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Radio Listening, Television Viewing and Comprehension Development in Senior Secondary School Students in Jos Metropolis

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Abstract

Reading comprehension is the basic foundation for functional literacy and scholastic achievement. However, most school children spend a great deal of their time watching television or listening to radio than in reading. The research effort was thus; set out to investigate the effects of television and radio programmes to the development of comprehension levels in secondary school students. The study revealed that exposure to both programmes of television and radio had negative impact on the development of higher levels comprehension, while positively affecting the lower levels. Ways of developing critical comprehension in relation to both media types in reading classes and out of school activities are suggested

Background and Objectives

There has been a general outcry and concern by parents and school authorities on the pervasive use of television and radio by Nigerian youths and children. The concern is justified by the outright dearth of reading culture (except for examinations and tests) among them. Furthermore, the recurrent poor academic performance of most students in their studies and the lack of consensus on the cause of this poor performance spurred the need for this research effort. In undertaking this research, the study investigated the effects of the television and radio on the levels of reading comprehension in secondary school students in Jos Metropolis. It specifically, determined the effects of television and radio on secondary school students' reading comprehension abilities at the literal, inferential and analytical levels.

Research Question and Hypotheses

One research question and three hypotheses were posed to guide and resolve the problems of the study.

Research Question

1. Which level of comprehension do the television and radio enhance in secondary school students?

Hypotheses

1. There is no significant difference between the post-test achievement mean scores of Secondary School Students who were exposed to programmes of television and radio and the control group in reading comprehension levels.
2. There is no significant difference between the pre-test and post - test achievement mean scores of students exposed to radio programmes only and the control group in reading comprehension levels.
3. There is no significant difference between the pre-test and post - test achievement mean scores of students exposed to television programmes only and the control group in reading comprehension levels.

Literature

Literature indicate that there are basically three main views concerning the influence or lack of influence of television viewing on children's reading skills, namely: the facilitation hypothesis, the inhibition hypothesis and the no-effect hypothesis.

Facilitation Hypothesis

Researchers of this hypothesis posit that the television facilitates the child's acquisition of reading skills in two ways: the promotion of book reading and the promotion and emergence of on screen reading. Hamilton (1975), Splaine (1978), Bryant, Alexander and Brown (1985) posit that television encourage and promote the reading of books when movies broadcast have a book version by drawing attention to published material. They explain that television bring about additional reading practice both on the screen or materials related to the movie and ultimately further developing children's reading skills.

Inhibition Hypothesis

Researchers posit that the television inhibit reading development in children through displacement, passivity, hemispheral specialisation and concentration disorder. Gaddy (1986), Corteen and Williams(1986) and Hornick(1981) note that the television may impair the growth of reading skills by displacing out-of -school activities, which otherwise might facilitate the development of reading skills. They also observe that if television indeed take time that otherwise would have been spent on reading, then the continual reading practice needed to ensure the development of reading fluency might suffer.

Passivity Hypothesis

Postman (1982) in highlighting the passivity process to inhibit reading argues that watching television induces children to become mentally lazy. His hypothesis is based on two assumptions, which are:

1. That children process information from television programmes more or less automatically without investing much mental effort.
2. That children's knowledge of what is required to process television is not transferred for processing print.

Hemispherical Specialization Hypothesis

Zuckerman, Singer and Singer 1980; & Winn, 1985 submit that the inhibition of reading in this hypothesis is based on the fact that the right brain hemisphere is over-stimulated by high doses of television viewing causing the slow functioning of the left brain hemisphere, which is usually dominating, to be reduced or eliminated. This hypothesis put the processing of television information at par with the processing of visual images.

Concentration-deterioration hypothesis

The suggestion is made here that television viewing usually weaken the child's ability to concentrate. Singer and Singer (1979) and Greenfield (1984) for example, opined that television and particularly its rapid-fire-exposition may cause children's power of concentrating to deteriorate. Beentjes and Van Der Voort (1988) also note that there are indications that television viewing shortens the time children are willing to spend in finding answers to intellectual problems, particularly if such problem requires much thought using analysis, synthesis and evaluation.

No-effect hypothesis

What this hypothesis offers is an explanation why research presumably did not succeed in finding a relation between television viewing and a child's reading skills. Two reasons are given:

1. In 1980, Neuman had argued that there is a possibility that researchers have been unable to locate the effects that are there.
2. Hornick (1981) acknowledges that television does influence reading skills but through mechanisms such as social class and quality of school instruction that are working at cross-purposes.

Comprehension Ability/Levels

Discussing comprehension as it concerns the television and radio requires the review of literature on the concepts of listening and reading as the television and radio audience would require both skills to fully comprehend or understand programmes in order to appreciate them. Scholars in listening such as James (1977) and Mathew (1978) and scholars in reading such as Davis (1968) and Miller (1977) note the following skills as common to both listening and reading comprehension. They are: active participation;

identification of obvious, factual or main information; recognising the relationships of ideas and concepts; analysing and synthesising information and are both cognitive processes that manifest in the stated skills in a given interaction.

To determine efficient comprehension, especially that of reading, scholars divides the reading activity into levels, since it is perceived as a logical organisation of those components that make up the reading activity. Vacca and Vacca's (1989) three-level comprehension was used for this study. These are literal, interpretive and the applied levels of comprehension. The literal level is where readers identify obvious, factual or main information; while the interpretive or inferential level is where they perceive relationships that exist in the identified information, conceptualising the ideas formulated by those relationships as the author presents them, so that readers are better equipped to make inferences that are implicitly or explicitly implied in the materials. At the applied or analytical level, readers read beyond the lines using information to express opinions and form new ideas. Thus, most, if not all, readers operate at one or all of these levels when they are engaged in a reading activity. Vacca and Vacca's (1989) level of comprehension, thought in reading, was used for determining the levels of students' comprehension ability during exposure to the electronic media because of its easier compartmentalisation of the levels of understanding.

Methods and Procedure

Design, Population, Sample and Sampling Technique

The study used the survey- quasi experimental research design. 400 senior secondary one (SS1) students were randomly selected from 4 secondary schools in Jos metropolis. The schools were purposively selected on the bases of either being government- owned or privately-owned on the one hand, and either day or boarding on the other hand. There were two types in each of the categories.

Instruments and procedure for Data Collection

Two major instruments for sourcing of data were used to secure the relevant information needed for the study; the questionnaire and the Pre-test Post-test Control Group Design. The questionnaire techniques were used to solicit

and obtain data from respondents about accessibility of students to the electronic media, programme and language preferences of students, time spent in watching and listening to these programmes. In order to verify and ascertain the effects of the programmes and time spent with the electronic media on students' comprehension ability or levels and the enhancement of either spoken or written expression two types of English language tests were constructed. The Cronbach-Alpha and Test Retest methods were used to test reliability of instruments. Programmes from the television and the radio were dubbed on both audio and videocassettes to which students were exposed. The dubbing in advance was to allow for the construction of test items and to test the reliability and validity of questions that were constructed.

A paired randomised matching of the students to both control and experimental groups was undertaken using their classification into below average, average and above average categories, from their JSS3 examination records. The research groups for each school were divided into three experimental groups and one control group, with 25 students in each group. The pre-test was administered after which exposure to programmes of the electronic media commenced. The exposure lasted for eight weeks and the post test administered.

Results and Discussions

Research question 1 was answered using the mean and standard deviation as indicated in the table below.

Table 1: Mean and standard deviation of levels of comprehension of radio only, TV only and Radio and TV groups

Type of expression	Media Group	n	X	SD
Listening Comprehension	Radio only	100	3.41	1.32
	TV only	100	3.72	1.32
	Mix	100	3.27	1.36
Inferential Comprehension	Radio only	100	0.91	0.82

	TV only	100	1.05	0.83
	Mix	100	0.93	0.83
Inferential Comprehension	Radio only	100	0.48	0.68
	TV only	100	0.49	0.70
	Mix	100	1.27	1.16

The TV and Radio enhance the literal comprehension more than the inferential and the analytical comprehension, since the mean of the literal comprehension is greater than those of inferential and analytical in all the media types and the standard deviation also greatest at the same level of comprehension.

Hypothesis 1 was tested using the One-Way Analysis of Variance as in table 2.

Table 2: Result of the One-Way ANOVA for Differences in the Post-Test Achievement Mean Scores of the Radio Only, TV Only, Both TV and Radio Only Groups and the Control Group in the Three Levels of Comprehension

Language	Source of	Sum of	df	Means of	F cal	F crit.
Skill and type	variation	squares		squares	value	
Literal Comprehension	Between Groups	51.012	3	17.004	10.19	.000
	Within Groups	660.689	396	1.668		
	Total	711.694	399			
Inferential Comprehension	Between Groups	76.235	3	25.412	31.68	.000
	Within Groups	317.625	396	.802		
	Total	393.860	399			
Analysis Comprehension	Between Groups	121.987	3	40.662	59.88	.000
	Within Groups	268.887	396	.679		
	Total	390.874	399			

Note: P = 0.05

The F critical of the post-test mean scores of the four groups of students in literal, inferential and analytical levels of comprehension were significantly different with value for the three levels of comprehension (.000 for all levels) is less than the p value of .05. Therefore, the null hypothesis (Ho) is rejected, while the alternative hypothesis is accepted. The alternative hypothesis states that there is a significant difference between the post-test achievement mean scores of secondary school students of the TV only, radio only, TV and radio groups and the control group in the literal, inferential and analytical comprehension

Hypothesis 2 was tested using the t-Test statistic for related sample as indicated in the table below.

Result of t-Test for Differences Between Pre-Test and Post-Test Achievement Mean Scores of Secondary Schools Students in Radio Programmes Only and Those in the Control Group.

Test	Group	n	X	SD	t cal	df	t crit. value
Pre-test Literal Comprehension	Radio Only	100	4.33	1.19	0.38	198	.702
	Control Group	100	4.27	1.22	-		
Post-test Literal Comprehension	Radio Only	100	3.11	1.27	-	198	.378
	Control Group	100	4.20	1.21	4.50		
Pre-test inferential Comprehension	Radio Only	100	2.18	1.50	0.38	198	.702
	Control Group	100	2.10	1.09	-		
Post-test Inferential Comprehension	Radio Only	100	0.90	0.81	-	198	.000
	Control Group	100	1.96	1.08	7.78		
Pre-test Analytical Comprehension	Radio Only	100	2.28	1.61	2.34	198	.020
	Control Group	100	1.80	1.20	-		
Post-test Analytical Comprehension	Radio Only	100	.48	.70	-	198	.000
	Control Group	100	1.77	1.15	9.62		
Pre-test Total	Radio Only	100	20.71	4.95	2.07	198	.060
	Control Group	100	19.15	5.65	-		
Post-test Total	Radio Only	100	15.35	4.42	-	198	.000
	Control Group	100	19.12	5.34	5.42		

P = 0.05

At both the pre-test and post-test literal levels of comprehension there was no significant difference in the achievement mean scores with values of .702 and .378 respectively. For the pre-test and post-test inferential levels of comprehension, there was a significant difference at the post-test with .000

value, while the pre-test had no significance with value of .702. The pre-test analytical comprehension had no significance, with value of .020, while the post-test had significance, with .000 value. The t critical value for the post-test total achievement mean score has a value of .000 against the pre-test total value of .060 indicating significance, therefore, the null hypothesis is rejected.

Hypothesis 3 was tested using the t-Test statistic for related sample as indicated in the table below.

Result of t-Test for Difference Between Pre-Test and Post-Test Achievement Mean Scores of TV Only Students and Those in Control Group

Test	Group	n	\bar{X}	SD	t cal	df	t crit. value
Pre-test Literal	TV Only	100	4.30	1.26	.141	198	.887
Comprehension	Control Group	100	4.30	1.21			
Post-test Literal	TV Only	100	3.72	1.31	-2.65	198	.009
Comprehension	Control Group	100	4.19	1.20			
Pre-test inferential	TV Only	100	2.01	1.16	0.13	198	.901
Comprehension	Control Group	100	2.10	1.09			
Post-test Inferential	TV Only	100	1.05	0.82	-6.68	198	.000
Comprehension	Control Group	100	1.96	1.08			
Pre-test Analytical	TV Only	100	1.83	1.22	0.17	198	.861
Comprehension	Control Group	100	1.80	1.18			
Post-test Analytical	TV Only	100	0.49	0.69	-9.46	198	.000
Comprehension	Control Group	100	1.77	1.15			
Pre-test Total	TV Only	100	16.5	5.36	-198	.591	
	Control Group	100	19.12	5.34	3.44		
Post-test Total	TV Only	100	16.51	5.36	-	198	.001
	Control Group	100	19.12	3.34	3.44		

Note: P = 0.05

The pre-test literal comprehension had a value of .887, while a value of .002 for post-test was significant. The pre-test inferential level had a value of .901, while the post-test inferential level had a value of .001 showing a significant difference at the post-test. The pre-test analytical comprehension also had a value of .861, while the post-test analytical was significant, with a value of .000. The t critical for the pre-test total of .591 was not significant but the t critical of .001 for the post-test total was significant. This means that the Ho hypothesis is rejected for the post-test total for all levels of comprehension.

Discussion

Analyses indicated that there was significant differences between the post-test achievements mean scores of senior secondary school students in the experimental groups and the control group at the three levels of comprehension. These differences showed that students performed poorly at the inferential and analytical levels of comprehension after being exposed to programmes of the radio only, TV only and both TV and radio. This analysis was also backed by the answer to research question two which shared the same pattern. This finding is supported by the research and findings of those who support the inhibition hypothesis. This hypothesis holds the view that television inhibits children's reading skills and inhibition could occur by the displacement and the concentration-deterioration processes.

The idea of displacement process was supported by the researches of Gaddy (1986), Corteen and Williams (1986), Brown, Cramond and Wilde (1974). This process explains that television impairs the growth of reading skills by displacing out-of-school activities that otherwise might facilitate the development of reading skills. The concentration-deterioration process suggested by Singer and Singer (1979), and Greenfield (1984) opine that the speed at which information is released by the television deteriorates the child's power of concentration and usually shorten the time children are willing to spend in tackling intellectual problems, especially such problems that require much thought using analysis, synthesis and evaluation.

Recommendations

Media education should be introduced into the curriculum of English language teacher training programmes, as this will better equip teachers in handling the incorporation of media programmes into the secondary school English language curriculum.

Television and radio programmes should be integrated into the English language lessons for teaching both listening and reading comprehension using the following approaches as examples. Students should have exercises of making written versions of television and radio programmes, such as lyrics of songs, documentaries, news, and dramas or soap operas. After reproducing the oral into written forms, students should then use them for reading comprehension. In addition, students should be asked to

correct wrong English language features (usage) found in both programmes of television and radio as classroom exercises.

Broadcast stations should include certified and English language and education experts in the planning, development, presentation, monitoring and evaluation of their programmes to help the youth maximize the learning experiences from such programmes. In addition, parents and guardians should not only monitor the programmes that children watch, but also correct any wrong usage of English language that the children may likely learn from such programmes.

Parents should further develop and construct hypothetical, analytical and evaluative question on radio and TV programmes for their children. This is to enhance responsible and active concentration of children to programmes. When children answer such questions, parents should have time to discuss their answers with them.

Conclusion

The research investigated the effects of the broadcast media on English Language learning skills of students. It did this by establishing and determining the effects of both television and radio programmes on the three levels of reading comprehension, (literal, inferential and analytical) of secondary school students in Jos metropolis. Suggestions for the complementary use of television and radio programmes as part of the normal English Language classroom teaching and home studies are advocated.

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