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Date August 18, 1978

TELEVISION AND ITS INFLUENCE ON SCHOOL ACHIEVEMENT OF THE SEVENTH AND EIGHTH GRADE STUDENTS IN DUTTON, MONTANA

by

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A professional paper submitted
in partial fulfillment of the requirements for the degree

of

MASTER OF EDUCATION

with concentration in

Elementary Administration

Approved:

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MONTANA STATE UNIVERSITY
Bozeman, Montana

August, 1978

ACKNOWLEDGMENT

The author wishes to express her deep appreciation to her chairman, Dr. Ellerbruch, for his patience and assistance. She also wishes to express her gratitude for the encourgement from her husband and her five children.

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ABSTRACT

This study was designed to investigate the relationship between the television viewing habits of the seventh and eighth grade students of Dutton and their scholastic achievement.

Dutton is a small town, typical of any rural town in Montana, with a school population (K through 12) of approximately 175 students. The entire population of thirty-two students during the 1977-78 school year was used to answer questions concerning the effect of television viewing time on the gain scores of achievement as measured by IOWA TESTS OF BASIC SKILLS .

The first part of this investigation was to get the average hours of watching television per day by each of the seventh and eighth grade students. Their television time was measured by half-hour blocks, with both news and weekend viewing in separate catagories. This information, gain scores of achievement, and other relavent information was analyzed by computer. The results were used to answer questions concerning the relation of television viewing and gain scores of achievement.

A review of literature deals with both the pros and cons of the effect of television viewing time on learning. The majority of the primary and secondary literature reviewed by the researcher indicates a positive attitude towards the effect of television on education.

In answering the questions concerning the relation of television viewing and gain scores on achievement of Dutton seventh and eighth graders, the Pearson r, the t test, and an Analysis of Variance shows no significant relation. If there is a relation between the television viewing time and achievement gain it has not been demonstrated in this study.

Recommendations were made for further studies concerning the effect of television on scholastic achievement.

CHAPTER I

INTRODUCTION

The Gallup Poll's recent survey of the public's attitudes toward the public schools gives an indication as to the widespread nature of the currently fashionable 'back to basics' movement. According to the Poll, the public believes that the basic subjects are reading, writing, and arithmetic and that the schools should return to schooling of earlier years, and go back to the old ways of teaching.. In response to the question: Do you favor or oppose this 'back to basics' movement?, eighty-three percent said they favored the movement and only eleven percent said they opposed it. (Gallup, 1977)

Does returning to the schooling of earlier years mean we should ignore television? This is impossible. The existence of television is a reality and it has become part of the student's culture.

Educators must understand the power of those who criticize the use of technology, such as television, in the schools. Some critics have gone so far as to put some of the blame for the declining Scholastic Aptitude Test scores on the nationwide acedemic of juvenile addiction to television. They claim television distracts students from doing homework, causes 'poor visualization', and generaly competes with schooling.

Gross (1978) in a newspaper story tells about members of the Parents-Teachers Association in the Cleveland suburb of University Heights wanted to do something about television abuse so they launched

an experiment in conjunction with a national campaign against television violence. Teachers were concerned about the effects of television on the children. They said that they were often restless in class and behaved as if they expected to be entertained. Seventy five families prohibited their children from watching twenty-nine shows - from primetime fare to Saturday morning cartoons - that were considered too violent. The parents were asked to observe and compare their children's behavior before and after the experiment. At the end of six weeks parents observed that: (1) Children made better use of their leisure time, (2) They acted with more respect and less hostility towards their parents and friends, (3) Nightmares ceased, (4) The children were less nervous and hyperactive, and (5) Eating habits improved. Gross (1978) stated that many of the parents were so pleased that they continued to be more selective about what they allowed their children to watch on TV even after the six weeks were up.

Every time one picks up a newspaper or magazine, he is influenced by the writers. Physical fitness groups often claim that television is a deterrent to the health of our children. They say the typical child spends hours before the television set getting absolutely no exercise. Before a child has reached school age, he has spent half his conscious life sitting with his experiences processed for him by the genius of technocracy. The television itself tells of crimes which have been committed because the criminal got the idea while watching television.

There is also a considerable amount of evidence available to support the proponents of television. The literature section of this paper notes a number of research studies which support the educational technology of television.

Educators around the world report that television results in an improved curriculum for schools, and television technique fosters a desire to learn which traditional materials cannot match.

To some people, television has a role as a distorter of our basic education system. To others, it has an important part to play in teaching young people, if only educators will offer their expertese and help it advance for the benefit of our children.

Statement of the Problem

The problem of this study is to investigate the relationship between the television viewing habits of seventh and eighth grade students in the Dutton Public Schools and their scholastic gain scores as measured by IOWA TESTS OF BASIC SKILLS.

Need of this Study

This study is important because in a small community of this type the school does have a great deal of influence on the control of television viewing done by the elementary students. There is no educational or cable television and only two commercial networks, both from Great Falls. The other entertainment and recreation in Dutton revolves around church, 4-H, and school activities. If the parents had valid information on the effect of television on the

scholastic performance of their children, they would cooperate by controlling the number of hours, the type of programs, and the time at which the students watched television. The information would be given to them through parents-teachers communication. Dutton has two parents-teachers conferences each year with virtualy 100 percent of the parents attending. They are very open to suggestions which will improve their children's education.

General Questions to be Answered

1. Is the amount of time spent watching television related to the gain scores of the seventh and eighth grade students of the Dutton school?
2. Is the total time spent watching television related to the total gain score on math?
3. Is the total television viewing time related to the gain score on capitalization?
4. How does watching television (excluding news) four or more hours a day relate to the composite gain score of the entire test as compared to students who watch television less than four hours a day?
5. Do those students who watch the news make a greater gain in work study skills compared to those who do not watch the news?
6. How does the vocabulary gain score of those who watch news compare with the vocabulary gain score of those who do not watch the news?
7. Is there any interaction between sex and viewing time of seventh graders on the composite gain scores of the entire test?

General Procedure

This project was carried out by all of the seventh and eighth grade students of the Dutton school. Each student made a survey of the hours spent watching television during three non-consecutive weeks in February and March. At the end of the third week they found their final daily average of television viewing and recorded it to the nearest half-hour. This information was used with the IOWA TESTS OF BASIC SKILLS which are taken each fall. The gain scores for the seventh graders were calculated by subtracting the 1976 total scores from the 1977 total scores. The gain scores of the eighth graders were calculated by subtracting their 1976 total scores from their 1977 total scores. These gain scores, the television viewing information, and other relavent information was analyzed by computer to see if television is related to achievement gain scores.

In addition to the literature search related to television and achievement the investigator spent time searching the relevant literature concerning the influence of television on school work, homework, and the process of visualization in an attempt to provide a basis for discussion on the following additional questions related to visualization:

1. Does television play a part in the process of visualization?

2. If students are having problems associating visualization with data, who or what is the cause of this phenomenon of 'poor visualization?

Limitations and Delimitations

This study was limited in that the different types of television shows, other than news broadcasts was not taken into consideration. Many of the events in the study followed one another without having a 'cause - effect' relationship. The population of the seventh and eighth grade was only thirty-two students.

Definition of Terms

Composite score - a summation of weighted scores secured from two or more tests of similar functions for a given individual. (Goods 1973)

Gain score - the change in scores between two consecutive years; a positive gain unless specifically indicated as a negative gain of the numerical value of the score -- used synonymously with raw score. (Goods, 1973) In this study, the difference between 1976 scores and 1977 scores.

Television groups- Group 1 represents students who watch television four or less than four hours a day. Group 2 represents students who watch television more than four hours a day.

Work study skills - skills in the social studies; geographical concepts, graph interpretations, and knowledge and use of reference materials.

Viewing time - average daily time spent watching television calculated to the nearest half hour.

Visualization - the process of forming a mental image of, making perceptible. (Webster, 1961)

Summary

This project concerns the amount of time spent watching television and relating it with the gain score of one year for the seventh and eighth graders in the Dutton school. Additional time was spent in a literature search to determine the effect of television on the ability to visualize and what effect it has on school work.

CHAPTER II

REVIEW OF LITERATURE

A review of related literature was used to examine areas of visualization to determine if seventh and eighth grade students have lost some of their ability to use visual imagery and, more important to this study, to find out if there is agreement that uses television is one of the causes of poor school work.

A great amout of the available literature dwells on the improvement of visual imagery and the role of television in the lives of elementary students, rather than the lack or loss of visualization.

This review is divided into four major areas; (1) the effect of television on visualization and school work, (2) the influence of behaviorists, (3) perceptual skills involved, and (4) visual thinking.

TELEVISION

During the 1960's television became a scrapegoat on which to blame the problems of our society. One of the common theories was that because visual media flashes pictures before our eyes, we no longer attempt to use our abilities to visualize. Therefore if a person gets out of the habit of using the ability to make visual images, that ability becomes lost. According to Singer (1977), television moves so fast that the viewer does not have time to store what he sees into his memory bank for later recall.

Literature also brings to our attention the fact that visually

presented materials are processed more extensively in the right side of the brain, while mathematical sequences engage the left side of the brain. This seems to indicate that television does not hinder mathematical logic. There has been much debate, however, on the influence of television on reading.

One of the current criticisms of the public is that television reduces the amount of reading people do. The visual impact of television is very easy to consume and takes less effort than reading a book or getting news information from the newspaper. The claim is that television has helped to produce a nonreading age group.

On the other hand, the available literature suggesting a positive relationship between the teaching of language arts and television is convincing. In a review of the literature, Feeley (1975) concluded: "Researchers and reading teachers seem to be recognizing relationships between the receptive modes of viewing and reading, and are making use of children's great interest in television to teach reading." It is obvious that television has influenced the popularity of the Nancy Drew Mystery Stories, the Hardy Boys Mystery Stories, Charlotte's Web, and Laura Ingalls Wilder's Little House books. These observations indicate the influence of television at the elementary level. The writer noted that the Little House books are even popular among high school students and adults which illustrates the connection between a popular television series and reading. These examples suggest that librarians and teachers need to be familiar with current programs that are book adaptations in order to recommend these books to children.

Television's wide availability in the schools is a factor that must be taken into consideration. In a recent study, Dirr (1977) used a carefully constructed questionnaire to attempt to discover the extent of the use of instructional television in the nation's schools. Dirr used extensive follow-up procedures in order to obtain a satisfactory response. His preliminary findings yield some interesting results. Defining instructional television as "any in-school uses of television (either broadcast or recorded) for instructional purposes," he tentatively concludes that instructional television is available in 71.5 percent of the classrooms of this country either by film, videotape, or directly from the air.

Dirr further concludes that 50 percent of the educators surveyed (a stratified random sample of all public school superintendents, principals, and classroom teachers in all school districts in the United States with an enrollment of 300 or more students was made; a similar sample was taken of private schools) view instructional television positively, while only 10 percent view it negatively. Forty percent have not formed firm convictions about the medium's potential, leaving a large group to be convinced one way or the other. Dirr argues: "A major implication which is apparent even at this early stage is that Instructional Television is being used regularly by 15 million children - approximately one out of every three children of school age." When one thinks of the possibilities for teaching through television, these statistics take on additional meaning.

It is possible that the ease of television for obtaining information, over traditional school work makes upper elementary students impatient with the effort required to comprehend auditory directions and lectures. Be reminded that the majority of elementary and secondary school children cannot recall the time there was not a television set in their home.

BEHAVIORISTS

Poor visualization is evident among elementary and high school students. Jordan (1977) reminds readers of the number of times teachers come to the aid of students by drawing diagrams to help solve mathmatical problems, whether the problem is a simple story question or an advanced calculation. How often have teachers heard students exclaim, "Why didn't I see that"?

> Jordan (1977) states: "In order to have a good visualization a person would have to have a sufficient 'memory bank' of experiences to draw from and some practice in forming visualizations. These experiences are best realized if they consist of a concrete nature rather than as abstract one."

Very early in life a child is encouraged to avoid visualization. Parents take pleasure in showing off the superior intellect of their child. When a child has learned to say 'one, two, three, etc' he is encouraged and rewarded. But he has not really learned to count. He has only memorized words without being able to visualize the meaning of what he is saying.

When the child enters the school system, a great deal of force and pressure is put on him to become an answer producer. Many a time the teacher can be observed doting over the child who answers quickly and

uses no manipulatives.

Jordan (1977) puts all the blame of poor visualization on the behaviorists when he says:

> "Standardized tests have in common the feature of aiming at superficial knowledge and never digging into the depth at which a student may actually comprehend the concepts. It is a shame that society places such a high value on the correct answers generated by low level cognitive skills.
>
> I believe that the behavioral psychologists are at the root of this problem and responsible for maintaining this answer-oriented and anti-visualization strategy. The bill of goods they have sold the school administration and teachers has the schools concerned only with pre-test, post-tests, recording the level of skills, moving down the prescribed path, evaluating, rewarding and charting. They pay little attention to individual human needs, modality preferences, problem solving, or all the aspects that are uniquely human."

The blame seems to fall on our compulsory education system. Are we pushing children too fast and missing the basic foundation of education? This public school education is free and compulsory. The compulsion implies that children need to be changed. Changed to what? From children who can visualize to stereotyped who cannot? From children who can enjoy seeing pictures in cloud formations to children who can only see the great rush of life? From non-readers to great writers? Drucker (1967) noted that the Armed Forces Qualifying Tests are failed by one of every four persons because they cannot read, write, or add a basic sum.

Jordan (1977) claims if visualization abilities are being lost, it is probably not due to television, comic books, or other audio-visual media, but because the behaviorists are pushing our children too fast.

PERCEPTUAL SKILLS

Many of the authorities in the literature quote Piaget's major developmental stages. Lefrancors (1975) stresses maturity as the best basic foundation on which to build. When the visual images on the television screen are perceived by the child, he is drawing on his own level of maturity. He draws from his own past experiences and interests to relate with the image on the screen. It is very important that children have time to mature through developmental skills - each of which is more complex than the previous. Lefrancors reminds one that each stage is qualitatively different from the other, but each results from the one that preceded it and prepares the child for the one that follows. It is difficult for adults to actually know how mentally developed a child is at a certain age. The book Television for Children (1962) implies that adults make serious mistakes when they judge television for children because the cognitive structure of a child's perception is different than the cognitive structure of an adult. The program content, as seen by an adult, does not always determine what a child sees. A child's visual imagery is determined by interest, drives and experiences.

Elkind (1969) believes that between the ages of four and eight the child's ability to process perceptual information is transformed in three significant ways. First, perception becomes more flexible and the eight-year-old can reorganize the information provided by his senses while the four-year-old can respond only to the organization

that is given. Secondly, perception becomes more rapid so that the older child perceives simultaneously what the young child perceives sequentially. And finally for the older child perception becomes dynamic, and he can impose order and organization upon information that appears unordered and disorganized to the younger child.

VISUAL THINKING

McKim (1972) believes that the capacity for visual thinking is essential in everyone when they are very young, but school discourages the use of imagery by emphasizing language oriented curriculum which uses the left side of the brain. As schooling advances, language is used more and more to express experiences. As a result of this emphasis, the opinion of a few writers, is that imagery, which uses the right side of the brain has a tendency to fade away from lack of use.

A study conducted by Schapiro (1972) attempted to relate the use of visual imagery to concrete experiences. He concluded that the form in which an image appears and the manner in which it is experienced depends on the individual. The individual has the ability to 'turn off' images which he does not want to use at a particular time. Winn (1977) relates this to going on a 'trip'. She states that the worries and anxieties of reality are as effectively deferred by becoming absorbed in a television program as by going on a 'trip'. This can be a form of addiction just as drugs or alcohol. When children are staring at the images on the television screen, they are not always seeing what is in front of them, but are thinking of something entirely different.

SUMMARY

Literature deals with both the pros and cons of the effect of television on learning, but the majority of both primary and secondary sources do not put the blame of poor visualization and the decline of academic achievement on television. Most of the anti-television reports are found in the popular literature and seem to be mostly opinionated and biased. Nowhere, in the primary and secondary sources of literature that this researcher has read, does it say that television has a negative effect on school work.

CHAPTER III

PROCEDURES

This study was developed to determine if there is a significant relation between scholastic achievement and the hours spent watching television.

This chapter will describe the population, the method of collecting and organizing data, statistical hypotheses, analysis of data, precautions taken for accuracy and a summary.

Population Description

The population of this study consisted of all the seventh and eighth graders in the Dutton school. That population was made up of seventeen seventh graders and fifteen eighth graders, and can generalize to any small town in rural Montana.

The study included the entire population as defined, therefore no sampling was necessary.

Method of Collecting Data

The first step of collecting data was to find out how many seventh and eighth grade students watched at least one television news broadcast each day. To make the classroom questioning nonreactive, the investigator picked the first Friday in January and the last Wednesday in January to ask the following questions: (1) Did you watch the news on television last night? (2) Did you watch the news on Wednesday? (3) Do you watch the news almost every day? Each student recorded his answer on a sheet of paper and gave it to the investigator. The same three questions were asked on the last Wednesday of January,

(using the word Monday instead of Wednesday in question two). If the student answered four of the six questions with 'yes', he was given a rating of thirty minutes of news watching per day.

During the second week in February, each of the students found their average hours per day spent watching television, using the following chart:

HOURS SPENT WATCHING TELEVISION THIS WEEK
(excluding news)

DAY	Morning	Afternoon	Evening	Total
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
TOTAL				
AVERAGE				

This survey was repeated during the second and the third week in March. The students were not told in advance that they would be doing the survey three different times. After each week their surveys were collected. At the end of the third week the final average was found and recorded to the nearest half hour.

The investigator chose these particular weeks so that one week was during the basketball season and the other two weeks were after

the season had ended. In a town of this setting, where strong emphasis is on extra-curricular activities, this season is a representative of the entire time spent watching television during the school year.

The criterion instrument used in gathering the achievement scores was the IOWA TESTS OF BASIC SKILLS, which are given in October of each year. The instrument is published by Houghton Mifflin Company and prepared at the University of Iowa under the direction of A. N. Hieronymus and E. F. Lindquist. The split-halves reliability analysis is by a national representative sample of N = 2606. The reliability coefficient ranges from .89 to .96 on the five skills tested, and the composite reliability coefficient is .98. The reliability coefficients for the half-test were obtained as Pearson product-moment correlation coefficients and the reliabilities for the complete tests are estimated by using the Spearman-Brown formula.

The scoring for these tests was done by the Houghton Mifflin Scoring Service for MRC (Measurement Research Center).

The IOWA TESTS OF BASIC SKILLS were not designed as aptitude tests nor as predictors of future academic success. However, the importance of proficiency in the basic skills in determining high school and college success has been demonstrated repeatedly.

Method of Organizing the Data

All of the data, including student identification, grade, sex, age, and the gain scores of vocabulary, reading, capitalization,

language skills, work study skills, math, and the total composite scores were coded along with the grade equivalent, and the average hours of television viewing time including news broadcast and the average hours of viewing per day excluding the news broadcast.

All of this information was fed into the Montana State University computer and analyzed, using the Statistical Package for the Social Sciences. The descriptive statistical information included mean, standard error, median, mode, standard deviation, variance, kurtosis, skewness, minimum, maximum, and frequency of each gain score. Inferential statistics were also performed by the MSU computer.

Analysis of Data

Analyzing the collected data involved the careful examination and interpretation of responses to each question. Using the Pearson product-moment correlation coefficients, analysis of variance, or the 't' test, the investigator was able to determine whether to retain or reject the null hypotheses. A significance level of .05 will be used.

Precautions Taken for Accuracy

All of the statistical calculations were done on the computer at Montana State University. Scores which were coded were verified and rechecked by the investigator.

Summary

The contents of this chapter have dealt with the population, the procedures of collecting data, the methods of organizing the data, an explanation of the instruments used, and the analysis of data.

CHAPTER IV

ANALYSIS OF DATA

Chapter IV will answer each of the questions stated in chapter one concerning television viewing and achievement of the seventh and eighth grade students in Dutton, and give a summary of the findings. The Analysis of Variance table for question seven is found at the end of the chapter. The table of the Pearson Correlation Coefficients used for questions one through six is presented below:

PEARSON CORRELATION COEFFICIENTS

		Vocab-ulary	Capital-ization	Math	Study Skills	Composite
TV time including news	Correlation(r)		-.0601	-.1027		-.1081
	Significance level(S)		.381	.302		.292
TV TIME excluding news	r =					-.0887
	S =					.327
News only	r =	-.2576			-.1270	
	S =	.093			.260	

N = 28

Question 1

Is the amount of time spent watching television related to the composite gain scores of the seventh and eighth grade students of the Dutton school?

Null hypothesis tested: There is no relation between the hours of watching television per day and the composite gain scores of the seventh and eighth grade students.

Alternative hypothesis: There is a relation between hours of television per day and composite gain scores.

The Pearson r shows a slight negative correlation of -.1081 and a significance level of .292, but it is not significantly different from zero. This can be interpreted that the hours of television per day bears no systematic relation to composite gain scores of students. The number of hours a student watches television is no prediction of what his composite gain score will be.

The null hypothesis is retained.

Additional analysis was performed by the use of the t test, which determined there was no significant difference between the mean of the composite gain score of students who watch four hours or less than four hours of television a day and the mean of the composite gain score of students who watch more than four hours of television a day. The mean gain of students watching less than four hours of television is .88 and the mean gain of students watching more than four hours is .82.

T-Test
Composite Gain Score

Viewing time per day	Mean gain	Pooled Variance Estimate
≤ 4 hours	.88	t =.48 probability =.632
> 4 hours	.82	

Question 2

Is there a relationship between the total time students spend watching television and the gain scores on math?

Null hypothesis tested: There is no relation between the time spent watching television and the gain scores on math.

Alternative hypothesis: There is a relation between television and gain scores on math.

The Pearson r shows a slight negative correlation of .1027, which is not significantly different from zero, and a significance level of .302. This can be interpreted to mean that time spent watching television and gain scores on math bear no significant systematic relation to each other; the one cannot be predicted by the outcome of the other.

The null hypothesis is retained.

Additional analysis was performed using the t test, which indicates there is no significant difference between the mean of the math scores (.90) of those who watch television four or less hours a day and the mean of the scores (.62) of students who watch more than four hours a day.

T-TEST

MATH GAIN SCORES

Viewing time per day	Mean gain	Pooled Variance Estimate	
$\leq$ 4 hours	.90	t=1.44	prob.=.160
$>$ 4 hours	.62		

Question 3

Is the amount of time spent watching television related to the gain score on capitalization of the seventh and eighth grade students?

Null hypothesis tested: There is no relation between hours of watching television and gain scores on capitalization.

Alternative hypothesis: There is a relation between watching television and gain scores on capitalization.

The Pearson r (-.0601) is almost zero, and the significance level is .381. A value of zero describes the absence of a relation between watching television and gain scores on capitalization.

The null hypothesis is retained.

Additional analysis was performed using the t test, which shows there is no significant difference on the capitalization score (1.28) of students watching four or less than four hours of television and on the gain score (1.40) of students who watch more than four hours of television per day.

T-TEST

CAPITALIZATION GAIN SCORES

Viewing time per day	Mean gain	Separate Variance Estimate	
$\leq$ 4 hours	1.28	t= -.26	prob. =.801
$>$4 hours	1.40		

Question 4

Is watching television (excluding news) more than four hours a day related to the composite gain score of those who watch television less than four hours a day?

Null hypothesis tested: The mean of the composite gain scores of students who watch more than four hours of television per day (excluding news) is equal to the mean of the composite gain scores of students who watch four or less hours of television per day.

Alternative hypothesis: The mean of the scores of students who watch more than four hours of television (excluding news) is not equal to the mean of the scores of students who watch four or less than four hours of television per day.

A Students t statistic was calculated giving a t value of 1.09 and a probability level of .28. This implies that there is no significant difference between the mean of the composite gain score(.75)of those who watch more than four hours and the mean of the composite gain score (.91) of students watching less than four hours of television (excluding news), therefore the null hypothesis is retained.

T-TEST

COMPOSITE GAIN SCORE

Viewing time (excluding news)	Mean gain	Pooled Variance Estimate	
$\leq$ 4 hours	.91	t = 1.09	Prob. =.283
$>$4 hours	.75		

Additional analysis was performed using the Pearson r. The result was a correlation of -.0887 meaning that one cannot predict anything more than a random guess about composite gain scores in relation to the number of hours watching television (excluding news). The significance level is .327, but r = -.0887 is not significantly different from zero.

Question 5

Do students who watch news make a greater gain in work study skills than students who do not watch the news?

Null hypothesis tested: The mean of the gain scores on work study

skills of students who watch news is equal to the mean of the gain scores on work study skills of students who do not watch news.

Alternative hypothesis: The mean of the gain scores on work study skills of students who watch the news is not equal to the mean of the gain scores on work study skills of students who do not watch news.

The t test shows the mean of the gain scores on work study skills of students who watch the news is.66, which is slightly less than.85 for those who do watch the news. The t value of.65 which is not significant indicates no difference in mean gain scores on work study skills. The difference is not sufficiant to reject the null hypothesis.

Therefore, the null hypothesis is retained.

T-TEST
WORK STUDY SKILLS

	Mean gain score	Pooled Variance Estimate
Students who do not watch news	.85	t = .65 prob. = .520
Students who watch news	.66	

Additional analysis using the Pearson r shows a slight negative correlation of -.1270, which is not significantly different from zero. The significance level is .260. By the statistics shown above one can not predict the gain score on work study skills by the amount of news a student watches, and watching news will not predict the gain score on work study skills. There is no systematic relation between watching news and the gain score on work study skills.

Question 6

Is the mean of the vocabulary gain scores of students who watch news equal to the mean of the vocabulary gain scores of students who do not watch the news?

Null hypothesis tested: The mean of the vocabulary gain scores of students who watch news is equal to the mean of the vocabulary gain scores of students who do not watch news.

Alternative hypothesis: The mean of the vocabulary gain scores of students who watch news is not equal to the mean of the vocabulary gain scores of students who do not watch news.

The mean of the gain scores on vocabulary of those who do not watch news is 1.41 and the mean of the gain scores on vocabulary of those who watch news is .98. The mean gain score of students who do not watch news is slightly higher than those who do watch news but they are not significantly different, since the t value of 1.40 has an associated probability value of .186.

The null hypothesis is retained.

T-TEST
VOCABULARY

	Mean Gain Score	Pooled Variance Estimate
Students who do not watch news	1.41	t = 1.40 prob. =.186
Students who watch news	.98	

Question 7

Is there an interaction between sex and television viewing time of the seventh grade students on composite gain scores?

Null hypothesis tested: There is no interaction between sex and television time of the seventh grade students on the composite gain scores.

Alternative hypothesis: There is an interaction between sex and television time of the seventh grade students on their composite gain scores.

The Analysis of Variance table compares the composite gain score of boys who watch four or less than four hours of television with the composite gain score of girls who watch an equal amount of television. It also compares the gain scores of boys and girls who watch more than four hours of television per day. It compares boys who watch less television with boys who watch more television, and does the same with girls who watch less and girls who watch more. The two-way interaction between sex and television time was analyzed to see if, in fact, there is an interaction.

The Analysis of Variance is presented in the table on the following page. These results show there is no significant interaction between sex and television on the composite gain scores of the Dutton seventh graders since the F ratio is .14 which has an associated probability value of .713

The null hypothesis is retained.

If there is any interaction between sex and the time spent viewing television and if it has any effect on the composite gain scores of achievement, it has not been demonstrated by this group of seventh graders.

ANALYSIS OF VARIANCE

COMPOSITE GAIN

By sex

T_1 -Television time per day

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIFICANCE OF F
Main Effects	.162	2	.809	1.16	.344
Sex	.147	1	.147	2.11	.171
T_1	.717	1	.717	1.03	.329
2-way Interactions	.985	1	.985	.14	.713
Sex T_1	.985	1	.985	.14	.713
Explained	.172	3	.572	.82	.506
Residual	.907	13	.698		
Total	1.08	16	.674		

Summary

Seven questions were addressed in the analysis. The results of the Pearson Correlation Coefficients, the T-Test, and an Analysis of Variance indicate no significant relation between time spent watching television and achievement gain scores of seventh and eighth grade students of the Dutton school. If differences exist, related to the

television viewing habits and achievement gain of seventh and eighth graders, they have not been demonstrated in this study.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was designed to determine if television viewing time has an effect on the scholastic achievement of seventh and eighth grade students in the Dutton School.

It has been commonly felt that students' television viewing is detrimental to school work. According to the literature this has not been conclusively substantiated by studies at this time. It has also been thought that time spent watching television is related to intelligence. This has not been well established either. A few studies have been made in attempts to find the correlation which may exist between intelligence and television viewing, but the studies which this writer has reviewed have not reported any great significance.

Conclusions

In answer to questions concerning television viewing habits of seventh and eighth graders and scholastic gain scores the comclusions based on this study are:

1. The total amount of time seventh and eighth grade students in Dutton spend watching television is not related to the composite gain scores of their achievement. There is no evidence showing that the achievement scores for the Dutton junior high students vary in relation to the amount of television they watch.
2. The total television viewing time is not related to the total gain score on math of the seventh and eighth graders in this study.

3. Total television viewing time is not related to the gain score on capitalization. The gain scores on capitalization do not show a relation to the amount of time that is spent watching television.

4. The mean of the composite gain score of students who watch less than four hours of television (excluding news) is the same as the mean of the students who watch more than four hours of television (excluding news) every day.

5. The seventh and eighth graders in Dutton who watch news do not have a greater gain in work study skills than the students who do not watch the news.

6. The vocabulary gain score of students who watch news is the same as the vocabulary gain score of students who do not watch news. Watching news regularly does not seem to improve the vocabulary of the seventh and eighth graders in Dutton.

7. There is no interaction between sex and television viewing time of seventh graders on the composite gain scores of the entire test. There was a slight indication that boys watch more television than girls, but the amount of time watching television and the sex of the students had no significant interaction on the composite gain scores.

After a careful examination of gain scores on school achievement in the Dutton junior high and the amount of time spent watching television, this writer concludes there is no significant relation between academic achievement and the number of hours spent viewing television as possible to infer from this study.

According to the literature televiewing is an activity which has found its place in competition with other activities. It tends to displace radio, comics, and motion pictures to a small degree, but not play, sports, recreational and religious activity. As a whole televiewing has become an accepted pastime of two-channel communication; visual and audio. All people depend extensively upon their eyes and ears to keep them informed. Television alone provides a ring-side seat for world events as they unfold.

Recommendations

Current literature suggests that Educational Television offers advantages for teaching - - this medium of television is an important and interesting part of our children's lives. Teachers should make contributions to pupils' development by offering guidance to television viewing as well as recognizing and using interest in this mass media to motivate instruction. Television education requires a commitment on the part of educators to teach the basics - not just the basics of a bygone era, but to teach the basics of our contemporary society.

The investigator recommends that this study be continued or redone with more careful, long range planning. Based on past research it is recommended to measure the time viewing television as hours per week, rather than hours per day, and to take into account the different types of programing. Also, a different approach, such as using two

monitored groups of viewers is suggested.

As a follow-through a study of this kind should be repeated several years from now after incorporating a television guidance program.

There has been much research done in the past, but there is still much to be done in the future. It would be interesting to compare the television habits and school achievement of the Dutton junior high with another population of seventh and eighth graders in a similar rural setting.

This study was done with thirty-two students of the sevevth and eighth grade in Dutton. Questions concerning the television viewing time of the students and their achievement gain scores were answered using the Pearson r, the t-test, and an Analysis of Variance. The results showed no significant relation between time spent watching television and achivement gain scores. If differences exist they have not been demonstrated in this study.

BIBLIOGRAPHY

Brish, W. Testimony before the Television Advisory Panel, U.S. Office of Education, "Educational Television the Next Ten Years." Stanford Institute of Communication Research, 1962

Bruner, Jerome. Toward a Theory of Instruction Cambridge, Mass,: Belknap Press of Harvard University Press, 1967

Dirr, P. "The Use of Instructional TV - A Report on a New Study." EDUCATIONAL AND INDUSTRIAL TELEVISION. November 1977, pages 23-25

Drucker, P. The Age of Discontinuity: Guidelines to our Changing Society. N.Y. Harper & Row, 1969

Elkind, David. Developmental Studies of Figurative Perception. Recent Advances in Child Development Research, Lipsitt and Reese (Eds.) New York: Academic Press, 1969

Feeley, J.T. Television and Reading in the Seventies. LANGUAGE ARTS,September, 1975, pages 797-815

Gallup, G.H. Ninth Annual Gallup Poll of the Public's Attitudes Toward Schools. TODAY'S EDUCATION Nov./Dec., 1977

Good, ed. Dictionary of Education. McGraw-Hill, 1972

Gross, Barry. Kids Turned Into Angels Not Seeing TV Violence, article in THE STAR. Feb. 14, 1978

Jordan, James H. Why Johnny Can't Visualize - Failures of the Behaviorists. Reprint from the TEXAS MATHEMATICS TEACHER May 1977

Lefrancors, G. Psychology for Teaching. Belmont, Cal., Wadsworth Publishing Company, 1972

McKim, R. Experiences in Visual Thinking. Monterey, Cal., Brooks/ Cole Publishing Company 1972

Schapiro, David. Structural Aspects of Visual Imagery in Altered States of Consciousness, Dissertation Abstracts International 33. November 1973 ERIC

Singer, Jerome. "Television, Imaginative Play, and Cognitive Development", A paper presented at the Annual American Psychological Association. San Francisco, Cal. 1977

Television for Children. Foundation for Character Education, Boston, Mass. 1963

Winn, Marie. The Plug in Drug. Viking Press, New York, 1977