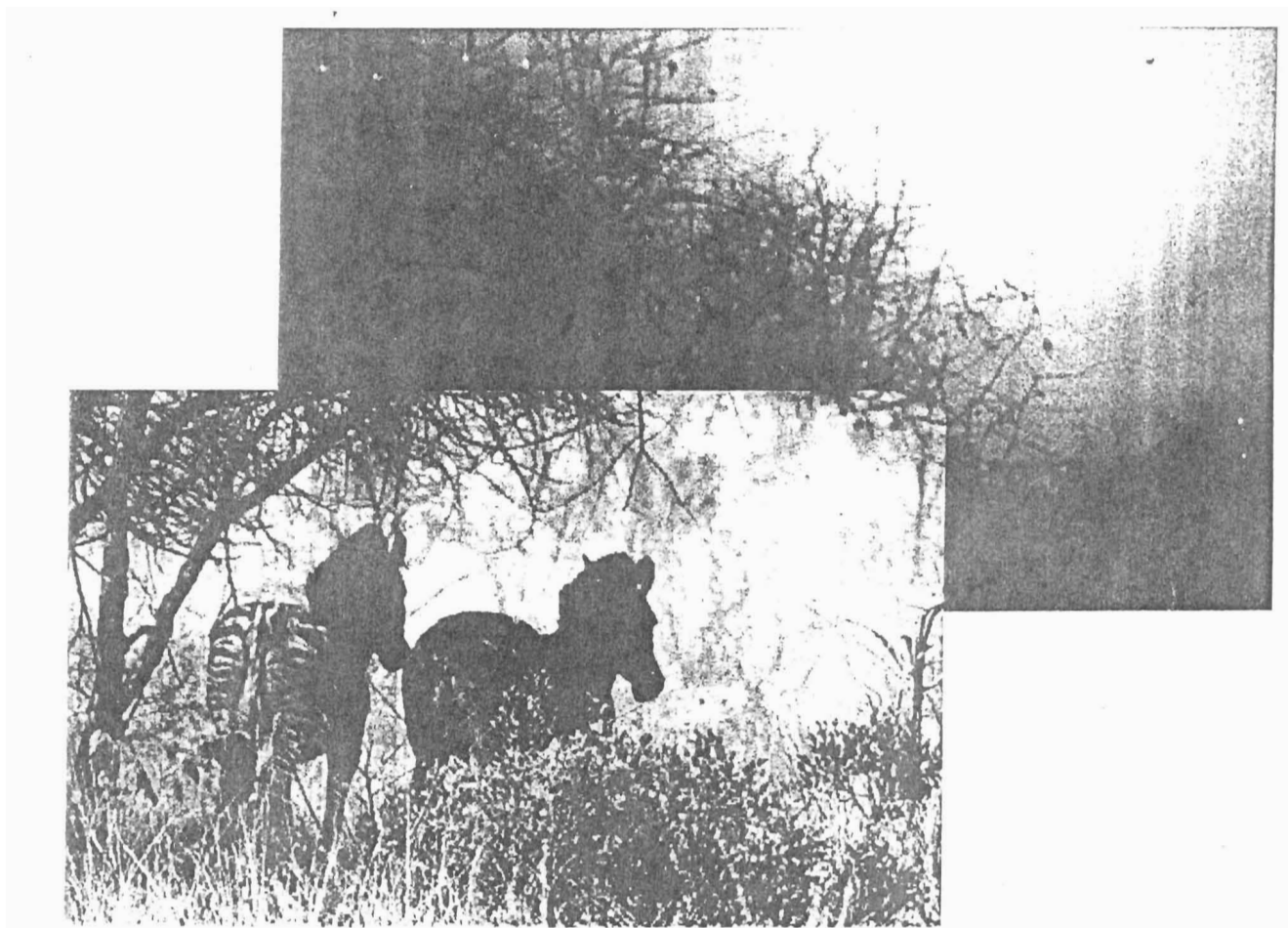


Visual Literacy And Development:

An African Experience



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Drawing And Cognitive Interpretative Abilities of South Western Nigeria Children Adeyanju 'Lade Joel Popoola Bayo.

Abstract

The study examined the effects that repetition of visual and verbal modes has on interpretative drawing abilities of 11–15 years old secondary school students in South Western Nigeria. Subjects of study were 60 male and 60 female non-art oriented students. Samples were randomly selected and stratified into two groups A and B. The experimental group viewed repetitive visual materials of folksongs from posters while the control group had oral presentation of the folklore. Descriptive statistics were used to analyse the data. Results showed that females were better in comprehensions while males out-performed the females in drawing.

Introduction

The Yoruba people live in the South Western Nigeria but they are also found in areas of Republic of Dahomey and Togo. With over 250 ethnic languages that are spoken in Nigeria, the English Language is a medium of communication in secondary schools. Since people have their own language, the power of interpretation requires deep understanding of the new language they have to use in school.

In order to ensure that ambiguity is reduced, the strategy of the use of teaching with some form of instructional materials becomes imperative for guiding learners. Some forms of pictorial materials and activities of singing have been found to facilitate teaching and learning.

However, a number of songs/folklore taught to the children often make little meaning to them initially. It is assumed that children can tell their own stories more in drawing than in the use of words. In conflict situations among the young learners, use of corporal punishment on erring students may not be effective always, rather, their energy could be redirected and channel through drawing of pictures. This may be a strategy of getting the youth positively engaged.

What Is Visual Literacy?

The Cambridge International Dictionary of English explains that visual implies seeing. (2002 p.1627) The picture, the film and maps brings about understanding and remembering of information. Literacy is therefore regarded as an extension of spoken language and therefore the ability to decipher visual symbols, sounds, signs, colour etc., reflect literacy.

At the UNESCO Conference of 1965 in Teheran; the idea of literacy was functionally defined as "selective and intensive literacy education that is tailored to a particular need." (Ntta 1997, p 36) Functional literacy combines the skills of reading, writing, and numeracy with social, technical, and occupational training unlike traditional literacy that is concerned only with reading, writing and numeracy.

According to Wittich and Schuller (1972) the need for visual literacy skills training become necessary if

learners would be able to develop abilities in perception of visual differences and similarities in group of pictures presented to them. It is felt that with pictures, ideas and emotion can be created; the pictures that are created by learners in form of drawing can encourage verbal skills that is mostly required for communication purpose.

Some other ways of looking at visual literacy includes having the capacity to read images successfully by transforming a piece of coloured canvas into a likeness of the visible world. Interpreting the world in terms of schemata that the nature has created or that which a creative child has made. It is conceived that the psychological aspects of image making and image reading is implied. When a child has developed the vocabulary of forms rather than knowledge of things, he/she may become a skilled learner with ability to interpret what is seen.

In the statement of Berkeley (1977), I quote;

"The world as we see it is a construct, slowly built up by everyone of us. in years of experimentation, our eyes bring about "sensations of colours" that our mind weaves into perceptions, the elements of our conscious picture of the world that is grounded on experience, on knowledge." (p. 251).

This paper operationally defines visual literacy as the ease with which a person is able to produce correct interpretation to things that are observed physically or are imagined. Hence, a person who is able to describe sufficiently, by making what is heard less abstractive is classified as being visually literate, provided he/she can put down in descriptive interpretative symbolic drawing, writing or scribbling form, the correct intention.

Basis For Using Drawing As Medium Of Expression And As Teaching And Learning Strategy.

1. Wilson (1971) put it that students don't have adequate vocabulary for expression, with a slight discomfort, this inability often leads to a show of aggression and conflicts may result. This is the experience in classrooms and in public places like motor packs, and motor bicycle parks in Nigeria.
2. Meanings are in people, therefore the use of words have different meanings to different people and it is the cultural background of people that determine the immediate interpretation of words (Lander 1965).
3. Research on use of pictures for influencing attitudes and behaviour generally has been reported in Samuel 1970. The researcher observed that the attitude to Negro was have been significantly improved when series of pictures were exposed on Negro life.
4. There are conditions put forward under which pictures can facilitate comprehension, one of which is relevance between the text and illustration. As conceived, a fully integrated pictorial material into the instructional system will improve comprehension.

Art teaching is supposed to concretize the child's way of expressing his thoughts, ideas and feelings (Ashton Warner, 1985) Even then, given any tool, the child would naturally make meaningless scribbles to express his thoughts. It has often been said that children draw what they know and not what they see. This may not be the case with older children of ages between 11 through 15 years old. The children under this age bracket are already matured and are in the concrete operation stage, of mental development between the age of 2 to 5 years, the child scribbles and when he/she attains the age of 5 - 7 years, he/she naturally draws symbols. The age 7 - 9 years is the schematic stage of the child's creativity and mental development when knowledge of perspective is yet to be understood by the child. (Harovithz, Lewis and Luca 1967 in Adeyanju 1996)

However, the 11 - 15 years old would draw what he sees rather than what he knows because of the experiences that he/she has gathered in the several attempts to make some representation. It is worthy to mention that it was only in the latter part of the 19th century that the art of the child became important to the philosophers, the sociologists, educationists and psychologists. It became important because from children drawing the child's thinking, intelligence and emotion became known (Schiffer and Veale 1993)

The Relevance of Art in the education of the child as a result has been summarised by Benjamin Franklin. That art is useful to all human being in that with the hand, man can draw, create, imitate, make prints and learn to see properly (1749).

Psychologists put it that children progress through systematic stages of thought organization as they interact with their environment. This explains why enhancement of the child's perceptual ability is seen to get improved when the child is in touch with pictorials, drawings and modeling and when the child gets involved in creating things that are self made. Since art is universal and the basic language of human, when used, the normal child is able to communicate with it (Cunningham 1978)

Through drawing, it is observed that children can let out their pent-up feelings. Betty Edwards (2000) observed that the use of the right side of the brain concerns itself with spatial relational and holistic view that the schools have neglected. Rather than allow the child to utilize only the left side portion of the brain that only handles verbal logical and symbolic hemisphere, a balance between the use of the left and right hemisphere will enable learners to learn with ease especially with visual materials in form of drawings made by the child himself. Drawing allows the child to provide more information for the teacher, given the opportunity to express his/her ideas. Piaget's contribution is important in this respect.

Piaget's Stages Of Development

Piaget submits that children pass through systematic stages of thought organization in order to progress in their cognitive development. (Piaget in Diggory, 1972)

The theory of cognitive development states the four stages, they are:

1. Sensorimotor stage, 2. Pre Operational stage; 3. Concrete Operational and 4. Formal Operational Stage.

The Sensori motor stage describes the child's involvement in the use of motor memories, also refers as (Action images) At the pre-operational stage marked by age 2 - 7 years, the child is 'egoistic' and finds it difficult to accept others view point. The concrete operational stage falls between age 7 - 11 years. At the preoperational stage, the child will perform specific operations a little less than at the child undergoing the formal stage since he/she is expected to be more mature. At the formal operational stage, he/she have mastery of the 'rules' and concepts of space, size and can draw. The formal operational stage coincides with that of visual realism.

The concern of this study is the formal operational stage when children can think in abstract terms, follow logical proposition, reason by hypothesis isolate elements of a problem and systematically explore all

possible solutions. It is also realized that cognitive ability varies because of differences in innate intelligence, cultural background and the milieu under which the individual child is growing.

Piaget has stressed the need to assist the learner develop reasoning skill found useful in understanding of the sciences. (Nordland, 1974, Lawson, 1975, Allele Williams, 1987). The child can thus be assisted to learn by actively listening to folksongs and by making him/her interpret his or her understanding.

Bruner (1975) describes the child's representational abilities in terms of the developmental process of enactive, iconic and symbolic stages.

Enactive process describes how the child would represent his world through action in his/her attempt to scribble. The ionic stage describes the child's attempts to form images using signs and symbols that he/she can recall freely from imagination. Iconic stage is similar to the schematic stage of the child's creativity and mental development (Ajayi, Dopemu, 1984, Lowenfeld and Brittain 1975)

At the symbolic stage, the child is mature, he/she has mastery of the rule of drawings symbolism is the highest level of abstraction that the child achieves in his/her representation of experience. At this stage the child can name objects fairly more accurately as he/she can reason in logical terms.

Researchers have carried out investigations on effects of visuals/pictorial material, audio and repetition of visuals and audio materials on learners' performance

Benedict (1988) investigated the effects of locally recorded films and imported films on learners' psychomotor ability. Eighty-fourth year secondary school students were subjects of study. Participants were stratified into groups of 20 males and 20 females. A measure of drawing, painting and modeling abilities was made. Result showed that the group that watched locally recorded videos performed significantly better than those who viewed imported video. The study confirms the importance of home made materials to the local environment as strategy of learning.

Dopemu (1984), stressed further on the importance of teachers' use of instructional materials that portray African themes. Findings of the authors showed that learner were able to relate more easily to materials from their local environment. They also found that learners' interest was motivated because the materials used were learner culture based.

In Dwyer's (1967) investigation on pictorial representation of line drawing shaded drawing and photographic effect on cognitive and drawing ability. Results should that effect detail of photographs decreased learning. compared to learning produces by drawings and that drawing test led to higher scores.

Rump and Southgate (1978) researched to teacher and learner preferred pictures as strategy for teaching. Results showed that while secondary school learners preferred brightly coloured familiar subjects in a representational style teachers in contrast preferred a wider variety of types of art that could broaden students' aesthetic experience.

From observations made on representational drawing, it can be put that constant drawing would enable learner to extract critical visual information cues from figure such that distracting background becomes less problematic to the child. The research of Shaver (1975) is on verbal and visual presentations to 96 seventh grades art student's ability to identify artist's painting style. Results showed that those exposed to visual perceptual set identified correctly the artists painting styles, more than those who were exposed to verbal set. Some important findings have been documented on pictorial and oral narratives.

Levin (1976) Ruch and Levin (1977) exposed first graders to repetition of visual materials and found that simple repetition appears to improve performance and that repetition of pictures did facilitate it. Levin, Bender and Lesgold, (1976) research on retarded children found that picture repetition improved performance of the age groups of 9 years, and 12.5 years through 15 years old children. It was, however, reported that verbal repetition alone did not bring about improvement in performance of retarded children.

In Guttman's (1977) study of picture and oral narratives, 80 percent of questions were responded to by children when pictures accompanied narratives. In contrast, only 57 percent correct response was found for no picture control combination. From the above, it seems that the use of pictures increases understanding of concepts.

The research findings of Arnold and Dwyer 1975, 1972 and Goldberg, 1974, Weisberg, 1970, indicated that provision of learner with relevant pictures before or during a learning session generally facilitates science learning. Songs and folklore in teaching have not been investigated because this strategy of teaching is not yet popular in Nigerian schools.

However, Offorma, (1991), Egbugara and Iroegbu (1989) etc., in their various research found songs to be useful intellectual stimulus; that songs extended learners imagination increased power of learners imagination and they also found that songs served as enrichment. Arising from the different positions taken by the various researchers on the influence that pictorial and oral presentations have on learners' performance in schools, the present study investigated the drawing ability of 11-15 years old South Western Nigeria secondary school students. The strategy of

repetition of poster and repetition of folklore (song) were used in the study.

Purpose

The purpose of the study was to determine the extent to which repetitions of a poster and oral presentation of folklore (song) would increase cognitive and drawing ability of learners.

Subject

Subject for this study were (60 males and 60 females) with a mean age of ± 13 years ($SD + 3.60$) who attended secondary schools in an urban- centre in Ile-Ife. Subjects were randomly selected from Junior Secondary School, (J.S.S 1-3).

Instruments:

The instruments for the study comprise an illustrated descriptive poster (A4 size) wash drawing that the researcher prepared and used as stimulus material. The poster illustrates a popular Nigerian National Anthem titled: "Arise O Compatriot, Nigeria Calls Obey". Only the first stanza of the folksong was used as cognitive test. A second instrument was a ten question multiple choice test. It was used as a measure of performance of subjects' comprehension ability.

Procedure

Subjects were selected into two groups (A) Experimental and (B) Control groups after a pre test of their cognitive and drawing ability was taken. The researcher taught each group using the conventional method and then treated each of the group with relevant design strategy. Group A, i.e., experimental group was treated to repetition of enrichment of poster illustration five times. During the teaching period of 35 minutes only 3 minutes was used to expose the poster to group A. The subjects in group B received oral presentation of folklore (song) whereby a repetition of the song was made five times during the teaching time of 35 minutes. After all treatments of each group were completed, a post test was administered using the pretest questions

to test subject's cognitive comprehension and drawing abilities.

Allotment Of Marks For Drawing And Comprehension:

The score of drawing performance was based on 10 points. One mark was score for ability to interpret correctly the folksong in drawing terms. Use of correct symbols either on schematic form or implied line that reflected correct intention of the learner was given a mark. The total number of marks obtainable for the drawing was 10; the maximum score being 09 and the minimum 1 mark. There are 10 multiple choice questions with options a, b, c, and d. They were used to measure learner's comprehension ability.

Data Analysis

Data was analysed using quantitative and qualitative measure for the drawing test, while descriptive statistics of mean score and standard deviation was also used where applicable for the drawing and comprehension tests.

The Research questions that guided the study are:

1. Will the experimental group that received the enrichment treatment of poster repetition perform better in drawing compared to the control group that did not receive the enrichment of poster?
2. Will the experimental group that received the repetition enrichment treatment of poster perform better on the (cognitive) comprehension test compare to the control group that did not?
3. Will boys perform better than girls on drawing test?
4. Will girls perform better than boys on (cognitive) comprehension test?

Figure 1

N = 60

	Pre Test			Post Test		
	Score	\bar{x}	SD	Score	\bar{x}	SD
Male	242	4.03	2.00	371	6.18	2.49
Female	203	3.38	1.84	256	4.27	2.07

Drawing Experimental Group Score On The Drawing Task

N=60

	Score	\bar{x}	SD	Score	\bar{x}	SD
Male	230	3.38	1.84	268	4.47	2.11
Female	286	4.77	2.18	333	5.55	2.36

N=60

Experimental Group Score On The Comprehension Task

	Drawing	Pre Test			Post Test		
		Score	\bar{x}	SD	Score	\bar{x}	SD
Male	234	3.9	1.97	267	4.37	2.09	
Female	226	3.77	1.94	248	4.13	2.03	

Control Group Score On Drawing Task

N60	Comprehension	Pre Test			Post Test		
		Score	\bar{x}	SD	Score	\bar{x}	SD
Male	238	3.97	1.92	262	4.37	2.09	
Female	286	4.77	2.18	280	4.67	2.16	

Control Group Score On Comprehension Task

Fig. 1 presents the score of the experimental group. Male subjects out performed the female subjects in drawing. The male have mean score 4.03, female 3.38 in the pre test. The pos-test score also shows that male with mean 6.18 was higher than female with mean 4.27 in the drawing score.

The comprehension pre-test score proves that female were better. Female have mean, 4.77 while the male counterpart have mean score of 3.38. The Post-test score of female in comprehension score was higher still with mean of 5.55 SD 2.36. Male counterparts score with a lower, mean was 4.47, SD 2.11. The fig.

2, presents the drawing exercise of the control group. In both the pre and post tests score, males out performed the females in drawing. Male mean score was 3.9 as against female mean of 3.77 (pre test score). The post test mean score of male in drawing is 4.37, SD 2.09 as against the female with mean of 4.13, SD, 2.03. The score in drawing are relatively close for the control group. However, the comprehension score of female was higher in both the pre and post tests. Female mean was 4.47, SD 2.18 as against that of male with a mean score of 3.97, SD 1.92. Female mean on post test was higher still with 4.67, SD 2.16

Figure 3 Male Drawing

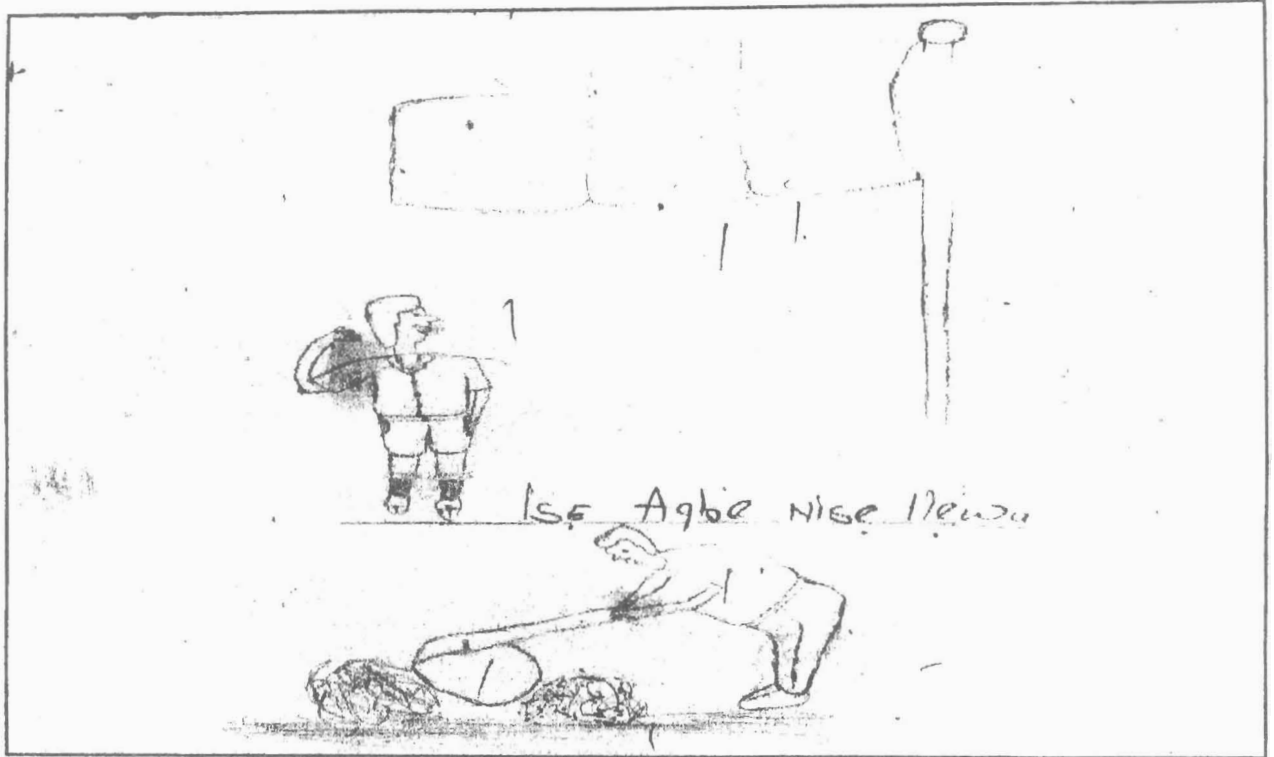
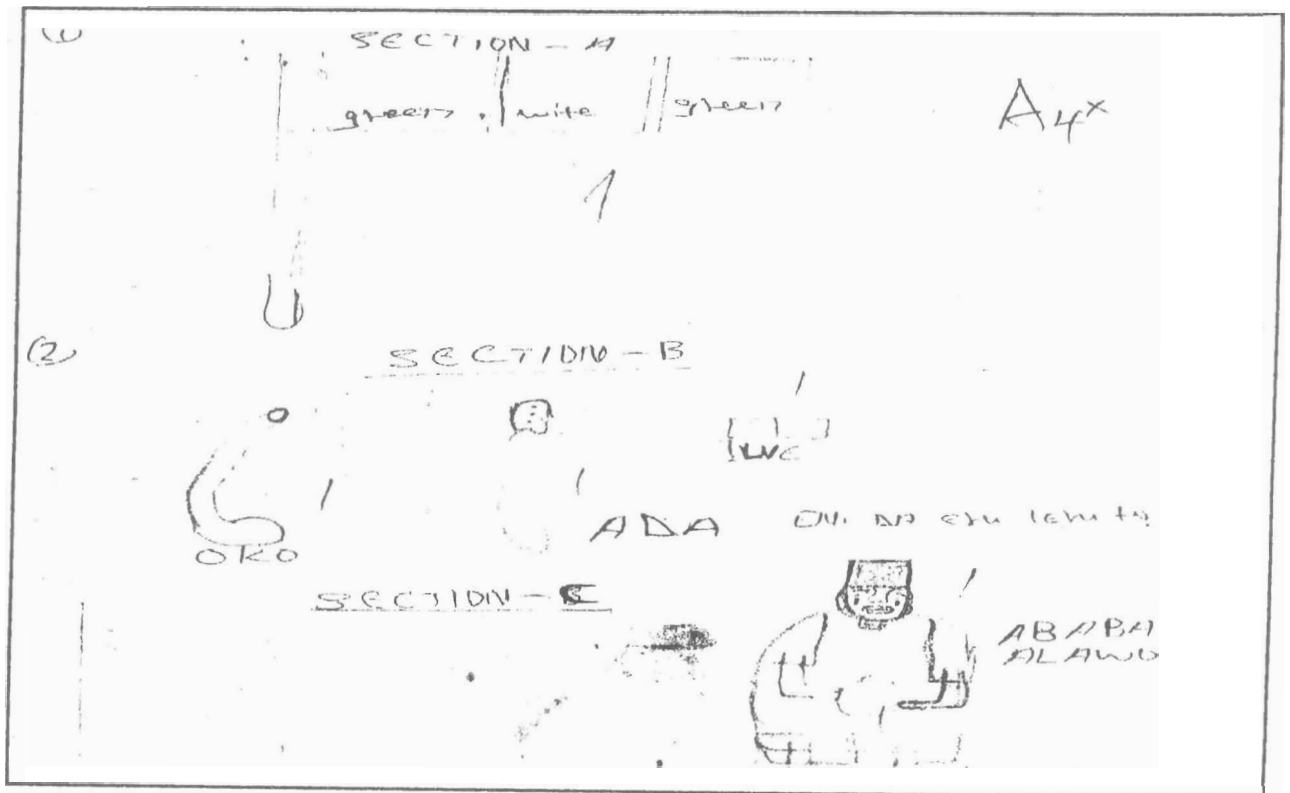


Figure 4 Female Drawing



Discussion Of Findings

The research questions on pictorial repetition showed that the experimental group performed slightly better than the control group in both drawing and comprehension exercises.

This finding supports the position of Levin, Bender and Lesgold (1976), Also Guttman (1977), Wittich and Schuller, (1972) in whose work it was found that repetition of pictures increased learners performance.

As regards boys performance on drawing, result showed that boys drawing ability was higher than those of girls in both the experimental and control groups. The post test mean score for Boys was 6.18, *SD* 2.49 for the experimental as against the mean score that the girls obtained which was .27, *SD* 2.07. Boys therefore performed better than girls in the drawing task. The comprehension performance of girls was however better than those of boys irrespective of type of treatment given. The Post test mean score of 5.55; *SD* 2.36 for girls is higher than the \bar{x} of 4.47 for boys, *SD* 2.11, as indicated in the figure 1. These results shows that girls were better at comprehension, but boys expressed the self better in drawing.

The research questions 1 and 2, on enrichment group that was treated to pictures produced better results in terms of the drawing and comprehension tasks. The research questions 3 and 4 were also found tenable. Boys were better in drawing while girls beat the boys in the comprehension tests..

Could it be that the folksongs used was more appealing to the girls than boys? Result of girls' performance in comprehension tend to support the positions of Orffoma, (1991) and Egbugara (1989) as well as Iroegbu's study of learners disposition to folksongs and enrichment of their performance.

Conclusion:

It is often said that girls acquire language skills earlier than boys, and that girls have more vocabulary for expressing thoughts. The outcome of this developmental study has found that girls performed better in comprehension task than boys.

The boys however, performed better in drawing because of they produced more relevant and accurate illustration of the folksongs in symbolic representation form. The question that arose from this investigation asks whether girls will continue to excel in language acquisition, if so when will the boys excel in language use, and when will the girls begin to express thoughts in drawing forms?

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