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**TOPIC: THE IMPACT OF TOKENS REINFORCERS ON THE LEARNING OF
SPEECH IN THE SEVERELY MENTAL RETARDED PUPILS:**

**A CASE STUDY OF NEEMTREE BASIC SCHOOL, KABWE,
CENTRAL PROVINCE**

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ABSTRACT

Most severely mentally retarded pupils have speech disorders. This problem hinders them from performing like other pupils academically and socially. In certain cases it results into negligence by family members who find it difficult to communicate with them. Speech is very important for every person as it is a tool of communication, wherever, a person may be. This problem affects pupils both at school and at home and results in their isolation most of the time. Children with Special Education Needs are a common feature in most Zambian schools though the desegregated data was not available. The literature available on such pupils is not based on the local situation; it is based on other countries. In Zambia, children with severe mental retardation are affected in a similar way. Children with speech disorders find learning very difficult. This is because they are unable to put their views across to other pupils or the teacher. Communication is mostly one sided as they are able to understand what other people are saying but fail to make other people understand what they trying to put across. This limits their social interaction in that they are hindered from playing with their peers as well as participating in other activities in which their friends are participating. It is, therefore, incumbent on Special Education Teachers to find out ways in which such pupils can be helped to improve speech articulation so that they can interact with and function like other pupils.

1. INTRODUCTION

The Special Education Unit for the mentally retarded pupils at Neemtree Basic School was established in 1983. The aim for establishing this Unit was to provide specialised instruction based on pupils' individual needs. This aim is in line with government policy of 1977 which emphasises provision of special education services to children in a systematic manner. It was also established to ensure that these children, who previously were not catered for could receive quality education just like any other school-going children in Zambia.

Government policy on Special Education, which is in fact compatible with the International opinion (UN Standard Rules, 1993), encourages equalisation of opportunities for children with disabilities, including those with mental retardation. Equalisation of opportunities is a concept that centres on moral issues such as the principle of equal rights. The principle of equal rights implies that the needs of each and every child with mental retardation are of equal importance and that these rights must be taken into consideration in planning of educational needs of the child as this ensures that every child is given an equal opportunity to participate actively in the learning process.

Mentally retarded children need special education services in order for them to benefit from the provision of education, like other children do. Some mentally retarded pupils have speech disorders, apart from being slow learners. These children find learning very difficult. This is because they are unable to put their views across to other pupils or the teacher. Communication is mostly one sided as they are able to understand what other people are saying but fail to make other people understand what they are trying to put across. The disorder inhibits communication with both the teacher and other pupils resulting in such pupils being

inactive, isolated and under achieving. It hinders them from playing with their peers as well as participating in other activities in which their friends are participating. It limits their social interaction. They need to be helped to acquire speech so as to become part of the ordinary classroom.

From the findings of various researchers, mentally retarded pupils with speech disorders need a lot of attention from teachers and parents in order for them to perform like other children do in the area of speech articulation. They need to be assisted both in school and at home so that they can develop confidence to attempt the tasks they have been given.

In this paper a presentation is made how severely mentally retarded pupils can be motivated to learn speech and thereby improve learning outcomes as demonstrated in a case study carried out at Neemtree Special Education Unit.

2. GENERAL BACKGROUND AND LITERATURE REVIEW

3.1 Definition of Terms

Mental retardation: Sub average general intellectual functioning.

Impact: A strong effect of an activity on the behaviour of a pupil.

Speech: Production of sound for oral communication.

Learning: Process of acquiring knowledge.

Reinforcer: A system that increases a tendency either positively or negatively.

3.2 Definition and Impact of Mental Retardation

There have been numerous attempts to define mental retardation. The difficulty to come up with a universally accepted definition has arisen from the fact that mental retardation affects people from different disciplines such as social workers, medical workers and educationists. Each profession has ended up defining mental retardation according to the way it affects that profession. Reward and Orlansky (1980) stated that the critical importance of definition was noted as early as 1924 by Kuhlman, who recognised that definitions of mental deficiency can be used to decide the fate of thousands every year.

The way mental retardation is defined determines what special education services children may be eligible to receive. Many authorities have referred to mental retardation as sub average general intellectual functioning. Woods Michael (2008) states that mental retardation is a disorder in which a person's overall intellectual functioning is well below average, with an intelligent quotient (IQ) around 70 or less. Individuals with mental retardation also have a significantly impaired ability to cope with common life demands and lack some daily living expected of people in their age group and culture. The impairment may interfere with learning, communication, self care, independent living, social interaction, play, work and safety.

Levin, Melvin D (2008) states that children with mental retardation lack basic skills, known as adaptive skills, in at least two of the following areas, communication, self –care, home living, social skills, use of community resources, self–direction, health and safety, academics, leisure and work. Mental retardation becomes apparent in children before the age of 18.

Gearheart, et. al. (1984) considered mental retardation to be significant sub-average general intellectual functioning which is accompanied by deficits in adaptive behaviour and manifested during the developmental period. This has become the generally accepted definition and was first arrived at by the American Association on Mental Retardation (AAMR). According to Shear and Baur (1996: 351), "Mental retardation is fully defined only when adaptive functioning, including independent self-care behaviour, language development, self-direction and socialisation are considered". A very important aspect of this definition by the AAMR is that a person must be well below average in both measured intelligence and adaptive behaviour in order for him/her to be classified as mentally retarded.

Whereas at one time it was common practice to diagnose individuals as retarded solely on the basis of IQ below 85, today, they must have deficit behaviour and an IQ below 75 or 70. What is important is to distinguish between incidence and prevalence when determining how frequently mental retardation occurs as well as when considering other factors such as severity and age.

3.3 Classification

Mental retardation is classified according to the degree of disability. Myers (1918) classified it in the following way:

- Mildly mentally retarded - may learn academic skills; adults may with assistance achieve self-supporting social and vocational skills.
- Moderately mentally retarded - may progress to second grade level; adults may contribute to their own welfare by being in employment and finding their own shelter.
- Severely mentally retarded - may perform simple tasks under close supervision but are generally untrainable.
- Profoundly mentally retarded - require constant aid and supervision.

These last two categories are the worst affected and require a lot of attention and assistance from their families. The main essential features are significantly general sub average intellectual functioning resulting in, or associated with deficits or impairment in adaptive behaviour; with onset before the age of 18 years. (The American Psychiatric Association).

There are times when mental retardation is accompanied by speech disorders. This can be caused by failure or delay in speech development in the child during the developmental period.

3.4 The Importance of Speech

Speech is very important for every person as it is a tool of communication, wherever a person may be. It is production of sound for communication of oral language. Oral language is expression of messages by speaking as well as reception of messages by listening. Van Riper and Erickson (1996) state that a person with an articulation disorder is one who fails to master the speech sound of a language. Van Riper (in Doorlag 1987) believes that speech is

considered abnormal when it deviates so far from the speech of other people that it calls for attention to itself, interferes with communication or causes the speaker or his listener to be distressed.

Gearheart et. al. (1988) believes that speech and language are learned behaviour in lower animals and humans. Certain abilities need to be present for pupils to learn language and speech. The pupil must be able to hear, have normal or hear normal speech mechanisms. If his/her speech organs are not normal or near normal, he/she will be unable to articulate in a manner similar to others.

3.5 Speech Development in The Mentally Retarded

The development of language in a child gives a reflection of how language is constructed. Crystal (1987) states that language is a purely human and non-instinctive method of communicating ideas, emotions and desires by means of voluntarily produced symbols. It is acquired in stages and develops from simple to complex. The stage attained by one child may differ from that attained by another of the same age.

The rate at which mentally retarded children acquire speech differs from that of normal children. In a normal child, cooing, moving and sighing start around the age of six months. These are followed by babbling sounds that may contain some vowels and consonants. According to Heward and Orlansley (1998), the child may respond to loud and soft sounds or voices by moving his/her head and eyes in the direction of sound. The mentally retarded children, however, delay and may start to babble at nine months or later, (Crystal 1987).

Babbling utterances are not linguistic but are regarded as preparatory stages for speech development. They play a role in preparing articulatory, respiratory and phonological organs for speech production. Bangs (in Patton et al. 1987) states that some children do not develop receptive and/or expressive language by the age of three years, like the majority of children do. According to Patton et al (1987), these children need to be given direction instruction on how to make speech sounds and how to say words and to be given opportunities to hear and use language. The more severe the retardation, the more a child is likely to have speech problems.

In certain cases, mentally retarded children will not have developed speech by the time they are of school going age. Parents who are enlightened may take their children for speech therapy as early as possible while others may not do so.

Studies have shown that the most common speech disorders among pupils with mental retardation are articulation disorders or difficulty with production of sound. Mentally retarded pupils with speech disorders may experience problems with either speech, listening or both areas. This makes them fail to learn as their peers do. Elliot (1971) says if a pupil can not speak or clearly understand, he/she is deprived of human ability and it is important to make every effort to enable him/her possess this right. Such a pupil is unable to learn because almost all skills or knowledge are learned through language. Van Riper and Erickson (1996) state that every worker in the field of special education as well as speech Pathologists often encounter language problems. The type of neural dysfunction and degree of mental retardation greatly determine the type and degree of speech and language disorders.

Pupils with this problem are unable to learn like others. This is because they are unable to put their views across. This usually frustrates them. At the same time they fail to follow what

other people are saying. In order for one to learn, he/she must communicate with other people. This element of communication is absent in pupils with speech disorders, resulting in difficulties for them to learn.

When teaching speech to these pupils, it is important to select the approach carefully. Gearheart (1986) proposes that abstract concepts be utilised at elementary levels of spoken language. These include comparisons of size, spatial concepts, ordinal concepts and directional concepts. Some pupils may have difficulties in the correct usage of abstract concepts. In such a case, teachers should use concrete visual aids as much as possible. A variety of objects of different sizes may be compared. When the child begins to understand these concepts, this understanding should be transferred to a wide variety of objects and situations in the real world, (Gearheart 1986).

3.6 The Role of Motivation in Learning

In order for pupils to learn, they need to be motivated. This is very important in the case of mentally retarded pupils. Mentally retarded pupils usually get bored quickly and may decide not to continue learning. It is therefore important for the teacher to find ways of encouraging them to continue learning. This strategy should be used even more when teaching them things that they are not familiar with such as speech articulation to those with speech disorders. The teacher needs to find the most suitable method for the pupil to use in order to meet the set goals. The motivators will stimulate pupils to do what the teacher asks them to do so that they can be rewarded for the efforts they are making.

Motivation is the internal process which spurs someone to satisfy some need. Sometimes we may be fully aware of a particular need and may attempt to satisfy it by acting in a certain way (Child 1986).

There are two types of motivation. These are intrinsic and extrinsic motivation. Intrinsic motivation is the satisfaction one gets from doing something. Child (1986) says, the idea of exploration and play are rewarded simply by the pleasure they give and not by tangible things. This is usually useful for long-term rewards. Usually, when people appreciate something, it will be easy for them to repeat it voluntarily. However, there are certain times when it is necessary to apply external stimuli. The rewards that are given after a desirable action has been performed are extrinsic motivators. Research has shown that "if our efforts are rewarded with something we like to receive (positive reinforcement) we are likely to repeat our efforts, and thus habits are born" (Child 1986: 100).

Kirk and Gallagher (1986) state that most teachers handling disabled pupils use a token system to teach desirable social behaviour. Tokens are given out following a desirable social behaviour and withdrawn if undesirable behaviour is displayed. Research has shown that behaviour of pupils improves when tokens are used. Pupils look forward to getting the rewards that the teacher offers after they have displayed desired behaviour. It is, however, not always convenient to use tangible reinforcers immediately after a behaviour has been performed as that may disrupt lessons. Yule and Carr (1992) state that tokens are one form of generalised reinforcements. Tokens used may be stars, points and coins. These have no value for the individual but have come to be valued because they represent the possibility of obtaining that which is of value. The exchange of tokens for something else leads to reinforcement. Thus, tokens acquire reinforcing properties. Tokens are used for the same purpose as other reinforcers.

Halliday (in Gearheat 1986) lists some functions of oral language which may be helpful to the teacher for him/her to have a planning base for increasing motivation to use spoken language. The teacher needs to identify the most effective ways to encourage each individual pupil

to communicate orally. Gearheart (1986) states that if a teacher knows the motivators of oral language, it will be easy for him/her to find ways of encouraging individual pupils to utilise spoken language functions, this may be of great value in building intent to communicate (motivation).

3. CASE STUDY

3.1 Context

Most of the severely mentally retarded children in the Special Education Units at Neemtrees Basic School and Mwashii Basic School, in Kabwe have speech problem. When parents take their children to these Units, they expect to see a lot of improvement in the speech of the children. Even those whose children start school with completely no speech expect these schools to equip their children with some speech.

Since the inception of the Special Education Unit at Neemtrees Basic School, severely mentally retarded children have been taught by specialist teachers who are fully qualified in their profession. These teachers are fully aware of the need to provide enriching experiences to pupils, while using effective instructional procedures. Their expertise has enabled them to find ways of encouraging pupils to take part in class activities. It has made them become very patient and tolerant to an extent where each pupil is given individual attention. They prepare some words to teach these children to pronounce in class. They praise each pupil who succeeds in pronouncing a word correctly. However, there is need for effective means to encourage the learners to participate actively.

Despite these efforts, parents of these children and some concerned educators have been dissatisfied with the slow educational progress of these pupils. These people have continued to complain that the education being offered does not seem to benefit their children as expected. Therefore, for these pupils to improve their speech, teachers need to come up with various activities that will enable them practice speech frequently. Hence, the need for a study to establish how the teachers can become even more effective in teaching mentally retarded pupils with speech disorders.

3.2 Purpose of the Study

The research was conducted in order to bring out the importance of using token reinforcers in the teaching of speech articulation to the severely mentally retarded pupils. It was the researchers' hope that it would help teachers to realise the need to use tokens in their teaching as a way of motivating pupils to learn. In turn once teachers appreciated the use of tokens, they could also sensitise parents on how to use them at home so that both the school and the home would be jointly aiming at helping children to improve their speech.

3.3 Hypothesis

The use of token reinforcers can enhance the learning of speech in the severely mentally retarded pupils.

3.4 Sample Size and Sources of Information

The sample for this study comprised 8 respondents drawn from 3 pupils, 3 parents and 2 specialist teachers. This research was conducted on three severely mentally retarded pupils at Neemtree Basic School, Unit for children with Special Needs. The pupils were aged between 9 and 14 years and were all boys. The pupils' teachers were involved by virtue of their being in constant contact with the mentally retarded pupils at the school and their having been involved in helping the pupils develop speech. They also had custody of the pupils' files where all details concerning their disabilities were recorded. At the same time, they acted as intermediaries between the school and parents.

The parents of the three pupils with speech disorders were involved since they had been with the children throughout and knew the onset of the disability. They also had information on the efforts that had been made to try and help the children.

Table 1: Distribution of Respondents

S/NO	Type of Respondents	Number of Respondents
1	Parents	3
2	Special teachers	2
3	Pupils	3
4	TOTAL	8

3.1 Procedure Of Data Collection

The researchers used questionnaires which were distributed to the parents, a teachers' interview schedule and pupils' observation schedules. The questionnaire for parents had 13 items. This information gave a background of the pupils' problems. The teacher interview schedule had 6 items on which discussion with the two (2) teachers was based. The Pupils Observation Schedule provided a means to monitor how pupils were pronouncing the words that were presented to them.

During the second week, the researcher started teaching the class. One of the subjects she was teaching was English and so she took advantage and started teaching the pupils with speech disorders speech work. She used to give the other pupils some other activities to do while she taught speech to the 3 pupils with speech disorders.

3.2 Baseline Phase

The researcher began by pre-testing the pupils so as to find out how they responded and how ready they were to learn speech. The researcher presented pupils with twenty (20) sounds and words shown on the observation schedule below. She read through a sound and asked pupils to make the same sound in turns. Immediately afterwards the teacher read out the

word that had the sound pupils had just produced. For each word a pupil pronounced correctly, the researcher made a tick. She made a cross whenever a child pronounced a word wrongly or failed to pronounce it at all. This helped the researcher to obtain baseline data. The baseline was conducted in order to determine the speech level of pupils before the intervention. This was to serve as a base for comparison of performance before and after the intervention.

In each speech work lesson, only ten (10) words were dealt with. Each pupil was spared fifteen (15) minutes in which to pronounce the given words and sounds. This is because these pupils are slow learners and one needs to be patient with them. Sometimes pupils were reluctant to pronounce a word for fear of making mistakes. The researcher however encouraged them to try and pronounce them.

3.3 Intervention Phase

After establishing the level of performance of the pupils, the researcher decided to introduce token reinforcers. Reinforcers are usually used in behaviour modification. When teaching mentally retarded pupils, the use of tokens helps the teachers to achieve their objectives. This is because they serve as motivators. In this particular study, the researcher selected the token reinforcers with the corresponding social reinforcer shown in the table below.

Table 2: Token and Corresponding Social Reinforcers

NUMBER OF CORRECT RESPONSES	TOKENS	SOCIAL REINFORCER
1	Green star	Clapping
2	Red star	Praise and handshake
3	Silver star	Hugging
4	Gold star	Hugging and sweeping the floor
5	Happy face	Playing 'snakes and ladders' with the teacher.

These tokens were given at the end of the speech work lessons according to the number of correct responses they made on each particular day. They were exchanged for social reinforcers 30 minutes before knocking off time because some of these reinforcers needed time for them to be administered. The pupils were motivated.

During the 4th week of teaching these pupils, the researcher started using the tokens sparingly. She started by giving out tokens if pupils made three or four correct responses. She started concentrating on social reinforcers, especially praise, hugs and clapping. The pupils seemed to appreciate the social reinforcers and the researchers took advantage of this by making them replace tokens, and as a way of reducing dependency on tokens.

The pupils with good speech were not left out completely. Social reinforcers were extended to them as well to make them feel the researcher appreciated the efforts they were making in class.

In the 5th week, the researcher started using tokens once in a while. This was a way of motivating the pupils so that they could do their work since they did not know when tokens could be used. At that time, their speech had improved enough for one who was

patient to understand what they were saying. At the end, the researcher again recorded their performance. She read out the same sounds and later asked pupils to pronounce them. As pupils pronounced the words, she made a tick for those correctly pronounced and an 'X' for those wrongly pronounced.

3.4 **Limitations**

It was difficult to have a sizeable group of children with similar characteristics such as age sex and achievement level because the unit had only few pupils and all of them were boys.

When the researcher requested to hold interviews with the parents of the 3 pupils, 2 of them did not show up. This could be because some parents do not want to be associated with their disabled children.

Poor record - keeping denied the researcher a chance to access some valuable documents. Some of the confidential files were withheld from the researcher.

The research was undertaken at a time when there were limited funds due unavailability of sponsors.

4.0 PRESENTATION OF FINDINGS

The questionnaires administered to parents of pupils 1 and pupil 2 showed that their children did not seem to have any problems at birth. At the ages of 8 months and 1 year 2 months respectively the children suffered from severe malaria. They suffered from malaria at the time when one of them was at the babbling stage and the other one was at the telegraphic stage of language development. The illness resulted in their failure to cry at a certain point when they were very ill. However, they were able to do this when they got better although the parents noticed that they were unable to produce any other sound. One was taken to the University Teaching Hospital 3 times when he was 4 years old. However, nothing was done there. Instead, they were advised to take the child to Kamwala Special School.

The two (2) teachers that were interviewed indicated that the three (3) boys started school at different ages. One started at the age of 8 while the other 2 started at the age of 10. When they entered school, all of them had very poor speech, although one of them had almost no speech at all.

They said these pupils did not interact much with their classmates, except during their Physical Education lesson. Even when questions were asked, these children did not volunteer to answer them. They only did so after a lot of encouragement by the teachers. Each one of them usually sat alone in class.

The researcher observed the specialist teachers teach the pupils and was able to identify the pupils who had speech disorders. The teachers used to encourage pupils to improve their speech by making them pronounce given words a number of times. The effort made by the teacher did not seem to yield much fruit in certain cases because one pupil in particular, used to give up after 2 or 3 attempts and stop talking.

The teachers indicated that they had occasionally used token reinforcers to teach speech to pupils with speech disorders. However, they said most of the time they used methods that they felt were easier to use and less demanding.

They indicated that a pupil who is praised by the teacher makes more effort to do what will impress the teacher so that he can be praised again. These pupils enjoyed shopping with the teacher in town. So the teachers used to reward pupils who had performed very well by taking them to visit some shops in town. They had also been making efforts to help pupils with speech disorders improve their speech by giving them repetitive tasks in which there were targeted words for them to learn. They also involved them in discussions and conversations in order for each one to have an opportunity to talk. As they were talking the teachers would correct them whenever they mispronounced a word. They would help them with words they were not able to pronounce by teaching them how to pronounce such words.

During the time the researcher was conducting her research, what was evident was that use of tokens had a positive impact on the learning of speech in the severely mentally retarded pupils.

In the Pre-test observation (Baseline phase) pupil 1 was able to pronounce seven (7) words correctly. Pupil 2 was able to pronounce six (6) words correctly while pupil 3 was only able to pronounce four (4) words correctly out of the twenty (20) that they were given. This information revealed the level of pupils performance in speech. It was not so easy to encourage the pupils to learn speech articulation. As already stated above, there were times when one or two of them would not want to repeat the word as they claimed that they did not want to learn the same things.

Table 3: Pre-Test Observation Schedule

Sound	Word	Pupils Responses					
		Pupil 1		Pupil 2		Pupil 3	
		C	Inc	C	Inc	C	inc
i	Teeth		X		x		x
b	Book	√		√		√	
ɪ	Thing		X		x		x
æ	Man	√		√			x
u	Look	√			x		x
d	Dog	√		√		√	
s	Sing		X		x		x
o	Orange		X		x		x
s	Shoes		X		x		x
ts	Child		X		x		x
p	Push		X		x		x
k	Kick		X		x		x
h	Hand		X		x		x
e	Egg	√		√		√	
fr	From		X		x		x
g	Good	√		√			x
ʌ	Umbrella		X		x		x
w	Washing		X		x		x
z	Zoo	√		√		√	
i	Using		X		x		x
TOTAL		7	13	6	°14	4	16

Key. **C** represents correct responses

Inc represents incorrect responses.

It was found that tokens had a positive impact on the learning of speech in pupils in that they motivated them to participate in a number of speech activities. The more the teacher used them, the more pupils were motivated to learn. Each pupil started making efforts to pronounce the words correctly. At first there was little improvement. In fact, the pupils were reluctant to repeat the words they were being taught for fear of pronouncing them wrongly and having to say words more than once. They, however, developed some confidence after being

encouraged. When the teacher shook hands with pupils, they seemed happy. Praise and clapping also made them happy. However, they were overjoyed if they were given a token that gave them an opportunity to be hugged by the teacher. The pupils started to put up their hands to answer some questions in the other subjects as well. Unlike, in the past, the amount of shyness in them reduced resulting in their ability to participate fully in what other pupils were doing. Their speech improved and they were able to pronounce most of the given words correctly, although one of them, whose speech had been very bad still needed a lot of practice.

Furthermore, the more tokens were used the better the response from the pupils. It was also found that not all pupils responded to one type of tokens because different pupils preferred different tokens.

Towards the end of the lessons pupils did not want to learn. This was probably because after break they had to learn Activities for Daily Living, Art and Design or pre-vocational skills. Pupils were not keen on learning these subjects. A pupil who earned a happy face would have an opportunity to play 'Snakes and Ladders' with the researcher in the last twenty minutes. This proved very rewarding for two of the three pupils. The researcher however, noticed that one pupil enjoyed sweeping the floor very much and so when this pupil earned the happy face, he would be allowed to sweep the floor. This was very satisfying for him. He looked forward to a time when he would earn the token that would give him a chance to sweep the floor instead of learning Activities for Daily Living or Pre-Vocational Skills. The other two looked forward to the time when they would be able to play 'snakes and ladders' with the teacher.

In the post-test observation, pupil 1 pronounced fourteen (14) words correctly. Pupil 2 pronounced eleven (11) words correctly while pupil 3 pronounced seven (7) words correctly.

Table 4: Post-Test Observation Schedule

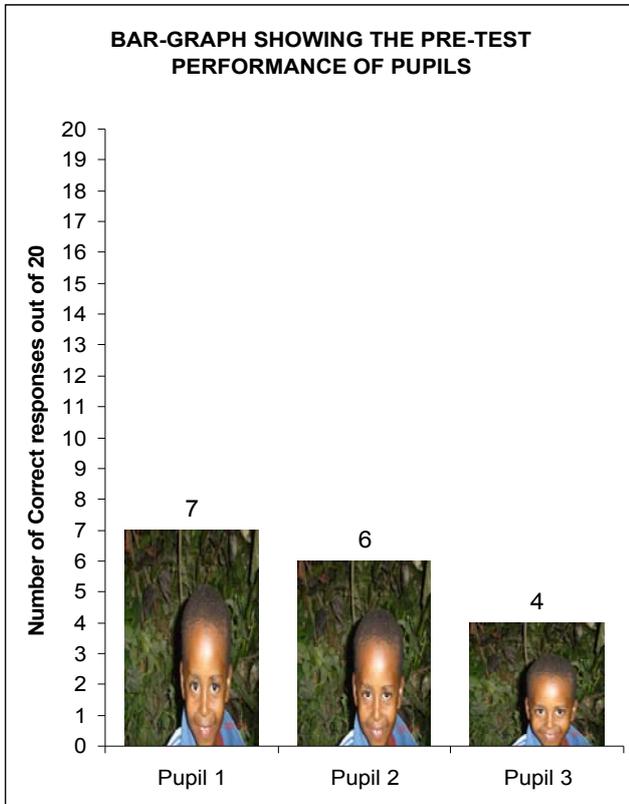
Sound	Word	Pupils Responses					
		Pupil 1		Pupil 2		Pupil 3	
		C	Inc	c	inc	C	inc
i	Teeth		x		x		x
b	Book	√		√		√	
θ	Thing		x		x		x
Æ	Man	√		√			x
u	Look	√		√		√	
d	Dog	√		√		√	
S	Sing		x		x		x
o	Orange	√		√			x
s	Shoes		x		X		x
Ts	Child	√			X		x
P	Push		x		X		x
K	Kick	√		√		√	
H	Hand	√			x		x
e	Egg	√		√		√	
fr	From	√		√			x
g	Good	√		√		√	
∫	Umbrella	√		√			x
w	Washing	√			x		x
z	Zoo	√		√		√	
i	Using		x		X		X
	Total	14	6	11	9	7	13

Key: C represents correct responses

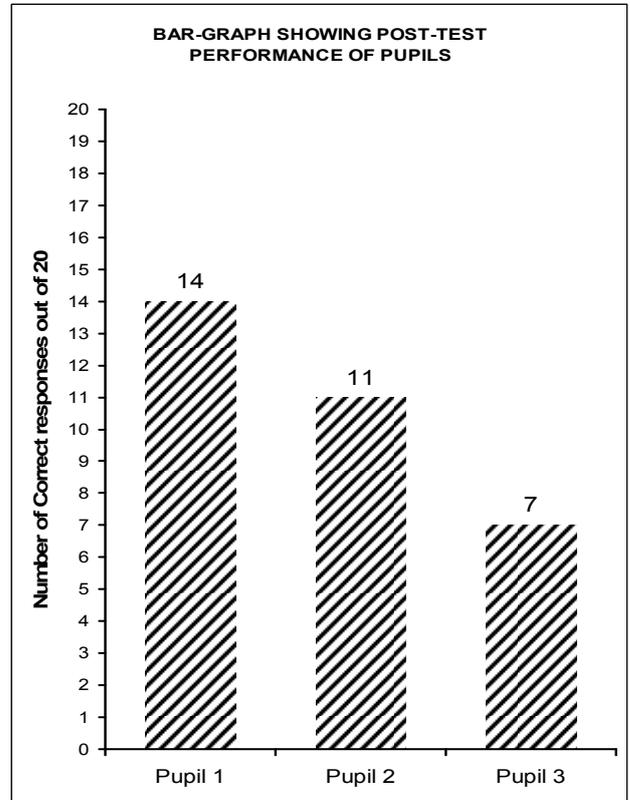
Inc represents incorrect responses

This shows that there was an improvement in speech production of these pupils facilitated by the use of tokens. These results and findings confirm Martin and Pear's (1996:27) statement that "if in a given situation, somebody does something that is followed immediately by positive reinforcers, then that person is more likely to do the same thing again when he or she next encounters a similar situation." The researcher, however observed that pupils had a

lot of difficulties in pronouncing words that had the /θ/, /s/ or /ts/ sounds. This was a result of their failure to distinguish between these sounds. Instead, they interchanged them.



Graph 1



Graph 2

5.0 RECOMMENDATIONS

It would appear from this study that tokens can be used to motivate mentally retarded pupils to learn. Teachers and parents can use them to initiate a positive response. Once it has been achieved learning is maintained. However, teachers should be cautious in administering and fading tokens. From the beginning, children should not be given tokens for every correct response they make so that they are able to respond even when they are not available. When introducing pupils to tokens, the teacher should train pupils on how to use them. The procedure involved should be explained so that they know how to exchange them for social reinforcers. Yule and Carr (1992) explain that a person should be given tokens if he understands their purpose. If he does not, he should first be given one and then, almost immediately, prompted to hand it back in exchange for his back up reinforcers. Appropriate tokens should be given and there must be variety to avoid monotony. Each time tokens are used pupils should be praised, hugged, given handshakes or clapped for, so that as they are faded, the social reinforcers accompanying them will continue to be used. These social reinforcers will, therefore, acquire reinforcing value. It is important that the people the pupils are living with also use praise and attention as reinforcers. When fading tokens the pupil should be informed that they will no longer be in use, instead social reinforcers will be used.

Clear records should be maintained when the tokens used are those to be pasted or drawn on a chart. They should be used for sometime and only faded gradually. This means that after sometime, they should be used sparingly not for every correct response but probably for three to start with and later for four correct responses so that pupils keep trying hard to make efforts in anticipation of

receiving them. As pupils start learning without being presented with tokens for every effort, the teacher may start fading them so that pupils would continue to learn without them.

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