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Practical Approach and Beneficial Effects in the Area of Speech Improvement

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Abstract: The lack of adequate and systematic approach to speech instruction has always been a problem facing teaching of the hearing impaired. The study describes principles and methods in the context of overall speech program at a school for the hearing-impaired in Ibadan, Oyo State, Nigeria. In describing an interdisciplinary approach, consisting of specific program design, the writer's major goal is to provide the reader with a practical method of speech instruction that may be applied to any program. Preliminary data which indicate this program has a very beneficial effect in the area of speech observations show that teacher's attitude toward speech instruction have also been positively affected.

Key words: Beneficial effects, speech improvment, Nigeria

INTRODUCTION

The limited availability of adequate speech training procedure has long been the source of frustration for teachers of the hearing impaired. Although, there has been numerous attempts to put this much-maligned topic in perspective (Haycock, 1993; Ewing and Evving, 1964; Vorce, 1974; Calvert and Silver, 1975), the teacher has generally been given methods (Osberger *et al*., 1978) without any systematic showed training procedures (based on production of suprasegmenta! patterns) to be effective for the majority of children involved. The most recent trend in speech training for the hearing impaired stems from the exhaustive texts of (Ling, 1976; Ling *et al*., 1977; Oyebola, 1995; Owolavvi, 1999). The concepts of an interdisciplinary approach to speech training and adequate personnel preparation have been advocated in the literature (Ling *et al*., 1977). A hearing impaired child needs speech and language like normal hearing children for communication, self expression, learning, pleasure, broaden of ideas, socialization and understanding of the world (Oyebola, 2005).

MATERIALS AND METHODS

Twenty hearing-impaired Primary School Children were used in this study. The research involved the teaching staff and Speech Pathologists in the school. The children use "The communication approach" for communication. The teaching staffs were given a week in-service training program on how to improve the speech of the students. The said program includes:

- Lectures on theoretical information concerning speech and hearing e.g., phonetics, hearing aids, residual hearing, speech and interpretation of audiograms.
- Demonstrations and evaluations of skilled speech instruction with actual children, e.g., video taped demonstration.
- Self-instruction activities to improve listening skills needed to evaluate acceptable and unacceptable speech, e.g., video tapes, audio tapes and written language.
- Evaluation of teachers used by the writer, e.g. a week face-to-face interaction and written evaluations.

The duration of the project was 4 weeks. The staff and speech pathologists were given a week of in-service-training by the writer and the remaining 3 weeks were used for the actual therapy and assessment procedures. A time table was made for the program. A 20-40 min for individual child to receive speech tutoring twice a week by the speech pathologists was provided while instruction period in each day was designed as a speech period in which the classroom teachers would monitor speech activities and reinforce speech targets through phonetics and phonologic activities. In this event questions regarding the child's speech production or method of approach were encouraged. The early part of this study was carried out by the teachers and speech pathologists who administered the phonetic and phonologic examinations to establish initial targets for the children. These targets were then worked toward in a systematic fashion by classroom teachers during the speech period as well as speech pathologists during

speech tutoring sessions. Through observation and practice during in-service session, the classroom teacher was expected to become more skilled in administering the phonetic and phonologic examination and eventually take over some of these responsibilities. New more targets were introduced to the children and progressive evaluation was recorded. In addition, a daily check on hearing aids and speech detection by the teachers, via sound test was conducted before each session.

Procedure: In order to measure improvement gained as an effect of the study, a three part design used, pre-test, treatment and post-test phases. Only 20 children were involved, 12 males and 8 females were randomly selected from Deaf School in Ibadan. They belong to Primary 2. The age range of these children was 11-14 years with mean of 12 year. The frequency on pure tone average revealed a mean of 102 dB for the right ear and 105 dB for the left ear. Prior to beginning treatment, the phonetic level evaluation was administered to each child and re-administered after 4 weeks period following exposure to the treatment. Although, many of the children tested had targets selected from suprasegmental, step one, two and three vowels and consonants, it was decided that for the present preliminary study, only progress in the suprasegmentals, step one vowels and step one consonants would be examined. Each item of the tests was scored and recorded.

RESULT S AND DISCUSSION

Table 1 shows the mean, standard deviation and range of pre-test and post-test scores as well as age and three frequency pure-tone averages. A t-test for small sample was used to determine if any significant differences existed between the 2 tests. A score of 3.883 was required to make it significant at the 0.001 level of confidence. A score 10.07 reveals a significant difference ($p < 0.01$) between pre and post-test scores.

The single most important finding of this study is that speech improvement on phonetic-level was positively affected. These results are particularly interesting when the age of the population tested is considered. Older children are often given lower expectation levels with regard to speech improvement because many poor speech habits have already been reinforced through the years: It is acknowledged that the present examination does not compare results of pre and post phonologic examination, nor have phonetic level examinations been conducted over 4 week periods. Both of these shortcomings are attributed again to staff limitations at the time of the post-test. It should also be noted that the (minimal control) design used, limits the internal validity of the findings and a further investigation should be conducted. In addition to the findings already cited, periodic formative evaluations reveal the following observations:

Table 1: Mean, standard deviation and range for age, pre-test and post-tests scores (n = 20)

	Age	Right ear dB	Left ear dB	Pre-test	Post-test
Mean	12.00	102.65	105.75	195.95	193.1
Standard deviation	1.14	13.60	10.35	21.46	16.89
Range	5.00	52.00	42.00	93	63.00

- Children have shown excellent progress in moving through sub skills and in transferring the acquired skill into phonology.
- Teachers' competencies in listening skills and in total speech awareness have increased.

CONCLUSION

The study shows that the overall results have been positive with regard to children's speech improvement, teacher's attitudes and the enhancement of teachers' competencies in the area of speech instruction. Although most of the remedial procedures are in the process of learning techniques for teaching targets and establishing phonetic to phonologic transfer through the training. On the basis of the preceeding information, it can therefore be projected that more and more of these responsibilities will be placed in the hands of classroom teachers as time goes on.

It is also, assumed that a more thorough assessment of speech improvement through the use of this approach will be forthcoming. For the present, preliminary data and observation have indicated that this application has been very beneficial and is certainly a step toward a more systematized procedure for teaching speech to hearing-impaired children.

In addition, in contrast to the more traditional approach of teaching speech by the speech specialist, this study afforded teachers the opportunity to be totally aware of each child's speech capabilities and target and in effect gave him or her the ability to monitor speech production in all subject areas throughout the stay.

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