrawn, speaking only in mono-syllables.

5.4.2 Aphasia in Children

Aphasia in children is the problems in understanding and using spoken language without any hearing loss, mental retardation, any other physical or emotional impairment in the use of language as a result of brain injury in the foetal period, during birth or within first one and half years of life. These children have problems in understanding what is said to them and talking inspite of having normal sensory skills as hearing, vision, normal intelligence and good emotional adjustment.

Aphasia could be congenital or acquired. Congenital cases of aphasia described above are also referred to as developmental aphasia or dysphasia. In such cases the brain damage is said to have occurred by birth or very soon after birth. In contrast, the cases of acquired aphasia are easier to recognize because the child has demonstrated normal development of language until the time of brain injury. Case 6 (Pinto's) illustrated earlier is a case of acquired aphasia. These children with acquired problem make a rapid recovery because the function of a damaged part of brain can quickly be taken over by an undamaged part. But, if there is extensive damage to brain, the child may remain essentially mute for a considerable period. The child with aphasia may suffer a severe interruption of cognitive development because of lack of available language. Children with aphasia are essentially nonfluent, they struggle to say their words, their syntax or sentence formulation is severely interrupted. The aphasic child's speech may sound telegraphic (with only nouns or content words), they may struggle to get the names of objects, people, animals out. While such children can often be identified in preschool years, it is during the school years that their language impairment becomes more striking, frequently presenting severe learning disabilities (refer to Unit 3 : Communication and 'I Messages of Course NES-103 : Guiding Children's Learning).

5.4.3 Remediation

Such language disorder children require intensive speech and language training and stimulation with emphasis on improving language listening skills, developing vocabulary, developing prosody of speech and training given in word, phrase and sentence construction/formulation.

Initial speech and language stimulation procedures include speaking constantly and excessively (and of course, interestingly) with the child, developing basic concepts and promoting cognitive development through object to object, picture to picture, label-object or matching exercises, explaining/describing events and stories, providing situation specific exposures through taking him or her to real life situations like, daily routine of bathing, eating, drinking, shopping for groceries, vegetables, fruits, going to the post office and hospital, etc.

Wherever possible the cause is ameliorated in such cases. In some of the cases it may be possible to reduce some of the causes like, for example, in case of Baisakhi (Case 7) the teacher advised that others should be tolerant of such socio-cultural changes. Gradually with encouragement from teacher and classmates, Baisakhi became as fluent, as intelligible and as talkative as others. In fact, she along with her classmates used to enter into word games where she would give a word from her dialect to which others would offer the equivalent term from standard language

and they all would laugh together. In any such training involving speech and language stimulation or language correction the use of a tape recorder is highly beneficial for recording and replaying correct and incorrect models, rhymes, word games, etc.

Check Your Progress

Notes: a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the Block.

1. List any three causes for inadequate speech and language.

.....
.....
.....

2. List any two characteristics of delayed speech and language.

.....
.....

3. In developmental dysphasia, brain injury would have occurred by the age of

- i) birth or soon after birth
- ii) 4 years
- iii) 8 years

4. In acquired aphasia, brain injury can occur

- i) by birth
- ii) any age after some normal language development
- iii) at 8 years.

5. Children with aphasia may show problems in and / or and language.

5.5 ARTICULATION PROBLEMS

5.5.1 Description and Articulatory Development

Children learn to utter/articulate/pronounce vowels like /a/, /i/, /u/, /o/, /e/, etc., correctly by 2-3 years and then acquire the consonants like /p/, /t/, /k/, etc., later. **The normal production of speech sounds viz., vowels and consonants with the appropriate movements of tongue, lips, jaw and other oral structures is called articulation.** Any disturbance in this process may give rise to an incorrect articulation or error of articulation or misarticulation.

Adult-like articulation is acquired by children in the process of development in early childhood. In terms of articulatory acquisition of consonants a **Table 5.3: Articulatory Acquisition** can be visualized as follows based on western research and our observation. Data from an Indian context still need to be collected and pooled together.

Table 5.3: Articulatory Acquisition

Approx. age	Sound mastered
2 ½ years	b p m
3 ½ years	d t n g k n ng y j
4 ½ years	f l
5 ½ years	v sh
6 ½ years	s z r h

As the Table 5.3 indicates, difficult sounds are learnt later than easier ones. Even after six and half years if the children have not acquired /r/, /s/, or any other sound then there is a cause for concern because it would indicate a mis-articulation i.e., any delay in the learning of these sounds will be considered a defect.

5.5.2 Types and Causes

Such articulation errors or misarticulations could be of four types. These are:

1. **Omission errors** refer to omitting or deleting a particular sound in a word as in fi for fish.
2. **Substitution errors** refers to substituting one sound for another as in tan for san (Son)
3. **Distortion errors** is where the sound is uttered nearer to the target sound but is not exactly the target sound. For e.g. such as fiyth for fish.
4. **Addition errors** where a new sound is added to the sounds of a word as iskuul for skuul (School).

These mis-articulations as we saw in Section 5.4 on 'causes' could be due to various factors as hearing loss, tongue thrust, tongue tie, cleft palate or cleft lip, cerebral palsy, and mental retardation and functional or non-organic causes/factors as socio-cultural influence.

The articulation of speech of one community may sound peculiar to another. However it does not mean the child has speech disorder.

While deciding whether errors in speech represent a disorder or not, the clinician will need to consider the number and types of errors, the consistency of these errors, the age and development characteristics of the speaker and the intelligibility of the person's speech.

5.5.3 Remediation

1. For improving articulation the first step is identifying the cause and eliminating or ameliorating it wherever possible. For example, if the child is found to have a hearing loss, after an audiological testing, he or she is referred to an ENT surgeon to rule out problem of conductive hearing loss and then given a hearing aid specific to his or her amount of hearing loss and then given practice in speech correction through articulation therapy.

Articulation therapy primarily stresses on the child/adult acquiring a correct model of the target sound through training him or her in

- i) awareness of misarticulation
- ii) discrimination
- iii) correction
- iv) stabilisation

Auditory stimulation (listening to the sound and imitating it) and phonetic placement (showing the child placement of lips and tongue with other oral structures in order to produce the target sound with precision) are the chief methods used by a speech therapist. Gradual progressive approximation to the correct target is encouraged in isolation followed by helping him or her generalising it to all the other real life language contexts. Electronic gadgets like tape recorders are very successfully and frequently used in articulation correction.

Check Your Progress

Notes: a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the Block.

6. Correctly identify the type of error in each of these examples by reading them out loudly.

Glaat for glaad	or glat for glad
Keavh for kaar	or cavh for car
Cheeru for cheer	or chairu for chair
Leet for sleet	or late for slate

Identify more examples of these 4 types of articulation errors.

7. State true or false.

- i) Consonants are acquired earlier than vowels.
- ii) /r/sound is acquired by 2 years
- iii) /p/ sound is acquired by 8 years
- iv) For remediation of an articulatory disorder identification of the cause wherever possible is necessary.

5.6 FLUENCY PROBLEMS IN CHILDREN

5.6.1 Description, Types and Causes

Majority of children speak with very good fluency. At around 3 years of age, some children may exhibit observable breaks in speech fluency items of momentary or temporary hesitations, repetitions, prolongation and pauses in speech. These are referred to as blocks or dysfluencies. Many children would overcome these dysfluencies in a matter of few days. But, if these problems persist even by age 5 and beyond, these may constitute the fluency problem known as **stuttering** or **stammering**. Care could be taken however to note the regularity and consistency of these stuttering blocks in terms of situation. (All of us have a tendency to stutter

when speaking to our seniors and authorities or when addressing a crowd for the first time, and children may not be fluent when speaking with authority due to fear).

Stuttering is a cause for concern when it is frequent, continuous and consistent in many of the situations. This stuttering refers to the involuntary repetition, prolongation, pauses or hesitation which the child struggles to end. The child has no conscious control over these blocks and hence they may be called involuntary. It is often the initial sound of the first word of the intended speech utterances in which the blocks occur. Stuttering is usually accompanied by a struggle because they are affected by the negative reactions of the listeners who may show surprise, concern, anger, intolerance, impatience or ridicule the person. These struggle responses are attempts to end the fluency interruptions by changing the intended word, such as starting with book but changing it to note or copy, pursing the lips, facial grimacing (twisting), blinking the eyes, etc. Often these secondary behaviour to stuttering become more of a communicative problem than the actual block as repetitions and prolongations.

Another fluency disorder is cluttering, a speech disorder characterized by an extremely rapid rate of speaking often with articulation errors. Fluency can also be affected in cases of articulation disorders as Dysarthria with Cerebral Palsy mentioned in Section 5.4 earlier. So, we have talked about three types of fluency problems of which stuttering and cluttering are usually seen in school age children while normal nonfluency or dysfluency is seen in preschool period.

The causes are usually non-organic or functional factors as explained in 'Section 5.4. on 'causes'. Specifically faulty parental reaction and treatment of the problem (and of course the child) remain an important causative or precipitating factor.

5.6.2 Remediation

As soon as you recognise that a child in your classroom or surrounding has a fluency problem the first thing you could do is to refer the child along with the parents to a nearby speech and hearing centre where the child would be assessed in detail for the nature of his problem causes/ factors contributing to the problem and as to what would be the best method of managing this particular problem and the child.

There are several remediation or therapy approaches available of which the most commonly used once are described briefly below.

1. Management of early dysfluency or normal non fluency

The best way to manage preschool children is to counsel the parents helping them to understand normal dysfluency and to place less emphasis on how children say things. Much of the problem may actually be in parent's ears who are over-anxious for their child's speech. Suggestions like providing children with an atmosphere that is more accepting of dysfluency, asking parents to speak slowly, clearly and in short utterances, improving the children's language by stimulation (by activities such as story narration, explaining events or experiences that he or she comes across etc.) anticipating and providing words on which they struggle, not showing their anxiety (for child's speech) to the child, etc., would be explained to parents so that they can promote fluency in children.

2. Management of stuttering

- i) **Psychological approach in case of older individuals:** Counselling and psychotherapy help to improve the individual's attitude towards the problem, decrease anxiety and avoidance, and help create a better image.

ii) **Modifying speech:** Therapy is given with an emphasis on improving speech by modifying rhythms, rate and voicing.

Counselling and modification of speech behaviour is the recent trend in remediation in the speech and hearing centres. Some of the simple speech modifying techniques are stretching and prolonging the vowels, and reducing the rate of speech. These exercises are gradually modified to approximate normal conversation rate and manner. Cluttering is also treated by reducing the rate of speech so that speech in any context is uttered with clear and easy pronunciation.

Note that all these techniques mentioned above can be followed by any of you (teacher or a parent) with some initial guidance from any speech therapist/ speech pathologist. In fact, home training or school training is strongly advised for best results in the management of any of the speech problems like a fluency problem. Also note that most speech problems require training/ practice on a long-term basis and hence the insistence on home training.

Check Your Progress

Notes: a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the Block.

8. i) Most of the dysfluencies in children can be grouped into 3 types namely and
- ii) Block of a dysfluent person include and
- iii) Stuttering is precipitated by..... reactions from the listeners:
- a) Positive
 - b) Negative
 - c) Pleasant
- iv) Secondary features of stuttering can be listed as follows:
- a)
 - b)
 - c)
 - d)
- v) Cluttering is characterised by and.....
- vi) and are main remediation approaches.

5.7 PHONATION DISORDERS OR VOICE PROBLEMS

5.7.1 Description, Types and Causes

Our voice can be identified for its pitch (frequency of vibration), loudness (intensity) and quality. So a voice could be high or low pitched, soft or loud, or be hoarse, harsh, or breathy. Generally a child's voice is high pitched whereas an adult's is low pitched. All of us change our loudness and tone depending on the situation. Slight

variation in pitch, loudness and quality are also a matter of individual style and manner but gross variations, specially those with sudden onset (within a matter of one or few days) should cause concern.

A voice that deviates markedly from one's peers probably needs to be investigated medically. If the different voice has always characterised child's vocalisation or particularly if a change in voice has persisted for more than two weeks (all of us have a change of voice of when we have common cold) the child should be referred to an ENT specialist (medical specialist who cares for ear, nose and throat problems).

Majority of voice problems in children can be related to vocal abuse or misuse due to frequent yelling and screaming which in turn may lead to thickening of vocal cords (membranes in the air way within our larynx) or they could lead to vocal nodules or tiny cysts on the vocal cords. Other common voice problems could be due to cerebral palsy, cleft palate or short soft palate which may lead to excessive nasality, excessively shrill voice or frequent variations in pitch.

5.7.2 Remediation

Any step towards remediation is primarily medical and the child has to be referred to an ENT specialist. Very rarely is specific voice therapy required in case of children. Reduction of vocal abuse by voice test or abstinence from the excessive use of voice may be advised for a few weeks by the ENT specialist. Very rarely, if the voice problem persists, voice therapy may be advised.

Voice therapy

Voice therapy refers to the efforts advised by a speech therapist to normalise the voice. These efforts essentially aim at modifying the voice appropriate to the age of the individual. If it is too low, a higher pitch is prescribed, if it is too loud, a reduction in loudness is attempted, if soft an increase in loudness, and elimination of any hoarseness, harshness by the use of appropriate voice is attempted.

Check Your Progress

Notes: a) Write your answers in the space given.

b) Compare your answers with those given at the end of the Block.

9. Fill in the blanks:

- i) Voice has three parameters namely
and
- ii) Children's voice are pitched.
- iii) Main problems in voice of school age children are due to
- iv) We have in the larynx responsible
for voice reproduction.
- v) Voice problems could be associated with any other speech problem
as and

5.8 LET US SUM UP

Speech problems (or impairments) have different causes and manifestations. Causes could be broadly categorised into organic and non-organic/ functional factors. Organic

causes could be brain damage, mental retardation, hearing loss, oral structural defects and laryngeal defects. Non-organic factors could be environmental or psychological. The variety of manifestations could be language disorders as mutism and delayed speech and language development, aphasia; articulation, problems of substitution, omission, distortion or addition nature. Fluency problems could be normal non fluency, stuttering or cluttering. Voice problems due to laryngeal defects in children could be of many varieties but common of them is due to vocal abuse.

Remediation for any speech problem insists as a first step on testing and guidance from medical professionals as pediatricians, neurologists, plastic surgeon, ENT specialist, etc., along with a guidance from a team including audiologists, psychologist and speech pathologist, depending on the type of speech problem. A referral should be made to any nearby speech and hearing centre for early identification and intervention. For best management and results early intervention is always recommended. With a little guidance from a speech language pathologist a teacher/parent can follow up the training/practice at school/home for best results.

5.9 UNIT-END EXERCISES

1. Identify the types of speech problems in children from your surroundings/ school.
2. List out the manifestation and the causes of speech problems in children in your school/surroundings.
3. Identify a child with delayed speech and language development and list out the characteristics of such impairment.
4. Identify a child with misarticulation and analyse his/her speech for the types of misarticulations.
5. Find out the secondary features and the type of blocks in a stutterer.
6. Find out children with vocal abuse in your class/ surroundings and caution them regarding the danger associated with continued vocal abuse.