

# THE ROLE OF SPEECH CLINICIAN/PATHOLOGIST IN CORRECTING SPEECH DEFECTS IN CHILDREN WITH HEARING IMPAIRMENT

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## ABSTRACT

*Communication is a dynamic relationship and it consist of both the verbal and non-verbal means of exchanging information, idea and knowledge between groups of individual The verbal aspect make use of Language and Speech hence the disorder of language and speech will cause communication breakdown which inevitably requires the intervention of a speech clinician. It is the clinician who diagnoses and assesses the client as well as plan the necessary therapy to correct the common predicaments of the speech and language impairment of the Hearing Impaired Children (HIC).*

## INTRODUCTION

An attempt to diagnose the topic is to first identify what is a language? What is speech? As well as who is a speech and language disordered? How does one observed speech and language disorder in individuals? What are the methods of evaluation and, how do we remedy it?

Bloom and Lahey (1978) defined language as the knowledge of code for representing ideas about the World through a conventional system or arbitrary signals for communication. In fact, language is a system used by a group of people for giving meaning to sounds, words, gestures and other symbols to enabled them to communicate with each other. In a broad term however, language refers to any means an individual uses to receive or sent messages. More specifically, it is the use of organised voice sounds and written symbols to communicate thoughts and feelings. Language is a symbolisation of thought and it has a set of rules for using this symbol, which consist of verbal and non-verbal aspect of language. In fact it occurs at both receptive and expressive levels of communication. Essentially language is made of speech and it is a means of transmitting culture and for integration of the young into the society. It is used for thinking and, directing actions.

Speech on the other hand is the spoken aspect of language and it is also used for communication speech involves a set of vocal symbol. It is essentially the vocal response mode of language which is a complex Motor behaviour that depends on physiological and neuro-muscular function coordination of respiration (the physiognomic

system) of a group of collected articulators involving:

- a. Phonation - by the larynx and vocal fold/Glottis
- b. Resonation - which is the vibrating amplification response by chest cavity, mouth, pharynx.
- c. Articulation by the lips, tongue, larynx, teeth, hard/soft palate, velum, jaw, that move in a continuous quasi-independent ways to modulate and correct the sound to speech.

Speech is really the encoded phonology of language It involves grammatical and. phonetic analysis. Speech essentially is the voicing out of meaningful words to carry out some emotional feeling to the encoders. Sheridan (1964) sees speech as the use of systematised vocalisation to express verbal symbol.

Language is related to social order and is a primary mechanism of social control. Allport speaks of language as social stimulation. All speech is for the purpose of getting response; disordered speech will hinder response and social stimulation, however,

Communication is both non-verbal and verbal means of exchanging information, idea and knowledge by group of individuals, community or species. Communication is a dynamic relationship while good speech is therefore purposive communication process often involves four skills as in reading, writing, speaking and listening; while listening is the most important of all. Fry (1957), identify 3 major elements in communication as Reception, Interpretation and Expression. To establish a child with communication problem one therefore should evaluate him/her in his total environment, family and peers relationships to ensure his/her oral functional symbols so as to ascertain the speech or language impairment. In essence a child's speech is considered to be impaired if it is unintelligible, abuses the speech Mechanism, or it is culturally or personally unsatisfactory (Perkins 1977). Van Riper (1978) further stated that speech is impaired if it:

- i. draws unfavourable attention to itself
- ii. interferes with communication or
- iii. causes the speaker to have difficulty in social relationships (Maladjustment).

## **ROLE OF PATHOLOGIST/SPEECH CLINICIAN**

The pathologist must first of all look at the individual organs to establish the nature of problem, as to identify the causes, which may be due to intellectual factors, psychological factors, as a result of low stimulation and motivation for speech. As asserted by American speech and Hearing Association (ASHA), that the communication disorder specialist is the speech pathologist, hence Campbell (1977) identified three broad competency areas to include wide knowledge and skills in speech, hearing and language intervention, cognitive programming and behavioural management, while their work should include screening, assessment, programming (direct) or consultations with other professionals and paraprofessionals, and parents (indirect) and continuous evaluation. Siegel and Sprallin (1980) then suggested that, they should be involved in two behavioural diagnosis, such as careful evaluation of child's current behaviour status, as to know where to start correctly their training. This is done through observation and testing. The pathologist should also assess, how rapidly the child can learn new skills; coupled with the power or the techniques required to teach a child new skills through continuous evaluation. Hence, clinicians must assess child language behaviour, define the goals, the content, and the method of assessment, most appropriate to the child being evaluated; which will help to establish the baseline functions, and to identify children with language problem potentially, as well as to measure behavioural changes with a programme teaching.

Muler (1978) stated that the assessment should produce information on how the child uses language, comprehension and production, which are needed to determine the influence of context or situation on production.

## **METHODS OF DIAGNOSIS/ASSESSMENT**

Broad screening is done first, before specific testing can be done to the identified areas of problem. Byant (1970) suggested the following component of an evaluation to detect communication disorder:

1. Articulation test - Assess speech error of the child and record the defective sounds in objective ways.
2. Perform hearing test to ascertain if it is the original cause.
3. Embark on Auditory discrimination test as to determine whether the child hears sound correctly. One can use Wepman Auditory discrimination test or Templin Speech sound discrimination test (Templin 1957).
4. Language development test must be used to determine the child acquired vocabulary, since it is a good indication of intelligence, such as peabody picture vocabulary test (Dunn 1965) or the Carrow elicited language inventory of 1974.

5. Determined the child overall language test by assessing the child understanding and production of structure e.g. syntactical, as in clinical evaluation of language functions by Semel and Wue (1980); to obtain the child language sample — in quantity and quality, both expressive speech and language, through structured tasks, to elicit language sample, by informal conversation as enthused by Atkins and Cartwright (1952).

Diagnostician should arrange specific eliciting situations to make the child produce particular construction, since phonological, morphological, syntactic and semantic aspects occur interactively. Each dimension can be observed, recorded independently, while Muller advocated for their individual consideration and relatedness.

Dickson (1995) emphasised that one should determine whether or not the communication behaviours are abnormal, ways in which it is abnormal, and whether the abnormalities can be treated. Hence the information is used to plan treatment remediation programme. Most professionals assessment should begin with the collection of "case history" information from the child and parent (through completing a biographical format) to reflect diverse information like child's birth and developmental history, illnesses, medications taken; scores on achievement and intelligence tests, and adjustment to school. The developmental stages of the child is required from the mother, such as when the child first crawled, walked and utter words. The specialist then examines the child's mouth carefully nothing whether there are any irregularities in the tongue, lips, teeth palate, velum or other structures that may affect speech production. Any odd discovery is then referred to medical expert for intervention.

In fact, Schiefelbusch and McCormick (1981) observed, that behavioural observation is increasingly in the use and that objective recording of the child's language competency in social contexts, has added much to our knowledge of language acquisition. Hence diagnostician should record, and sample the child language and speech across various settings. Muller (1978) even divides assessment procedures into four categories as listed below:

- a. Standardise Tests
- b. Developmental Scales
- c. Non-standardised Tests and
- d. Behavioural observation

The sampling of the child language performance in situational contexts that is unstructured, he labelled as behavioural observation, which is important to record the language competencies of the child in social context ~ skillful objective recording, design and applying entering is needed here.

The non-standardised test has face validity, if properly utilized, since it allows flexibility, both in design and application, which is modifiable to individual child; which Muler claimed to be an asset, since the test will conform to the child and not otherwise. He strongly proposed free speech analyses, elicited production and comprehension, elicited imitation in this case.

Developmental scales however emphasised that the speech and language as a concept emerged along a predictable parts, which allow for individual differences, hence specified behaviour can be used as an indication of development. Parents are therefore expected to answer both positive and negative check—list items, while the child is asked to perform task that elicit specific behaviour consisting of two types:

- a. Indirect reporting of development milestones and
- b. Direct observation and objective reporting

Standardised test, however, is more than a formal test, since large children population have attempted the instruments with demonstrated validity and reliability, which is based on specific Model of Language. Specialist can also use other various language tests measures to evaluate the child competencies. These tests includes the following:

- a. Illinois Test of Psycholinguistic abilities (Kirk, McCarthy and Kirk (1968).
- b. The Peabody Picture Vocabulary Test (Dunn 1965)
- c. The North Western Syntax Screening Test (Lee 1971)
- d. Utah Test of Language Development (Median 1989) for 5 to 11 years children.
- e. Woodcock language proficiency Battery (Woodcock 1980) for 5 to 80 plus years.

In fact assessing language involves measuring receptive and expressive skill development in the following structural components, as in phonology, articulation disorder, morphology and assessment of spontaneous language. Through mean length of utterances (MLU); and recorded elicited response on tape. Developmental sentences Analysis and Vocabulary Test, with Intelligence Test, such as WISC - R - III are also necessary. Goldman - Fristoe - Woodcock Test of Articulation and Discrimination, could be utilized for information which can assess the semantic and pragmatic rules with the peabody picture vocabulary or Boehm Test of basic concept; or used Bankson language test 2 of 1990, for age three to seven years. Other available test are "Clinical Evaluation of Language Fundamentals Revised" (CLEF - R) by Semel Wiig and Secord 1987, (for ages 5 to 16 years). Houston Test of Language Development by Crabtree (1965) for 6 months to 6 years. While Test of Adolescent Language (TOAL - 2) of 1987 by Hammill. Brown Larson and Wiederholt for age 4 — 11 years can also be used to test children with language and speech problems.

## CONCLUSION

Conclusively, after the assessment procedures have been completed, the speech/language pathologist reviews the results of the case history, formal and informal tests, language sample and behavioural observations. Recommendations are then made to teachers or parents, about the most effective approaches, to the speech/language impairment of the child, or he may start remedial therapy with the child through planning and programming of language training, generating goals and objectives, determining sequence in which to organise and effect objective attainment.

## REFERENCES

- Atkins C.P & Cartwright L.R. (1982): National Survey preferred Language elicitation procedures used in five age categories: *Journal of American Speech and Hearing Association*, 24, 321- 323.
- Bankson, N.W. (1990). The speech and language impaired In E.C. Meyen (Ed) *Exceptional Children and Youth* (2nd ed.) Eenver Love.
- Bloom C. & Lahey M. (1978): *Language Development and Language Disorders*. New York, John Wiley & Sons.
- Campbell D.T. & Stanley J.S (1977) *Experimental and quasi experimental designs for research on teaching in N.L. Gage (ed.) Handbook of Research and teaching*. Chicago : Rand McNally.
- Carrow E. (1974). *Test for auditory comprehension of Language*. Austin, Tex. Learning Concepts.
- Crabtree L.O. (1963). 'Houston Test' In Carrow E. (1974). *Test for auditory, Comprehension of Language*, Austin, Tex Learning Concepts.
- Dickson M.E and Rossi J.C (1995). A reading strategy for students with learning' disabilities *Teaching Exceptional Children*, 27(2), 11-14.
- Dunn C. (1965). *Peabody Picture Vocabulary test circle pines - Minu*. American Guidance Service.
- Fry (1957). *Assessment of Language ability in children in Goldman R. Fristoe op. cit*.
- Goldman R, Fristoe, A.M. & Woodcock R.V. (1980). *The Goldman-Fristoe-Woodcock test of auditory discrimination*. Circle pines. Minn: American Guidance

- service.
- Hammil, D.D. (1987). On defining learning disabilities: An emerging consensus journal of learning disabilities, 23,74, 74 - 84.
- Heward L.W (1996). Exceptional children - An Introduction to Special Education (5th Ed) Englewood Cliffs; Merrit Prentice Hall.
- Igbokwe, K.O. (Edited) 1981). Handbook of Total Communication Pre-primary and Primary levels, Lagos : NERC.
- James M. Kauffman and Hallahan D (Ed) (1981) Handbook of Special Education, prentice Hall, N.J Englewood.
- Janet Learner (1981). Learning Disabilities, Theories Diagnosis and Teaching Strategies Mifflin Company Boston (3rd Edition).
- John Venn (1994). Assessment of Students with Special Needs: Macmillan Pub. Co. N/Y.
- Kirk, S, McCarthy, J, Kirk, W.:(1968). The Illinois Test of Psycholinguistic abilities (Revised) Urbana University of Illinois Press.
- Lee L.L (1971). The North-Western Syntax Screening Test. Evanston, Ill: North-Western University Press.
- Masud H, Andrew M. Swansten (1980). Assessing problem children issues and practice, Burnet Books.
- Mechan, L.M. (1989). Teaching of Speech Washington D.C. Volta Bureau,
- Miller W.B. (1978). Education the war. Exceptional children 9 (232 - 240, 250-253.
- Morley, I.E. (1968) Cleft Palate and Speech - Livingstone.
- Perkins V.H.(1977). Speech Pathology, St. Louis M.O: C.V. Mosby.
- Premark, D.(1971). Language in Chimpanzees: Science 172: 608 - 222.
- Schiefetbusch R.L. Hollis J.H (1979). Language Intervention from ape to child. Baltimore University Park Press.
- Semel, E.M., Wlig E.H.(1980). Clinical Evaluation of Language functions: Englewood Cliffs. N.J. Merrill Prentice Hall.
- Semel, M.; Barritt, L; Bennetts S.N.; Perfetti, C. (1968). A grammatical analysis of Word associations of educable mentally retarded and normal children. American Journal of Mental Deficiency, 72, 507 - 576.
- Sheridan, O.S. (1964). Speech Pathology - An introduction Boston, N/J Mifflin Company.
- Spralling W.B. and Kvaraceus, W.C. (1980). Sex discrimination in special class placement. Exceptional children, (11) - 42 - 44.
- Templin M.C. and Darley F.L. (1969). The Templin - Dahrley tests of Articulation. Iowa; Bureau of Educational Research and Service University of Iowa.
- Woodcock R.W. (1980). Woodcock Johnson, psycho educational battery. Allen TX : Dim Teaching Resources.
- Woodcock R. (1974). Woodcock Reading Mastery Tests. Circle Pines, N. American Guidance Service.
- Van Riper (1978) Speech Correction. Washington D.C Merrilco.