

EFFECTIVE WAYS OF TEACHING GROSS SOUND DISCRIMINATION TO CHILDREN WITH HEARING IMPAIRMENT

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Abstract

This paper treats hearing mechanisms and the conditions for auditory training are identified. The necessary equipment for the training are now discussed in details as well as the methods of carrying out auditory training in children with hearing impediment. The paper concludes with the benefits derived from auditory training of children with hearing impediment in our society.

Auditory training is to cultivate in the child with hearing impairment the ability to perceive sounds. These sounds may include singing tones or spoken vowels on various notes produced by musical instrument or noise, whistle, ringing of bells etc. In other words, it is sensitizing a person to experience the existence of sounds through work rhythm, utilizing piano or other musical instrument. Also, it is the training of the brain to associate language ideas with the arbitrary sequences of sound known as words (Moji, 1997).

Beside, Adediran (2003) stated that auditory training is a programme aimed at enabling the hearing impaired to maximize the use of his residual hearing. Mba (1991) viewed the programme as the process of teaching a hearing impaired person to make a maximum use of whatever hearing he has left for the purpose of understanding speech through hearing. To Halanhan and Kauffman (1991), it is the procedure of teaching the deaf or hard-of-hearing child to make use of what hearing he or she possesses.

They went further stating its three major goals as:

- (a) Development of awareness of sound.
- (b) Development of the ability discriminate among sounds.
- (c) Development of the ability to make gross discrimination among environmental sound.

It is an obvious fact that whatever the degree of deafness, one must have a little bit of residual hearing left in the auditory mechanism. This bit is what the client is trained to maximize its usage better hearing and understanding. Some of the major benefits of auditory training to the child include:

- (a) It aids the child to make use of his ability to hear, interpret and imitate speech sounds.
- (b) It is hoped that it will develop in the deaf child a natural voice with inflection accent and rhythm and it assists better grasps of languages.

- (c) It develops speech readiness in children i.e. develop the ability to observe, imitate, concentrate and develop visual, auditory, tactile and kinesthetic approaches.
- (d) It enables the hearing impaired a gradual movement from group hearing to individual speech and language understanding.

Consideration for Auditory Training

For any effective training for children with hearing impairment to be carried out, there is that need to consider the intelligence of the children. This is because intelligence plays an important role in auditory training, no less than in other fields of development; it is believed that it influences achievement. The intelligence in the child can never create a desire in him or hear. The consensus opinion, however, is that intelligence is a major factor in auditory training (Oyebola, 1997). The type of deafness and onset also bear some relationship to the results obtained from auditory training. So, it can be noticed that, a child that is congenitally deaf will have more problems in school than one who experienced post-lingual deafness. Again, once a child has heard speech sounds, he will be able to use his residual hearing more effectively, regardless of how imperfectly.

In addition to that, the ingenuity of the teacher of auditory training is the measure of interest. Not infrequently, a child's lack of interest is a reflection of the teacher's level of interest. The teacher should at all times, aim at arousing interest in the child to an extent that, it will motivate him to want to hear better and talk better. Oyebola (1997) highlighted some of the factors that can enhance auditory training as:-

- (a) General acceptability of auditory training programme by the school administrators.
- (b) Proper keeping of the child's records.
- (c) Giving of carefully observation of results by teachers.
- (d) Recognition of individual needs and differences among their pupils; the provision of suitable room and equipment and their proper maintenance.
- (e) Suitable teaching methods, which recognize the previous experiences of both pupils and teachers with hearing equipment.
- (f) Suitable classification of pupils and numerous opportunities for informal practice in acoustic activity.

Before teaching of gross sound discrimination, there is need to carry out a hearing test on a child with hearing impairment to assess the sensitivity of the weak tones at different frequencies and determine the nature and severity of hearing impairment. It also assesses the sensitivity to differences between insensitive, frequencies, or durations. It also assesses the loudness of different sounds fed into ones ear or the other.

What is gross sound discrimination? It is a process of discrimination between variety of sounds or objects of training producing unique sounds. Association – it tests the ability to associate objects with sounds based on their

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uniqueness. The tester produces the objects at the sight and hearing of the child. Objects are later manipulated to produce sound for him to see. After this, sounds are produced with these objects at his or her back or outside the room, for testee to discriminate accordingly. Sound makers for this method include rattles, bells, gong, talking drum, or natural sounds.

In carrying out gross sound discrimination, there is need to establish sound awareness, will assist in auditory training. Sound awareness is a creation of the trainers, which include otologist, teacher and parents. It refers to sensitivity to sounds to the hearing of the client for him to respond to. Upon awareness of such sounds through creation depicted by a given action (raising up of fingers, sound localization, sounds that are fed into the client hearing are expected to be relevant and meaningful to everyday interaction in the society.

Gross Sound Discrimination Equipment

There are many instruments that can be used for testing gross sounds discrimination. The most commonly used are: drums, cymbals, triangles, gong, envil, tambourine, Chinese wood block, bells, cow bells, dinner bells, whistles, horns, tin horns, wooden horns, rattles, crickets, noise makers, caste net, jingles, sticks and rhythm sticks and rhythm sticks. Sounds effect records, which utilize the noises, produced by a cow, dog, kitten and telephone bells may be played also for this purposes (Moji, 1997).

Effective Ways of Teaching Gross Discrimination

There are many ways of teaching gross discrimination but for this paper we shall be considering the following:-

- (a) Sounds association
- (b) Gross sounds
- (c) Sound effect recordings
- (d) Vowel sounds
- (e) Finer discrimination

According to Adediran (2003) the teacher sounds the selected instrument twice as the child looks on and he may be encouraged to touch it the third time. The teacher sounds the instrument away from the child and measures the distance at which the child responded the second time. The teacher may point one of the objects and sounds it at a recorded distance and he may then allow the child to differentiate between the two sounds. Again, the teacher may sound one and show the object to the child. The teacher sounds the other and also shows it to the child. He then sounds another object and then requests the testee to show the one that he sounds. The testee may be made to look away from this exercise. When the testee successfully identifies the object, the third sound may be introduced and the process goes on and on.

Another way is that, the teacher records the noise of the objects like cow, dog, kitten and telephone bell. The teacher has all the pictures/models of the

objects, which represents various sound recorded. As the records plays, he picks up the right object and pantomimes the activity. If the testee is interested he is being encouraged to do the same. This exercise goes on for some times and progress is being recorded. As the record plays the teachers selects the appropriate object and places away from the testee sight possibility behind the window and door. The exercise goes on until he testee is able to select the exact animal himself.

Hallahan and Kuffman (1991) observed that, vowel sounds can be used to teach sounds discrimination also. Here the vowels are that of the sounds from animals i.e. the sound made by a dog, cow, etc. The tester may collect toys of animals. The tester may pick one of the toys and talk about it and dramatize the dog barking to stimulate imitative response. The child may sit on the teachers lap or the teacher may stand behind the testee so that the child can see his face in the mirror very clearly.

The teacher then says, what the animal e.g. dog in saying, 'bow, thus the child is enabled to lip-read from the teacher's face and the same time, receive the impression from the ear and feeling the vibration by touch.

The activity can continue without the child watching the face of the tester but he animal will be introduced. The same thing continues with other animals and sounds.

The nest is contrasting the sound from animals. Each sentence is repeated with the appropriate object or toy. The exercise may continue until the child is able to differentiate between the two sounds watching the lips and when the tester's lips are covered. From sounds of two animals, this can continue with sounds of three, four animals etc.

According to Adediran (2002), finer discrimination is an act of identifying part particular sounds with their respective sound makers after being grossly produced. It is an event, which comes up after the testee has been assumed to acquire some mastery of multiple sounds. He or she is exposed to continuous like sounds for a period of time for him or her to identify particular sound and its maker.

Hard of hearing adults might not need sound awareness exercise but may need to be retrained after fixing hearing aid on awareness of weak sounds and gross condition. Sound makers like doorbells telephone rings and other distinctive forms of sounds would readily be useful.

Accepting this view, Adediran (2000) suggested that drills and exercise are particularly useful for adults especially when the items contain contrasting elements based on cues that the patient is to learn.

Recognition based on such cases must be carefully trained through several stages. At first, the speed may be slow enough so that the listener can succeed. Speed later become important, especially as the cue is introduced into syllabus and word contexts. Such as bed in red, pull in bull, gross in cross.

Here, it will be more appropriate to introduce to the client familiar sounds in the immediate environment that are meaningful as well as useful for daily purposes of life. With the introduction of amplification device, audibility will be enhanced and the client performs even better and receives family motivation and immediate reward for production at sound and speech.

Benefits of Gross Sound Discrimination

Some of the benefits derived from the exposures of children with hearing impairment to gross sounds discrimination are:

- (a) Easy adjustment of child to sound in the society.
- (b) Early intervention favours mainstreaming which assist the child in educational pursuits to any level since he is familiar with sounds.
- (c) Increase ability to hearing and interpretation of sounds for educational enhancement.
- (d) It offers opportunity to acquisition of more natural speech and speeding up his mastery and use of language.
- (e) It taps residual hearing and re-activates same.
- (f) A re-activation of residual hearing makes available the use of third sense, other than visual and tactile. This makes knowledge acquisition easier and moral natural.
- (g) It brings the wonderful oral-aural modalities for both hard of hearing and the congenially deaf.
- (h) It restores efficiency of a child with hearing impairment.

In conclusion, for the success of gross discrimination exercise, some of the most important factors such a personality of the child, the type of hearing impairment, the age at which training is begun, the quality of the instrument and the skills of the teacher must be adequate and relevant for gross sound discrimination in children with hearing impairment.

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