

ISSN 0189-7012

JOURNAL OF EDUCATIONAL MEDIA AND TECHNOLOGY

JEAMT



VOLUME 7, NUMBER 1, 1998

**JOURNAL OF NIGERIA ASSOCIATION FOR
EDUCATIONAL MEDIA AND TECHNOLOGY**

ALTERNATIVE MEDIUM FOR THE TEACHING OF DISORDERED PUPILS AT THE PRIMARY SCHOOL LEVEL

BY

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Abstract

This paper surveys pupils with speech disorders and the available instructional materials for their use in Uyo metropolis of Akwa Ibom State. Speech disorders identification interview schedule and materials identification questionnaire were the instruments developed and used to elicit responses from the subjects. The data collected were analysed using descriptive statistic of simple frequency count and percentages. The assessment records of the pupils under study were casually looked at to assess their performance in English language. The findings showed that 50.14% of the respondents are speech disordered children studying together with others. The study revealed further that the available instructional materials for the teaching of speech disordered pupils are basically, printed and graphical in format and does not appeal to all their senses. The paper proposed a new alternative medium, the synchronized audio-graphic materials for economy and effectiveness.

Introduction

Education is the bedrock of the development of any country. Primary education is the pivot of all levels of education and has to be built on solid foundation. Any problem at the primary school level has to be identified early and corrected otherwise it permeates other levels of education and constitutes problem in the country's educational system as well as in the individual pupil's life. It has been observed that speech permeates the day to day activities at all stages in life and at all levels of education. Consequently, disorder in speech will definitely affect teaching and learning. Speech is emphasized through oral work and other activities within and outside the classroom setting. It has been observed that there are children with speech disorders who learn along with others without speech problem in our regular school setting (Ikpaye, 1987).

A casual look at the second term examination assessment records of pupils from some primary schools in Uyo Metropolis revealed that majority of the primary school pupils with speech disorder failed in English language and oral work while those without speech problems tended to perform significantly better. Due to the large number of children in most classes, the teachers do not have the time nor do they have the training to give them special attention as they desired. It becomes imperative that a well designed instruction is necessary to take care of these children.

The uniqueness of all learners requires adequate and appropriate instructional input for effective

tive teaching - learning. Studies have revealed inadequate instructional materials for handling such children (Onasanya, 1991 and Asuqou, 1998). A systematic approach to instruction is here recommended in schools if every child is to be effectively and efficiently trained. Speech disordered children are therefore incapacitated and require the use of modern methodology in handling them academically. An example of such approach is the use of a multi-media approach that will engage them actively while giving appropriate motivational stimuli.

To acquire the high technology media like computer assisted media, television, video, radio among others will be too demanding for the primary school system. These high technology media are quite expensive and hard to come by, but the use of multi-instructional approach is recommendable. There is need to source for other alternative instructional materials that can compete favourably with these expensive ones. More often than not improvised instructional materials are not often produced by the teachers because of the monetary cost, time and energy involved. It becomes imperative to source for alternative low cost multi-instructional media which will be as effective as the high cost technology prescribed in the use of multi-media approach.

This study is adopting the multi-media approach of instruction as postulated by Briggs and Gagne (1974), consequently the need for innovative materials is also stressed by Heinich, Melanda and Russel (1982) stated that "Children need highly structured learning situations because they lack the necessary field of experience and that emphasis should be placed on visual and audio materials for instruction". Thus, learning resources should be adequately and appropriately used to solve learning disabilities and disorders in the learners especially at the primary level of education. his requirement necessitated the present work on alternative media for the teaching of speech disordered pupils at the primary school level.

Purpose of the Study

The purpose of this study is to identify speech disordered pupils in public primary schools in Uyo and assess instructional materials available for their instructional use.

The Concept of Speech Disorder in Teaching-Learning Situations

Literature abounds to prove that there are pupils with speech disorders in primary schools who learn along with others without speech problem. According to Ikpaye (1987).

There are children with speech disorders who learn along with others without disorder in a regular school system. Such children may not have deformity of physical, mental, visual, auditory and motor problems but may be slow learners (readers) with emphasis on speech problems such as voice, fluency and articulation disorders.

In another assertion, Foster (1982) stated that speech disorders permeate the regular school system especially in English language class. Bankson (1978) defined speech disorder as "disorders of articulation (speech sound production), Voice and Fluency (rhythm)" Perkins (1976) stated that our language is primarily an oral one, having been developed by people for talking to each other. Human beings have the unique gift of speech - a way of using our breath and muscles to make sound in very precise patterns. Other people hear these sound and interpret them as words. When we speak or read, we are simply using oral language in different forms. The process of speech is a remarkable one.

Teachers and specialists ought to be very familiar with the development of speech, identify disorders and correct such disorders at the primary level of education. No child conforms exactly to precise developmental norms, some advanced, some are delayed and some acquired language in an unusual sequence.

Speech disorder according to Van Riper (1972), is considered when it deviates greatly from the speech of other people such that it:

- (1) draws unfavourable attention to the speaker;
- (2) interferes with communication/speech or;
- (3) causes the speaker to be socially maladjusted.

It is important to be aware of the age, education and background of the speaker in deciding whether or not a problem is a 'speech disorder'. Children with speech disorders have difficulties in understanding others and in expressing themselves. Such a child may be unable to learn the new words and days of the week in proper order or may find it impossible to follow a sequence of commands such as:

Stand up, hands up, hands forward stretch, hands sideways stretch, hands backward stretch, and hands down. Children with speech disorders are likely to have social and learning problems in school (Asuquo, 1998). The problems may not be easily detected if one is not attentive but their performance in speech often reveals the disorders. Studies on speech disorder have been reported by many researchers, among them are Suran and Rizzo (1979), who suggested that approximately 5 per cent of school - age children in the United States have speech disorders severe enough to affect their education. This percentages (5%) represents a very large population compared to other categories of children who are considered handicapped. The 5% criterion would mean that between 2 and 3 million American children have speech disorders. This statement agrees with the American speech and Hearing Association which reported in 1961, the following types and percentages of disorders;

Articulation disorders	-	80%
Fluency disorders	-	7%
Language disorders	-	3-5%
Voice disorders	-	2%
Other disorders	-	5-6%

In Nigeria, this problem is more prevalent in public primary schools than elsewhere. However, differences in speech due to cultural background, ethnic affinity or dialects of a standard language should not be considered defectives because they are reflective of a linguistic community. It be noted that any foreign language or second language such as the English language used in Nigeria requires appropriate usage for correct and proper understanding for effective teaching and learning. This task is required of the teacher as a model to the learners. The children will follow the teacher's children to increase their vocabularies to give them a good command over their mother tongue. Children imitate their teachers through oral composition, conversation, message, dramatisation, picture talks and stories.

The Function of Speech in Teaching - Learning

Effective oral communication is an essential tool in teaching learning situations. According

to Ibe-Bassey (1992). "Effective Instruction which produces effective learning, to large extent, depends on the effective interaction and effective sharing of meaning between the teacher and the learners. Aristotle in the 18th century noted that the purpose of communication is persuasion and if learning must perform effectively, (that is learn), the teachers must persuade them to accept their instruction. Teachers therefore, are rhetoricians who must motivate learners to learn and pass the several standardized and public examinations for good placement at colleges, Universities and jobs. Social, political and economic stability which are indices of national development would be assured. The attainment of these goals depend on the provision of a machinery for effective, efficient and meaningful communication between the instructor (teacher) and the learners. Effective classroom communication has its roots in instruction, learning and curriculum. It encourages learners to actively participate in learning so as to increase the effectiveness of the teacher. The use of spoken words is more effective in any instructional process. The term oral or verbal expression elicits quicker response and spontaneous assessment of the learners than non-verbal expression. Speech made by both the teacher and learners must be clear, and understood by both the teacher and learners during evaluation or feedback and at any stage of instructional process. This ensures proper assessment and achievement of instructional goals and objectives. A teacher with commanding speech pattern is able to impact instructions with ease to learners and achieves the set goals and objectives. He acquires the skills and techniques of teaching and uses instructional materials appropriately at required stages during instructional processes. He is not just seen as "knowledgeable or information store house" but as a manager of the instructional system. Similarly, the learners taught by him are not seen as participates in the instruction but as achievers because "knowledgeable teacher produces knowledgeable learners". In this task, the learners do not just sit and listen, they take active part in the lessons and are given something to do which could be individually or in group to encourage them speak and express themselves. Human beings speak in sentences, therefore learners should be taught words and sentences. New words are introduced while special and difficult words are stressed. They should employ simple sentences that are short and clear to the understanding of the learners. Appropriate and adequate instructional materials are required as well as visual and audio materials including, picturers, charts, words and sentence cards, real objects, specimen and radio/cassette or tape recorded instruction. These should accompany the teachers' explanations, actions and demonstration for easy understanding of instructional at the primary school level.

Early teaching and learning of speech should strive for the following objectives:

- (1) to understand spoken English
- (2) to speak correctly
- (3) to read with understanding and fluency; and
- (4) to write intelligibly in English.

When teaching, the teacher should remember the importance of speaking first. Therefore, the first half of any English lesson should be oral (spoken). This stresses, the importance of speech, in early education. At the primary level, emphasis is an simple conversation, simple reading and simple writing as a result of a switch from the mother tongue, the foundation of teaching - learning lies here but such foundation is often inadequate because learners are exposed too early to the poor, non-standard language skills. Most of the teachers do not acquire the skill, adequate background and qualification to impact the specialized knowledge to the learners.

Adelusi (1984), asserted that the primary aim is to teach basic skills of listening, speaking, reading and writing. But there are problems of lack of qualified staff and adequate/relevant teaching materials. This situation could be blamed on the curriculum designers/developers, media designers/managers, teachers, government, and the society at large. The problem could be solved when educational problems are identified and appropriate measures applied to the teaching - learning situations.

Thus speech as a life wire of both the teacher and the learner and as a medium of conveying instruction and getting responses and feedback, requires mastery through the use of adequate and appropriate instructional materials. A solid foundation must be laid at the primary school level of education to enhance effective teaching- learning at other levels of education. The present study is an attempt in this direction.

Research Methodology

A descriptive survey design was adopted for the study.

Population and Sampling Technique

Purposive sampling techniques was employed to select relevant group for the study. The population consists of all speech disordered pupils in primary 4 in this sixteen public primary schools were randomly selected. All speech disordered pupils in primary 4 of the selected schools were randomly sampled and 120 speech disordered pupils were identified and selected, which constituted the sample for the study. At primary 4 level, children have properly articulated concepts in English language and any speech disorder is easily identified.

Instrumentation

The following instruments were used for the study, and a fixed alternative schedule of 'yes' and 'No' were used for the research instruments. A validated 12 items speech disorders identification interview schedule and checklist to record interview outcomes were designed to identify pupils with speech disorders. A validated materials identification questionnaire which had 8 items were designed for teachers to identify the available instructional materials. The class assessment record (second term examination result) was used casually to assessed the performance of speech disordered pupils in English Language.

Data Analysis Techniques

Data obtained from the study were analysed using the frequency distribution table of subjects responses to each of the questionnaire items in the 4 schools of study. A descriptive statistics of simple frequency count and percentages were used for the analysis.

The Results of Findings

Speech Disorder in Primary Schools:Types

The results provided by the analyses below proves that a good number of pupils in primary schools have speech disorder problems based on items 'A' to 'F' of each of the classes listed below.

A - SPELLING / ORAL EXPRESSION

- (a) difficulty in expressing ideas/wants
- (b) difficulty in using appropriate words

- (c) pupils using actions/gestures
- (d) problems in comprehending spoken English
- (e) problems with certain classes of words such as verb, tense and comparative degree.
- (f) problems of spelling simple words.

B - READING AND COMPREHENSION

- (a) difficult in understanding complex sentences
- (b) problems in making simple sentences/free speeches
- (c) problems in dictation
- (d) problems in discriminating letters and words
- (e) difficulty in reading
- (f) problems in comprehending what is read

Table 1: Percentage analysis of the pupils with speech disorders in Primary Schools in Uyo

Variables	Yes AF	%	No AF	%	Total AF	%
Spelling/Oral Expression						
A	90	75	30	25	120	100
B	31	25.83	89	74.17	120	100
C	4	3.33	116	96.67	120	100
D	90	66.67	40	33.33	120	100
E	120	100	24	20	120	100
F	96	80	24	20	120	100
Reading/Comprehension						
A	24	20	96	80	120	100
B	60	50	60	50	120	100
C	106	88.33	14	11.67	120	100
D	40	33.33	80	66.67	120	100
E	60	50	60	50	120	100
F	11	9.17	109	90.83	120	100
Average	50.14		49.86		100	

Available Instructional Materials

The second objective of this study was to assess the instructional materials currently in use for speech disordered pupils in primary schools in Uyo. In order to meet the objectives, available instructional materials currently in use were identified under the following:

- (a) Flashcards
- (b) Workbooks
- (e) Models
- (f) Charts

- (c) Pictures (g) Flannel Boards
(d) Basic textbooks (h) Drawings

The respondents were expected to choose the one which is most available for use. Percentage analysis was then performed on the actual frequency of the respondents as regards the above variables.

Table 2
Percentage analysis of available instructional materials currently in use for speech disordered pupils in primary schools.

Instructional Materials Currently in use for Speech Disordered Pupils	Number of Items available	Percentage of Items use available
(a) Flashcards	20	16.67
(b) Workbooks	12	10
(c) Pictures	18	15
(d) Basic textbooks	21	17.50
(e) Models	11	9.17
(f) Charts	18	15
(g) Flannel Boards	9	7.50
(h) Drawings	11	9.17
Total	120	100

A bar chart showing the available instructional materials for speech disordered pupils in primary schools.

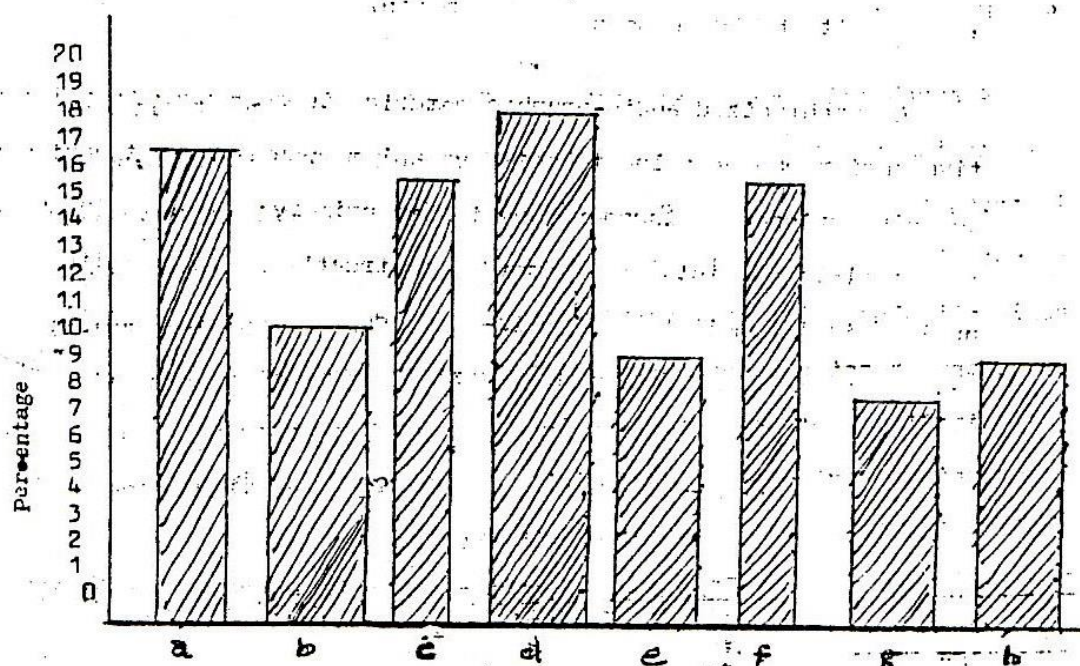


Figure 2 : Available Instructional Materials

Figure 2: Available Instructional Materials

The percentage analyses on table 2 and figure 2 revealed the available instructional materials currently in use for speech disordered pupils in primary schools in Uyo. Although these identified instructional materials are actually being used for teaching - learning of English language /oral speech in primary schools, these materials are not appropriate for handling speech disorders. Ibe-Bassey (1988) opined that instructional materials should appeal to the senses for learning within a given environment. These materials do not appeal to all senses for teaching-learning of speech disordered children. To meet the uniqueness of every child. Heinich, Melenda and Russel (1982) asserted that "Children need highly structured learning situations and that emphasis should be placed on visual and audio materials for effective teaching and learning.

A Proposed Alternative Medium

- (a) A description of the product
- (b) How it was designed
- (c) How it should be used
- (d) The advantages over existing media

A synchronized audio-graphic material is seen here an alternative medium and as a low technology medium proposed for teaching and learning of speech disordered pupils in primary schools. These set of materials consists of a recorded instruction in a cassette for audio stimulus while the graphic-box made of wood, electrical materials and transparencies or graphic materials are for visual presentation. A combination of these materials is what we referred to here as synchronized audio-graphic materials because both the visual and audio stimuli are presented simultaneously.

Design and production Process of Synochrozed audio-graphic materials

A-PARTS AND FIXTURES

- (1) Good quality timber framework planned to size
(length = 35cm)
(breadth = 30cm)
(width = 25cm)
- (2) Plywood board
- (3) Bulbs-6V-Direct Current
- (4) Electric control switches (16)
- (5) Power control switches (2) 'off' and 'on'
- (6) 1.5mm cable (socket) plug for connection of the materials to electricity through 220 V.AC. (Alternative current).
- (7) Flexible wire
- (8) Lamp holders/pilot lamps
- (9) Staple and hasp
- (10) Transparencies
- (11) Hinges
- (12) Plain glass sheet

- (13) Screw nails
- (14) Steel nails
- (15) Clips
- (16) Permanent marker
- (17) Rechargeable Battery (in case of power failure)
- (18) RECTIFIER
 - (a) Transformer (stepped down)
 - (b) Capacitors
 - (c) Diodes
 - (d) Power transistor, and
 - (e) Resistors
- (19) Radio for audio/Radio cabin
- (20) Cassette for recording instruction
- (21) Silver handle
- (22) Keyhole/key for security.

B - PRODUCTION PROCESS

1. Select good quality wood, cut to size according to specifications and plane down to size.
(Length = 35cm)
(Breadth = 30cm)
(Width = 25cm)
2. Select good quality ply board, cut to size, fox according to specifications:
(Length = 35cm)
(Breadth = 30cm)
(Width = 25cm)
3. Mark out positions for bulbs, switches, transparency for instruction (words and sentences) slots and fix/hasp or staple firmly and appropriately.
4. Bore holes and pilot holes to receive switches and lamp holders.
5. Fix all components securely down with screw nails or bolts and nuts.
6. Fix the bulbs and glass cover as last components
7. Apply good finishing by hand or machine spraying.
8. Fix key in the key-hole provided.
9. Fix the silver handle at the middle-top for lifting and holding the entire box for easy movement.

10. Use computer or permanent marker to write the instructions on the stencil (words and sentences) and slot it into the correct position.
11. Place the radio/cassette in its cabin for audio instruction.
12. Put on the switches as desired for visual and audio instruction and synchronized both the effective teaching and learning session.

This medium should be used as any electrical appliances.

Synchronized audio-graphic materials as an alternative medium of the high technology media like TV., Video has the following advantages over the available instructional materials currently in use for speech disordered pupils in primary schools:

1. It is locally developed using available resources.
2. Visual and audio instruction are presented simultaneously.
3. It could be use in urban and rural areas with electricity or chargeable battery respectively.
4. It does not consume time, energy, fund and not sophisticated.
5. It could be used at any point of instruction viz to introduce concepts in connection with voice, flency and articulation and could be used to summarize the entire instructional event.

Conclusion

The findings showed that 50.14% of the respondents are speech disordered children studying together with others (49.86%) without speech problem. Ikpaye (1987) and Foster (1982) confirmed that there are speech disordered pupils who learn along with others without disorders in a regular school system. This situation constitutes a learning problem which can peamenents the entires system. Findings on the available instructional materials revealed Basic textbooks of 17.50% as the most available instructional materials followed by flashcards of 16.67% while the least was flannel board with the percentage value of 7.50% . Ekpo (1988) asserted that for all instructional tasks there is no single big medium that is likely to perform magic. However, there are appropriate media to match learners' attitude and needs. These media should be assessed according to need, usage, function, application and purpose to which such media achieved. This statement advocated for a combination of media (visual and audio) for better performance. The available instructional media as assessed casually based on the performance of pupils on English language has revealed that pupils without speech disorders performed significantly better than the speech disordered pupils. Consequently, low technology media as an alternative medium which is both audio and visual is recommended for the teaching and learning of speech disordered pupils in primary schools.

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