

**EFFECTS OF DIGITAL VIDEO DISK INSTRUCTIONAL PACKAGE ON  
THE ACHIEVEMENT OF PUPILS IN SOCIAL STUDIES IN FEDERAL  
UNIVERSITY OF TECHNOLOGY STAFF SCHOOL, MINNA, NIGER  
STATE**

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**Abstract**

*The study examined the effect of digital video disk instruction on the achievement of pupils in Social Studies in Federal University of Technology Staff School, Minna. The research employed the pretest - posttest experimental - control group design, One hundred primary five pupils of Federal University of Technology Staff School, Minna were randomly selected and used for the study. The pupils were randomly assigned into two groups; the experimental group and the control group. The experimental group was taught using digital video disk while the control group was taught without digital video disk. Before teaching, both groups were pretested. The instrument used was a 50 - item Social Studies Achievement Test (SSAT). The multiple - choice objective set of questions was designed and validated for data collection, after six weeks of teaching, a posttest was administered to the two groups. The data collected was analysed using statistical measures such as mean, standard deviation and t-test. The findings indicated that the use of instructional package in the teaching of Social Studies significantly improved the performance of pupils in the subject. There was a significant difference in the performance of boys and girls taught the subject with digital video disk instructional package. The implications of the findings for the teaching of Social Studies were discussed and recommendations made.*

**Introduction**

Social Studies is mostly taught in primary schools in Nigeria. Although, it has recently been introduced at the Junior Secondary level. It is a subject that provides background knowledge and exposure for pupils to draw upon in secondary schools, particularly when they make selection of

subjects. Ogunyemi (2000) is of the view that Social Studies as a subject in the Junior Secondary School curriculum enables students to appreciate the dignity of man, create in them the willingness to accept necessary change within a system of law and order deriving from the will of the people and develop students' power of imagination and resourcefulness.

Lee (1994) defined the subject as the study that deals with mankind's social, economic and political behaviour at any place they live or had lived in the past. The emphasis in this definition is on behavioural patterns of man. Yet, it is obvious that the scope of the subject is wide and not limited to behavioural patterns of mankind alone. According to Dubey and Barth (1998), Social Studies is a set of goals that describes how citizenship education content can be selected, organized and taught. What this definition suggests is that Social Studies has different interpretations, which gives it a complex outlook. Yet, one popular solution to the problem of defining the subject has been the creation of words that are used by all Social Studies teachers.

It has also been observed by some Social Studies teachers that major problems accompanied curriculum innovation includes lack of clarity of meaning of the subject and non-familiarity of the teacher who teach the subject with the philosophy of the subject. Also, there are no adequate instructional materials and facilities to effectively teach the subject. Despite the fact that the National Policy on Education (2004) sets out the national objectives for all levels of education in Nigeria, these objectives have not been able to serve as a foundation for curriculum development for Social Studies and other subjects. Perhaps, more disturbing is the fact that many of the teachers of the subject are yet to be fully trained on the mode and operation of the instructional technology adopted for teaching the subject in schools. Also, noteworthy is the fact that most of the books available on the subject were written by foreign authors with illustrations that are very strange to our environment. Dubey and Barth (1998) present; a similar view:

"Many teachers in Junior Secondary Schools in Nigeria complain strongly about the lack of adequate training of teachers on the use of visual instructional materials" to teach social studies in both primary and secondary schools.

There is no doubt that these are valid complaints. Social Studies programme was implemented in Nigeria prior to the availability of sufficient learning materials though it is part of the problem in other subject areas too. The study carried out by Tukura (2001) revealed that teachers depend solely on their experience and ingenuity in their choice of instructional material and selection of classroom activities in the face of the dearth or non-availability of the instructional materials for teaching the subject. This is no doubt that none

use of instructional material produces less than appreciable result in pupils' performance in the subject like Social Studies.

The attitude of pupils to the subject is also not encouraging. In a study conducted by Adeniyi (1996) on the attitude of pupils toward Social Studies in Ilorin Local Government Area of Kwara State; he found that in addition to the fact that most of the pupils involved in the research demonstrated negative attitude to the subject, male pupils were the least impressed with the way the subject is being taught. Therefore, if pupils hold negative attitude towards Social Studies, it is relatively difficult to lead them towards the attainment of desirable objectives through the subject. The use of digital video disk instructional media has been found to increase the rate of learning by providing worthwhile experiences for learners. Mereni (2000), posits that instructional media does not only excite pupils' imagination and trigger off discussions, but also ensure effectiveness of teaching and learning by concretizing ideas and engendering creativity. It is not certain, the extent this digital video disk could enhance students achievement in Social Studies, hence the need for this study.

This study is, therefore, aimed at determining the effects of the use of digital video disk instruction on the achievement of pupils in Social Studies.

#### Purpose of the Study

The study was undertaken to determine the effects of the use of digital video disk instructional package on the achievement of pupils in Social Studies in Federal University of Technology staff School, Minna.

#### Research Questions

The following questions were asked to guide the study:

1. What are the mean achievement scores of pupils taught Social Studies with digital video disk those taught without it?
2. What are the mean achievement scores of male and female pupils taught Social Studies with digital video disk?

#### Hypotheses

The following hypotheses were formulated in the null form and tested at the 0.05 significant level.

H<sub>01</sub> There is no significant difference in the pretest mean achievement scores of pupils in the experimental and control groups.

H<sub>02</sub> There is no significant difference in the mean achievement scores of pupils taught Social Studies with digital video disk instructional package and those taught without it.

HO<sub>3</sub>: There is no significant difference in the mean achievement scores of male and female pupils taught Social Studies with digital video disk instructional package.

**Research Method**

**Design:** The design adopted for the purpose of data collection was the pretest-posttest- experimental-control group design.

**Sample:** The sample for this study was made up of 100 pupils (50 boys and 50 girls) randomly selected (using a hat - draw method) from three primary five classes in Federal University of Technology Staff School, Minna, Group A was assigned the experimental group while Group B the control group ..

**Instrumentation and procedure:** The instrument for study was developed by the researchers. It was made up of a 50 - item objective test covering four topics in primary five curriculum. The topics were: Our Culture, Family System, Means of Transportation in Nigeria and Our Resources (Physical and Human). The topics were chosen because they are very fundamental to the study of Social Studies at the primary school level. The test questions were validated before use by two seasoned educationists from Niger State College of Education, Minna.

A pilot test was conducted using the Federal Staff School, Minna. It was carried out with a view to refining the test items and ascertaining general reliability of the instrument. The total number of pupils in the pilot testing was 30 (15 males and 15 females). The school selected was not the same as the one used for the study.

The reliability coefficient of the research instrument was calculated using Pearson Product Correlation Co-efficient. The researcher used the test-retest approach with a gap of two weeks between the test-retest administered. Analysis of the test data yielded reliability coefficient of 0.97. The facility index for the instrument (SSA T) was calculated using the formula:

$$P=R/T$$

Where P = facility index

R = total number of candidates that responded correctly  
T = total number of candidates that attempted the item.

The facility index for (SSA T) items fell between 30 and 70% which was the recommended range for use (Furst, 2000).

The final fifty items met the requirement of facility and discrimination indices as proposed by Furst (2000) were administered to the control and experimental groups before the commencement of the study. The researchers administered the test after the two groups had been taught for

two weeks. During this period, four concepts were taught for a period of seven hours (25 minutes, x 2 periods, for six weeks). The test was distributed to the pupils with the help of a teacher from the school. Forty minutes were allocated to do the test. The timing was based on the pilot test earlier carried out. The scores from the tests given to the experimental and control groups were collated and subjected to data analysis. The results were analysed using Analysis of Co-variance (ANCOVA)

**Results and Discussion**

HO<sub>1</sub>: There is no significant difference in the pretest mean achievement scores of pupils in the experimental and control groups.

Table 4.1. T-Test Result for the pretest of Experimental and Control Groups

| Group               | N        | d      | Mean<br>x    | Standard<br>Deviation<br>(SD) | t-Value<br>Calculate<br>d | t-<br>Value<br>critical | Remar<br>ks            |
|---------------------|----------|--------|--------------|-------------------------------|---------------------------|-------------------------|------------------------|
| Experime<br>Control | 50<br>50 | 9<br>8 | 9.85<br>10.7 | 3.000<br>2.581                | 1.33 ns                   | 1.68                    | not<br>signific<br>ant |

ns = not significant at the 0.051 level

Table 4. 1 revealed the pretest statistical analysis on the pretest scores. The analysis revealed that there was no significant difference in the pretest mean achievement scores of experimental and control groups. The mean score for the experimental group was 9.85 while that of the control group was 10.17. The standard deviation for the experimental group was 3.000 while that of the control group was 2.581. The pretest scores showed that the calculated t-value of 1.33 was less than the critical t-value of 1.68, showing that there was no significant difference between the two groups. Hypothesis 1 is therefore, accepted. This means that the pupils in the experimental and control groups were at the same entry level with regard to the pretest mean achievement scores.

This shows that the pupils are comparable.

HO<sub>2</sub>: There is no significant difference in the mean achievement scores of pupils taught Social Studies with digital video disk package and those taught without the use of digital video disk.

Table 4.2. T-Test Result of Experimental and Control Groups on the Posttest

| Group    | N  | d<br>f | Mean<br>-<br>X | Standard<br>Deviation<br>(SD) | t-Value<br>Calculate<br>d | t-<br>Value<br>critical | Remar<br>ks     |
|----------|----|--------|----------------|-------------------------------|---------------------------|-------------------------|-----------------|
| Experime | 50 | 9<br>8 | 27.38          | 7.189                         | 10.33                     | 1.68                    | signific<br>ant |
| Control  | 50 |        | 38.00          | 4.026                         |                           |                         |                 |

\*significant at the 0.051level

The posttest statistical analysis on Table 4.2 showed that there is significant difference in the posttest mean achievement scores for the experimental and control groups. The mean score for the experimental group was 27.38 while that of the control group was 38.00. The standard deviation for the experimental group was 7.189 while that of control group was 4.026. The t-value (critical) of 1.68 indicating that there is a significant difference between the two groups. The experimental group taught with videotape package therefore, performed significantly better than the control group taught without the use of digital video disk and the research hypothesis 2, is therefore, rejected. There is therefore, a significant difference in the mean achievement scores of the group taught using digital video disk and the group taught without the use of digital video disk.

HO<sub>3</sub>: There is no significant difference in the mean achievement scores of male and female pupils taught Social Studies with digital video disk.

Table 4.3: t-Test Result of Experimental Male and Experimental Female Subjects.

| Group    | N  | d<br>f | Mean<br>-<br>X | Standar<br>d<br>Deviation<br>(SD) | t-Value<br>Calculate<br>d | t-<br>Value<br>critical | Remark<br>s     |
|----------|----|--------|----------------|-----------------------------------|---------------------------|-------------------------|-----------------|
| Experime | 25 | 4<br>8 | 15.32          | 1.886                             | 9.83*                     | 1.68                    | significa<br>nt |
| Control  | 25 |        | 9.85           | 3.000                             |                           |                         |                 |

\*significant at the 0.05 level

Table 4.3 showed the t-test results for experimental male and female subjects. The mean achievement scores for male was 15.32 while that of

female was 9.85 the standard deviation for male was 1.886 while that of female was 3.000. The t-value (calculated) of 9.83 was greater than the t-value (critical) of 1.68, indicating that there is a significant difference between the two groups.

Findings from the result shown in tables 4.2 and 4.3 indicated that the use of the digital video disk instruction could bring about significant improvement in the achievement of pupils in Social Studies. The pupils in the experimental group performed significantly better than the pupils in the control group. The result of the test also showed that males performed significantly better than female pupils. The low performance of girls in the subject could be attributed to the fact that girl child education is neglected. Girls are hardly encouraged to further their studies, but rather are expected to assist their parents at home. These roles could affect their performance in schools.

According to Okubunka (2001), lack of encouragement by parents and the bundles of stereotyped ideas on women's roles negatively affect their performance in schools. Ndidi (2002) and Bolanle (2000) also agreed with this observation. The results of Nwafor (2002) support the findings that the use of digital video disk significantly enhanced the performance of pupils in Social Studies.

### Summary of the Findings

The results of the study revealed that exposure of the pupils to digital video disk instruction improved their performance in Social Studies. The result from the study showed also that male students performed better than the female students taught Social Studies using digital video disk. By implications, pupils would perform better in the subject if digital video disk instruction is introduced in primary schools.

There is significant difference in the performance of male and female. Male students performed better than female students.

### Conclusion

In conclusion therefore, poor performance in Social Studies will drastically reduce if school authority can provide digital video disk for the students to improve teaching and learning setting.

### Recommendation

From the findings of the study, the following recommendations were made:

1. Digital video disk and other instructional materials should be used by teachers in primary and secondary schools to teach Social Studies. This would make the teaching and learning process more effective, meaningful and interesting.

2. Efforts should be made through research to find out other relevant roles which digital video disk could play towards improving the performance of pupils in Social Studies.
3. Workshops, seminars and in-service training programmes for the preparation of primary and secondary school teachers should emphasise the use of or application of instructional materials in schools.

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