

RELATIONSHIP OF TELEVISION VIEWING
TO ACHIEVEMENT, READING TIME, AND
LEISURE ACTIVITIES IN ELEVENTH
GRADE STUDENTS

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RELATIONSHIP OF TELEVISION VIEWING TO ACHIEVEMENT,
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An Abstract
Presented to
the Graduate Council of
Austin Peay State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Barbara Jean West

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ABSTRACT

The purpose of this study was to determine the relationship of television viewing and both achievement and leisure time activities among 11th grade students. A survey, developed by the author, was used to measure hours spent in after school activities. Grades in English and U.S. history and scores from the Gates-MacGinitie Reading Tests, Survey F, were used as measures of achievement. One hundred and fourteen students in the 11th grade at Fort Campbell High School in Fort Campbell, Kentucky were used as subjects.

Means and standard deviations for all activity hours, grades, and test scores were computed. Mean hours for all after school activities, including television viewing, were consistent with previous studies.

The Pearson-Product Moment technique was used to determine the presence of significant relationships between all possible pairs of variables. Television viewing hours were inversely related to grades in history and Vocabulary and Comprehension scores. No significant correlation was found between television viewing hours and English grades or Speed and Accuracy scores. Also, television viewing hours were not significantly related to hours for pleasure reading, homework, working, school sports, or other school related activities. Four after school activities were also found to be related to academic grades.

The results lend support to previous research, suggesting that television is inversely related to achievement by adolescents but not significantly related to after school activities.

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To the Graduate Council:

I am submitting herewith a Thesis written by Barbara Jean West entitled "Relationship of Television Viewing to Achievement, Reading Time, and Leisure Activities in Eleventh Grade Students." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

Elizabeth H. Stokes
Major Professor

We have read this thesis and
recommend its acceptance:

Linda Rudolph
Minor Professor
or
Second Committee Member

Arland E. Blair
Third Committee Member

Accepted for the
Graduate Council:

William H. Ellis
Dean of the Graduate School

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CHAPTER I

INTRODUCTION

Since the introduction of television into American homes over 25 years ago, parents and experts have argued the detrimental and beneficial effects of television on youngsters. For example, television has been named as one cause for lowered scores on standardized tests, such as the Scholastic Aptitude Tests (Schramm, 1977). Educators have observed a decline in students' achievement (Scott, 1956) and in the amount of independent reading (Sandberg, 1976). Teachers have also blamed television viewing for students' characteristics, such as shorter attention spans, restlessness in the classroom, and "blocking out" classroom activities they perceive as difficult or boring (Feinberg, 1977; Larrick, 1975). A large majority of surveyed pediatricians saw children's television viewing as not enhancing the quality of children's play and not assisting children in learning to make reasonable decisions (Bruyn, 1978). Winn (1977), comparing television to a narcotic, warned of the dangers of children's television addiction.

On the other hand, students, parents, and educators have also observed advantages of viewing television. Half of the elementary students surveyed by Witty (1966) reported obtaining help for their school work from television. Most parents surveyed by Maccoby (1951) praised television for presenting educational material and keeping their children off the streets. Both parents and teachers have commended

quality shows, such as Sesame Street, The Electric Company, and After School Specials (Busch, 1978; Larrick, 1975). The highly endorsed Action for Children's Television was organized to insure the production of superior children's television programs (Boyle, 1978).

Review of the Literature

Since 98 percent of American homes have one or more television sets (Barth & Swiss, 1976), most children and adolescents are affected somewhat by television. How much television are they viewing? Estimates vary because of location, size of sample, season of the year, or age group.

Larrick (1975) reported preschoolers, who view approximately 54 hours a week, will view more hours of television before they enter kindergarten than college students will spend in classrooms during four years of college. In addition, she stated that by the time teenagers graduate from high school, each will have spent 22,000 hours watching television and only 11,000 hours attending school. Furthermore, most youth spend more time viewing television than any other daily activity except sleeping (Comstock, Chaffee, Katzman, McCombs, & Roberts, 1978; Himmelweit, Oppenheim, & Vince, 1958; Schramm, Lyle, & Parker, 1961).

Early studies of children, grades one through six, reported weekly averages of 12-25 hours and a daily average of approximately 3 hours (Himmelweit et al., 1948; Schramm et al., 1961; Witty, 1966). Recent studies recorded weekly averages of 15-38 hours and a daily average of about 4 hours (Busch, 1978, Childers & Ross, 1973; Comstock et al., 1978; Gallup, 1977; Larrick, 1975; Long and Henderson, 1973).

For students in junior and senior high schools, early studies found weekly averages of 12-18 hours and a daily average of about 2.5 hours (Himmelweit et al., 1958; Schramm et al., 1961; Witty, 1966). Recent studies noted a weekly viewing average for teenagers of 15-35 hours and a daily average slightly over 3 hours (Busch, 1978; Comstock et al., 1978, Sandburg, 1976) .

When early studies (Himmelweit et al., 1958; Schramm et al., 1961) were compared to more recent findings (Comstock et al., 1978; Sandberg, 1976), the results indicated an overall increase in youngsters' television viewing. Lyle and Hoffman (cited in Comstock et al., 1978) estimated that the daily viewing average has increased one hour over the past two decades. A recent Nielson report (cited in Comstock et al., 1978) reported an increase from 1967-1976 in weekly viewing averages from 23.5 to 27.6 hours for children ages 2 through 11 and from 19.2 to 21.9 hours for ages 12 through 17.

Several researchers have reported a trend in television viewing according to age groups (Himmelweit et al., 1958; Schramm et al., 1961). Viewing was high among preschoolers, then declined slightly when children entered school. The viewing time increased in the elementary years, reached a peak about the sixth grade, and declined in junior high school. High school students viewed the least number of hours. The decline in junior and senior high school was attributed to increasing extracurricular activities, social functions, and mobility and growing study requirements in secondary schools (Comstock et al., 1978; Nelson & Rothney, 1964).

Many studies have been conducted since the 1950's to ascertain the relationship between television viewing and intelligence. In general, researchers have found lower intelligence related to heavier viewing

and higher intelligence related to lower viewing, though not always significantly. Smaller, regional studies of elementary students have found negative correlations between television viewing and intelligence (Slater, 1965; Thompson, 1964). Scott (1956) found sixth- and seventh-grade students who viewed more television had significantly lower scores for total and language intelligence tests but not for the non-language intelligence test. LaBlonde (1967) found a negative correlation between television viewing and intelligence for fifth-grade girls but not for fifth-grade boys. However, the early landmark studies by Himmelweit et al. (1958) and Schramm et al. (1961) found no significant relationship between amount of viewing and intelligence in children and were confirmed by recent findings (Childers & Ross, 1973; Sandberg, 1976).

Furthermore, an unusual situation has been described by many (Himmelweit et al., 1958; Schramm et al., 1961) for students in the sixth grade. Brighter students in this grade tended to be the heavier viewers. Schramm attributed this to young, bright children doing more of everything, including television watching, radio listening, and reading.

For adolescents, however, most early and recent studies have found a negative relationship between intelligence and amount of television viewing (Comstock et al., 1978; Himmelweit et al., 1958; Schramm et al., 1961). However, Sandberg (1976) reported no relationship between viewing time and intelligence for students in grades 6 through 11.

Finally, differences in television viewing between the extremes in intelligence may exist. Nelson and Rothney (1964) found superior high

school students view less television. However, Cordova (1974) found no difference in viewing habits of children in special education and regular education programs.

In the area of achievement, measured either by academic grades or achievement test scores, reports have been conflicting. Some recent studies have indicated an increasing relationship between amount of television viewing and achievement. As previously noted, amount of television viewing has increased in the past two decades. Also, most recent studies have been conducted with children who have viewed television almost since infancy, while early studies (Himmelweit et al., 1958; Schramm et al., 1961) were conducted with children with and without televisions in their homes. For example, Furu (1971) found no relationship between television viewing and achievement in 1957 and 1959 studies of elementary and secondary students in Japan. However, in 1967 and 1969, 10 years after television had been established in Japan, he found a significant negative correlation between television viewing and achievement.

For children in elementary schools, some researchers (Scott, 1956; Slater, 1965) found significant negative relationships between amount of television viewing and achievement test scores. On the other hand, most investigators found no significant relationship between television viewing and either achievement test scores (Childers & Ross, 1973; Long & Henderson, 1976) or academic grades (Childers & Ross, 1973; Himmelweit et al., 1958).

For teenagers, Ris (1976) found a negative relationship between amount of television viewing and achievement test scores while Sandberg

(1976) found no relationship. Nelson and Rothney (1964) found light viewers had significantly higher grades than heavy viewers though Ridder (1963) and Walker (1977) found no significant results. The tendency for teenagers to be more affected by television watching on their achievement may be due to increased demands of homework in secondary schools (Maccoby, 1951). In fact, several researchers (Himmelweit et al., 1958; Schramm et al., 1961) reported brighter teenagers with heavy viewing scored lower in achievement than brighter teenagers with light viewing.

Though amount of television viewing may be related somewhat to achievement, it cannot be named as the cause of lowering achievement. However, Schramm (1977) suggested television may be one cause affecting achievement. Further, television may indirectly affect achievement by interacting with intelligence, creativity, and adaptability (Furu, 1971). Television may affect achievement by preventing presentations of intellectual information, hindering development of cognitive skills, or displacing challenging leisure time activities (Schramm, 1977).

First, researchers have argued whether students can learn from television. Schramm et al. (1961) reported television often gave a student an early start with general knowledge in the first grade; but in later years, heavy viewers were less knowledgeable than light viewers or non-viewers. Other investigators confirmed this finding and also found that only young, duller children gained general knowledge from television (Busch, 1978; Himmelweit et al., 1958).

In addition, many studies found television stimulated reading interests both in fiction and nonfiction (Busch, 1978; Hammilton, 1974;

Himmelweit et al., 1958). Students stated they enjoyed reading books about popular television shows, which they found non-threatening, because they were familiar with the plot (Busch, 1978). They also wanted to read more about a topic introduced on television such as astronomy or art (Himmelweit et al., 1958).

Though researchers have found students gained from educational type programs (Himmelweit et al., 1958; Pearney, Freund, & Barman, 1978), most researchers reported students viewed more recreational programs than educational programs (Ridder, 1963; Schramm et al., 1961). Also, if given a choice of learning by print or television, most students expressed a preference for television (Busch, 1978; Heerman & Callison, 1978).

Second, experts have argued whether television helps or hinders development of reading skills. Researchers stated that educational and some commercial television programs build vocabularies and certain reading skills (Ball and Bogatz, 1973; Pearney et al., 1978). However, other investigators saw television as playing little or at least a limited role in teaching reading skills (Mason, 1965; Minton, 1975). Fasick (1973) found book sentences more varied and complex than television sentences. Wells (1974) criticized television for not providing repetition and practice skills which facilitate learning.

Third, television may hinder achievement by displacing out-of-school activities which may affect performance (Long & Henderson, 1973). However, a few investigators stated that if low achievers were not watching television, they would possibly be involved in other recreational activities and not studying (Ridder, 1963).

Many researchers have studied effects of television on amount of independent reading. Lazarus (1956) and Witty (1966) found elementary children reading more because of television. At the same time, television was found to have little effect on reading (Himmelweit et al., 1958; Schramm et al., 1961). However, other investigators found television displacing pleasure among elementary students (Duggan, 1955; Long & Henderson, 1973; Maccoby, 1951). In a survey of Midwestern students, Heerman and Callison (1978) calculated the ratio of television time to reading time to be 9:1 for kindergarten through third grade and 5.7:1 for fourth through sixth grade. Most researchers have found a significant negative correlation between television viewing and reading time by teenagers (Hammilton, 1974; Sandberg, 1976). However, Ridder (1963) did not find television viewing detrimental to reading time by teenagers.

Few studies have been conducted concerning television viewing and homework. Lazarus (1956) reported television viewing was displacing homework among elementary students, and Long and Henderson (1973) found amount of television viewing to be inversely related to homework time. However, at least in early studies (Duggan, 1955; Himmelweit et al., 1958), little or no difference was found between young viewers and nonviewers. Most youngsters reported doing their homework before watching television, and parental control of television use was reported to be stronger in the early days of television (Duggan, 1955).

For teenagers, Himmelweit et al. (1958) found a slight effect on homework by television viewing, and Maccoby (1951) reported no difference in homework time between viewers and nonviewers on weekdays but a significant difference on weekends. Northey (1962) found no difference in

homework time between heavy and light viewers. New studies may find an increasing correlation between amount of television viewing and homework for teenagers due to decreasing parental control, especially in the teen years (Gallup, 1977; Rossiter & Robertson, 1975), and the growing habit of "simultaneousness" of studying and watching television (Schramm, 1977; Smith, 1968).

For both children and teenagers, television has displaced certain leisure time activities, particularly attending movies and listening to radios (Himmelweit et al., 1958; Schramm et al., 1961). Long and Henderson (1973) and Maccoby (1951) found television significantly affected free play while Tarbet (1956) found no significant effect. Several studies reported television affecting the decline of creative or challenging activities, such as hobbies (Duggan, 1955) or playing musical instruments (Long & Henderson, 1973; Maccoby, 1951). However, Sandberg (1976) found no significant relationship between television viewing and hobbies.

Little evidence has been reported concerning television viewing and participation in sports. Lazarus (1956) noted time devoted to sports was displaced by television viewing. On the other hand, Riley, Cantwell, and Ruthiger (1949) found no difference between viewers and nonviewers in participation or attendance at sports events. In fact, Himmelweit et al. (1958) reported adolescents preferred sports as their favorite leisure activity.

Few investigations have studied the effects of television on sleep, which could indirectly affect school achievement. Though teachers

complained of fatigued students due to late night television viewing (Larrick, 1975; Scott, 1956), Duggan (1956) and Himmelweit et al. (1958) found no significant difference in viewers' and nonviewers' sleeping habits. However, Maccoby (1951) reported a significant difference of sleeping time between children who had and did not have televisions, while Long and Henderson (1973) found a significant negative relationship between television viewing and sleeping time.

Purpose of the Study

As previously noted, amount of television viewing and achievement seem to be more strongly related for teenagers than younger children. This difference between age groups may be due to poor development of study skills, increased homework demands, more out-of-school activities, or less parental control. The purpose of the present study is to investigate among 11th-grade students the relationship between the amount of television viewing and both achievement and leisure time activities. Special interest will be given to investigating the relationship to reading achievement, which is crucial to academic performance in secondary schools (Catterson, 1976), and to leisure time activities, which may directly or in conjunction with television, affect achievement.

Hypotheses

The following null hypotheses are proposed for 11th-grade students:

1. There will be no significant correlation between hours of television viewing and grades achieved in eleventh grade English.

2. There will be no significant correlation between hours of television viewing and grades achieved in eleventh grade United States history.

3. There will be no significant correlation between hours of television viewing and reading achievement scores in speed and accuracy, vocabulary, or comprehension.

4. There will be no significant correlation between hours of television viewing and hours of pleasure reading.

5. There will be no significant correlation between hours of television viewing and hours of homework reading.

6. There will be no significant correlation between hours of television viewing and hours of working.

7. There will be no significant correlation between hours of television viewing and hours of participation in school sports.

8. There will be no significant correlation between hours of television viewing and hours of participating in other school related activities.

CHAPTER II

METHOD

Subjects

The subjects were selected from the 11th grade class at Fort Campbell High School, where the author was employed as a teacher. Permission was obtained from the principal to conduct this study. This school is located on a military reservation at Fort Campbell, Kentucky, and all students are army dependents. The high school houses grades 10 through 12. There are approximately 475 students, ranging in age from 15 to 19.

The entire 11th grade class of 154 students was asked to complete three surveys on after-school activities. One hundred and fourteen students did complete all surveys, classes, and tests and were used as subjects to complete this study. Thirty-eight subjects were eliminated , because of incomplete data due to excessive absences or transfers to other school districts. Two subjects were eliminated because the amount of time they recorded for after-school activities for a one week period totalled more than 168 hours in a seven day week.

Description of the Instruments

A survey questionnaire was developed by the author to determine the number of hours spent by students on certain out-of-school activities. A copy of the survey is included in the Appendix. Since reliability and validity have not been established for the survey, reliability and

validity are limited to the honesty and accuracy of the students in the study.

Included in the survey was the number of hours spent watching television, reading for pleasure, completing homework assignments, working, participating in school sports, and attending other school related activities. In addition, three of these categories were subdivided. The number of hours watching television was divided into number of hours watching comedy, drama, soap opera, variety, talk shows, musicals, movies, game shows, news and sports. Pleasure reading was divided into novels, nonfiction, biographies, magazines, and newspapers. Academic reading or homework was also divided into textbooks, encyclopedias, library books, magazines, and newspapers.

Pleasure reading was defined as any reading material that was not used to complete a school assignment. Working was defined as any job, from babysitting to pumping gasoline, for which a student received pay. Household chores were not included in this category. In addition, participating in school sports was to be completed only by athletes and managers of a team. Attending a sports event as a spectator was to be counted in the other school related activities category, as was attendance at club and class meetings.

Finally, all data were to be recorded only for activities beginning after school classes were dismissed and on Saturday and Sunday. For example, homework completed in a school study hall would not be included on the survey. Time was to be recorded to the nearest half hour

according to the following scale: 0-10 minutes equals 0 minutes, 10-30 minutes equals $\frac{1}{2}$ hour, and 30-60 minutes equals 1 hour.

The instrument used to measure the achievement of subjects in reading was the Gates-MacGinitie Reading Tests, Survey F. Survey F is designed for use in grades 10 through 12. The three subtests for Survey F are Speed and Accuracy, Vocabulary, and Comprehension. The grade average reliabilities are Speed (number attempted), .72; Speed (number correct) .80; Vocabulary, .90; Comprehension, .88. (Gates & MacGinitie, 1969b).

The Speed and Accuracy Test consists of 36 short paragraphs of relatively equal difficulty. At the end of each paragraph is a question or incomplete sentence followed by four words. The student must choose the word that best answers the question or completes the sentence. The time limit is four minutes. There are two scores for the Speed and Accuracy Test, one for number of items tried and the other for number of items correct. Only the standard score for number of items correct was used in this study.

In the 50 item Vocabulary Test, the student was given a test word followed by five other words and asked to choose the word most nearly the same as the test word. The test words were arranged in order from relatively easy to more difficult words.

The Comprehension Test measures the student's ability to read paragraphs with understanding. The test consists of 21 passages and 52 blanks. For each blank, there is a choice of five words from which the student must pick the word which best completes the passage. The passages are arranged in order from relatively simple to more difficult passages.

The other measure of academic achievement used was the letter grades for each student in 11th-grade English and U.S. history for the nine week grading period in which the three surveys were administered. These courses were chosen because of the relatively heavy reading requirement in each and because all 11th-grade students are required to take these subjects. All students used the same reading level textbooks in the English and history classes. Each English and history class was heterogeneously composed and no grouping by abilities was applied in class.

The 11th-grade students were not necessarily enrolled in the same math, science, or elective courses. These courses were chosen according to interest and ability. For this reason, math, science, and other class grades were not used as measures of school achievement.

Procedure

The after-school activities surveys were administered to all students in the 11th-grade history classes by the author and the other history teacher. Attached to the survey were a letter explaining the study and an instruction sheet for completing the form. A copy of the letter and instruction sheet are included in the Appendix.

The first survey was given January 22-28, 1979. The students took the survey home, recorded their activities without supervision, and returned the surveys to school the following Monday. However, only one half of the surveys were returned. This method was abandoned for the supervised method of recording activities, which has been successfully

used by several investigators (Busch, 1978; Long & Henderson, 1973; Ridder, 1963; Scott, 1956).

Next the students were given the surveys at the beginning of each history class Tuesday through Friday and asked to fill in the activities for the previous afternoon and night. On Mondays the students filled in activities completed during the weekend. The surveys were collected every day and stored in the classroom. The three surveys were conducted for the weeks of February 12-18, February 26-March 4, and March 12-19, 1979. At the end of the third week, hours for each category were added then divided by three to obtain the average hours for the three week period for watching television, reading for pleasure, completing homework assignments, working, participating in school sports, and attending other school related activities.

During March, 1979, the Gates-MacGinitie Reading Tests, Survey F, were given to all subjects enrolled in 11th-grade English classes. The test was administered by the two 11th-grade English teachers as part of the regular testing program at the school. The tests were scored by the English teachers and the author. The raw score for each test was changed to standard scores using Tables 1-5 of the Teacher's Manual (Gates & MacGinitie, 1969a). The standard score is a two-digit number from 1-99 and is an equal-interval scale. The mean standard score for each of the three tests is 50 with a standard deviation of 10.

At the end of the nine weeks grading period from January 22-March 30, 1979, the two 11th-grade English teachers and two 11th-grade history

teachers recorded the letter grades for each student in the study. The author assigned all letter grades a number based on a scale from 1-13 with an "F" receiving 1 and an "A+" receiving 13.

CHAPTER III

RESULTS

Means and standard deviations were computed for all activity hours, grades, and test scores. These data are summarized in Table 1. The mean for weekly television viewing hours for 11th-grade students was 15.66. The mean academic grades were 6.69 for English and 7.17 for U.S. history. The mean scores for the Gates-MacGinitie Reading Tests were Speed and Accuracy, 50.10; Vocabulary, 48.11; and Comprehension, 49.09. The mean hours for weekly after school activities were pleasure reading, 2.07; homework, 3.04; work, 3.48; sports, 3.00; and other school related activities, 1.00.

A computer was utilized using the Pearson-Product Moment technique to determine correlation coefficients between all possible pairs of the 11 variables. These are summarized in Table 2. The critical values for Pearson's correlations using a two-tailed test for 100 degrees of freedom are .195 at the .05 level and .254 at the .01 level.

A significant negative correlation was found between television viewing hours and history grades, $r(100) = -.218$, $p < .05$. No significant correlation was found between television viewing hours and English grades. Television viewing hours were inversely correlated with both the Vocabulary subtest, $r(100) = -.212$, $p < .05$, and the Comprehension subtest, $r(100) = -.199$, $p < .05$. However, no significant correlation was found between television viewing hours and Speed and Accuracy scores. An analysis of

TABLE 1
Means and Standard Deviations of
Television Hours, Academic Grades,
Achievement Scores, and After School Activities Hours

	\bar{X}	SD
Television	15.66	9.52
English	6.69	3.02
U.S. History	7.16	3.52
Speed and Accuracy	50.10	11.54
Vocabulary	48.11	9.49
Comprehension	49.09	10.57
Pleasure Reading	2.07	2.53
Homework	3.04	2.47
Work	3.48	7.66
Sports	3.00	4.14
School Related Activities	1.00	2.13

Note. $n = 114$ for each group

television viewing hours and after-school activities revealed no significant correlation between television viewing hours and hours for pleasure reading, homework, working, school sports, or other school related activities.

After investigating the data, reporting other significant correlations was felt to be valuable. First, the scores for the reading achievement tests were significantly related to English grades: Speed and Accuracy, $r(100) = .508$, $p < .01$; Vocabulary, $r(100) = .574$, $p < .01$; and Comprehension, $r(100) = .549$, $p < .01$. Also, the reading achievement tests were significantly related to history grades: Speed and Accuracy, $r(100) = .643$, $p < .01$; Vocabulary, $r(100) = .696$, $p < .01$; and Comprehension, $r(100) = .667$, $p < .01$. A significant correlation was also found between English grades and history grades, $r(100) = .769$, $p < .01$.

Second, pleasure reading hours were significantly related to English grades, $r(100) = .205$, $p < .05$, and to history grades, $r(100) = .205$, $p < .05$. Significant correlations were also found between homework hours and grades in English, $r(100) = .271$, $p < .01$, and in history, $r(100) = .203$, $p < .05$. There was a significant correlation found between pleasure reading and homework hours, $r(100) = .231$, $p < .05$. In addition, pleasure reading hours were significantly related to two reading achievement subtests: Speed and Accuracy, $r(100) = .224$, $p < .05$; and Vocabulary, $r(100) = .262$, $p < .01$. However, no significant relationship was found between pleasure reading hours and Comprehension scores.

Third, a significant negative correlation was found between hours spent working and each of the following: English grades, $r(100) = -.222$, $p < .05$; history grades, $r(100) = -.241$, $p < .05$; and Vocabulary

TABLE 2

Correlation Coefficient Matrix of Television Hours, Academic Grades
Achievement Scores and After School Activities Hours

	TV	ENG	HIST	SP & ACC	VOC	COMP	READ	HOME- WORK	WORK	SPOR	ACT
Television	--	-.182	-.218*	-.127	-.212*	-.199*	.054	.025	-.191	-.029	.074
English	-.182	--	.769**	.508**	.574**	.549**	.205*	.271**	-.222*	.234*	.008
History	-.218*	.769**	--	.643**	.696**	.667**	.205*	.203*	-.241*	.300**	-.066
Speed & Accuracy	-.127	.508**	.643**	--	.743**	.773**	.224*	.067	-.164	.201*	.159
Vocabulary	-.212*	.574**	.696**	.743**	--	.879**	.262**	.068	-.218*	.191	.029
Comprehension	-.199*	.549**	.667**	.773**	.879**	--	.172	.020	.096	.129	.146
Pleasure Reading	.054	.205*	.205*	.224*	.262**	.172	--	.231*	-.191	.104	.065
Homework	.025	.271**	.203*	.067	.068	.020	.231*	--	-.091	.099	-.033
Work	-.191	-.222*	-.241*	-.164	-.218*	-.096	-.191	-.091	--	-.160	-.029
Sports	-.029	.234*	.300**	.201*	.191	.129	-.104	.099	-.160	--	.070
Activities	.074	-.008	-.066	.159	.029	.146	.065	-.033	-.029	.070	--

*p < .05

**p < .01

scores, $r(100) = -.218$, $p < .05$. On the other hand, time spent participating in sports was significantly related to the following: English grades, $r(100) = .234$, $p < .05$; history grades, $r(100) = .300$, $p < .01$; and Speed and Accuracy scores, $r(100) = .201$, $p < .05$.

CHAPTER IV

DISCUSSION

This investigation studied the relationships between television viewing hours and both measures of achievement and hours of leisure time activities. First, academic grades ranged from 1 to 13 on a 13 point scale with mean grades for English and history both being in the "C" range. The mean scores for each subtest of the Gates-MacGinitie Reading Tests, Survey F, were well within one standard deviation for the standard score of 50. In addition, the mean hours of television viewing were within the current national average range for teenagers (Busch, 1978; Comstock et al., 1978; Gallup, 1977; Heerman & Callison, 1978). The mean hours for pleasure reading, homework, and sports were consistent with other findings (Himmelweit et al., 1958).

The investigation of correlations indicated 11th-grade students who watched less television achieved higher grades in history and higher Vocabulary and Comprehension scores. The null hypotheses of no relationship between the above variables are rejected. Correlations between television and both English grades and Speed and Accuracy scores were negative though these correlations were not significant. Thus, the null hypotheses of no relations between these variables are accepted. These findings lend some support to previous studies indicating that teenage television viewing is related to achievement (Furu, 1971; Nelson & Rothney, 1964; Ris, 1976).

As was predicted, television viewing hours were not significantly related to hours spent in either pleasure reading or homework. This supports findings in earlier studies that television has little or no effect on pleasure reading and homework (Himmelweit et al., 1958; Maccoby, 1951; Northey, 1962; Schramm et al., 1961). Also, television viewing hours were not significantly related to hours spent in either school sports or other school related activities, which supports previous investigations (Himmelweit et al., 1958; Lazarus, 1956; Riley et al., 1949, Schramm et al., 1961). The correlation between television viewing hours and working hours was not significant but was in the negative direction.

Investigating other correlations revealed academic achievement was moderately related to reading time and reading achievement scores. This supports Carterson's (1976) view that children who enter secondary schools without the ability to read and write are seriously handicapped. First, students with higher scores on the three reading subtests achieved higher grades in both English and history. Students who earned high grades in English earned high grades in history. Also, students who spent more time reading for pleasure and completing homework assignments earned higher grades in both English and history. In addition, time spent for pleasure reading was significantly related to time spent completing homework assignments. Finally, those who had a higher number of hours for pleasure reading scored higher on the Speed and Accuracy and the Vocabulary subtests, but no significant correlation existed between pleasure reading hours and Comprehension scores. This is consistent with findings that teenagers high in reading ability read more independently

and earn higher grades in school (Busch, 1978; Furu, 1971).

Students who spent more time working after school made lower grades in English and history and scored lower on the Vocabulary subtest. However, no significant correlation existed between hours spent working and either Speed or Accuracy or Comprehension scores.

Students who spent more time participating in school sports received higher grades in both English and history. This may reflect the high academic standing required by all athletes at this high school. However, this result may not necessarily be generalized to schools in which a similar policy is not enforced.

Although attempts were made to control conditions in the classrooms by using the same textbooks and heterogeneous grouping, academic grades as a measure of achievement were limited by the subjectivity of each teacher. Another limitation of the study was the reliability and validity of hours reported for the after-school activities survey. This weakness is recognized for any self-report measure, but there appears to be no practical alternative for gathering this kind of data. Measures were taken to try to control this situation by having students fill out the surveys in class under teacher supervision and by averaging times spent in each category for the three weeks in order to ascertain typical, rather than atypical, habits of each student.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

The purpose of this study was to investigate among 11th-grade students the relationships between the amount of television viewing and both achievement and leisure time activities. A survey, developed by the author, was used to measure hours spent in after-school activities. Scores from reading achievement tests and grades in English and U.S. history were used as measures of academic achievement. One hundred and fourteen students in the 11th grade at Fort Campbell High School in Fort Campbell, Kentucky were used as subjects for the study.

Previous studies indicated that television may be directly related to achievement or indirectly related by displacing pleasure reading hours or other leisure-time activities. This study found significant negative relationships between television viewing hours and three of the five measures of achievement. No evidence was found that television was displacing pleasure reading, homework, or any other after-school activity. However, four after school activities were found to be related to academic grades. This suggests a need for further study of television's interaction with these variables as suggested by Schramm (1977).

Since amount of television viewing seems to have a negative relationship to achievement and reading has a positive relationship to achievement, perhaps teachers, parents, and broadcasters should work more closely to effectively combine both mediums. Suggestions include

supervising students' viewing (Larrick, 1975), discussing and analyzing programs in the classroom (Potter, 1978), reading books tied to a television plot or character (Hamilton, 1974), or organizing community action groups to encourage broadcasters to produce better programs (Larrick, 1975).

Recommendations For Future Research

1. For valid correlations between television viewing and academic grades, it is suggested that a future study be made in which teachers' evaluations of students be controlled by adhering to the same grading scales and practices and similar assignments and tests.

2. It is suggested that a future study be made using achievement tests in several subjects as well as reading.

3. Since this study found some relationships between television viewing hours and achievement for 11th-grade students, a future study should be made comparing correlations of television viewing hours and achievement for different grade levels.

4. It is highly recommended that a future experimental, rather than survey, study be made to ascertain any causal relationships between television and achievement. Measures of intelligence as well as achievement should be used, and possible interactions between television and both intelligence and leisure-time activities should be tested. A major drawback of this type of study is controlling amount of viewing. Unless parents volunteer to participate in this type of study, little can be done to monitor accurately the amount of viewing or nonviewing in individual homes while maintaining a family's right to privacy.

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APPENDIX

AFTER SCHOOL ACTIVITY SURVEY

Name _____

Week of _____

Activities

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Total
I. Television								
Comedy								
Drama								
Soap Opera								
Variety								
Talk Show								
Musical								
Movie								
Game Show								
News								
Sports								
Other _____								
II. Pleasure Reading								
Novel								
Nonfiction								
Biography								
Magazines								
Newspapers								
Other _____								
III. Academic Reading								
Textbooks								
Encyclopedias								
Library Books								
Magazines								
Newspapers								
Other _____								
IV. Work								
V. School Sports								
VI. Other School Related Activities								

January 22, 1979

Dear Juniors:

I am asking you to volunteer to take three surveys concerning after school activities for high school students. This study is to fulfill part of the requirements for completing a Master of Arts Degree from Austin Peay State University in August.

Please fill in the amount of time, to the nearest half hour, you participate in each activity. The scale to be used is 0-10 minutes = 0 minutes, 10-30 minutes = $\frac{1}{2}$ hour, and 30-60 minutes = 1 hour. For example, if you read or watch television for 5 minutes, fill in 0. However, if you read a magazine for 90 minutes, fill in $1\frac{1}{2}$ hours. If you do not know in which category to place an activity, fill in the "other" blank and the appropriate time. If you have any questions, please see me in room 16.

To insure an accurate study, it is important that you be honest in filling in the survey. Also, in order that I may reach my deadlines at Austin Peay State University, you must turn in the surveys on Monday. The first survey is due Monday, January 29, 1979. The other two surveys will be in February and March.

Thank you for assisting me in this study.

Yours truly,

Barbara J. West
Social Studies Instructor

February 12, 1979

To: Juniors

From: Ms. West

Thank you for continuing to participate in my study on after school activities of teenagers. Since we only received 75 surveys last time, I have decided to try a new method of collecting data for the next surveys. I hope this method will be more convenient for you. Here are the instructions:

1. Each day in your U.S. history class you will fill out your activities for the day before. Then fold your paper, put your name on the outside, and hand the survey to your instructor. The survey will be kept in a file at school.

2. Please fill in the amount of time, to the nearest half hour, you participate in each activity.

0-10 minutes = 0 minutes

10-30 minutes = $\frac{1}{2}$ hour

30-60 minutes = 1 hour

3. To help you recall what you did the day before, it may be helpful to think what you did hour by hour.

4. Students who have early dismissal or late arrival may include activities that may occur earlier in the day. If you have any questions, please see me in room 16.