The Effect of Guided and Unguided Television Viewing on Vocabulary and Comprehension of Fifth Grade Viewers

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THE EFFECT OF GUIDED AND UNGUIDED TELEVISION VIEWING ON VOCABULARY AND COMPREHENSION OF FIFTH GRADE VIEWERS

by

Cheryl Allen

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Education in the Department of Curriculum and Instruction State University College at Brockport

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ABSTRACT

In this study, two questions were posed for examination. The first problem measured the significance in the gain scores of comprehension and vocabulary presented in a television program to students viewing a telecast with a guided purpose and to students viewing a telecast unguided. Students who watched the guided program yielded growth in both areas of comprehension and vocabulary. However, satisfactory academic growth was observed also in unguided television viewing.

Secondly, differences were measured in posttest scores of comprehension and vocabulary presented in a television program between students viewing a telecast with a guided purpose and students viewing the telecast unguided.

No significant difference was found between the posttest scores of the two groups.
CHAPTER I

STATEMENT OF THE PROBLEM

Purpose

Research indicates that television has a positive effect on motivation, skill development, retention and attitudes toward learning (Yates, 1974; Ayers, 1973; and Rigge, 1972). Educators are accepting and using television as a learning tool because of its influence on the language skills. For example, Witty (1965) cites evidence in his study that television viewing improves and extends a child's vocabulary. However, the question arises is guided television viewing more effective than unguided viewing? This writer proposes to investigate the question of viewing television with a guided purpose and examining the effect that guided viewing has on comprehension and vocabulary through a study designed specifically for this purpose.

Need for the Study

John Dewey's philosophy advocated functionalism. He emphasized the importance of a child's interest and motivation in the learning process (Hilgard and Bower, 1975). In a 1966 study, most children were found to spend over twenty hours a week viewing television (Burns, 1966). Another study in 1974 showed girls viewing time to average twenty-eight hours and boys viewing time to average thirty hours per week (Starkey and Swinford, 1974). In eight years, these studies reveal an increase of approximately fifty percent more hours spent watching television.
The majority of the research studies on the influence of television viewing concentrate on the relationship of television to improving reading skills. In Atkin and Gantz's study (1974) of children's response to broadcast news, verbalization increased among peers and with parents (Atkin and Gantz, 1974). Several other studies examined the effects of the program, "Sesame Street." Progress was evidenced in children's basic skills as well as in higher areas of cognitive activity by those regularly viewing this broadcast (Ball and Bogatz, 1972; Rigge, 1972). In Glendale, Arizona, students were involved in a weekly improvement course in reading. In its evaluation, participants showed a definite improvement in reading (Werneken, 1971). The Appalachia pre-school study showed similar results. Techniques used encouraged active participation during viewing time for repetition of letter sounds and learning cognitive skills (Division of Research and Evaluation, 1970).

The literature further reveals that regardless of socioeconomic differences, there is no significant difference in what children learn from television viewing. In 1961, statistics showed eighty-eight percent of the population to have at least one television set in their homes (Postman, 1961). Recently, Albert Shanker, president of the American Federation of Teachers, cited evidence that now ninety-eight percent of America's homes have a television set even if they are often too poor to afford plumbing facilities (American Federation of Teachers, 1976). In an interest survey taken of seventh grade students, reading selections based on television characters were chosen favorites regardless of socioeconomic background (Hamilton, 1972). Oklahoma seventh
graders were also surveyed, and it was found that reading and viewing interests were not related to socioeconomic status (Penny, 1973).

There is a definite need for those concerned with education to examine the effect of television on reading. Perhaps in this way, another method of teaching and supplementing reading instruction can be used successfully.

Questions of the Study

1. Is there a significant difference in posttest scores of comprehension and vocabulary presented in a television program between students viewing a telecast with a guided purpose and students viewing the telecast unguided?

2. Is there a significant difference in pretest to posttest gain scores of comprehension and vocabulary for students viewing a telecast with a guided purpose and for students viewing the telecast unguided?

Definition of Terms

Several definition of terms are necessary for this study. They are: reading, television, educational television, guided viewing, unguided viewing, comprehension and using television in the classroom.

Reading is the meaningful interpretation of letters and symbols on the printed and written page (Harris, 1962).

Television is defined as one of the instruments of communication conveying identical messages to large numbers of persons who are often physically separated (Burns and Lowe, 1966). For the purpose of this paper, educational television will be defined as instructional programs viewed on those channels designated as such.
Guided television viewing is defined by this writer as written instructions to be followed during the course of the broadcast. Conversely, unguided television viewing is defined as not having any written instructions to be followed during the course of the broadcast.

Comprehension is the literal understanding of a television program presented to fifth grade students and the critical interpretation of it (Anderson, 1966). This will be measured by written responses to questions designed for the purpose of measuring the degree of understanding.

The last term to be defined is using television in the classroom. This section will include possible ways that teachers at any grade level can implement the television medium as a part of their curriculum or in some cases, use the television medium as the entire curriculum.

Limitations

There are certain limitations that need to be recognized in the design of the study. Vocabulary and comprehension will be the only variables analyzed for the purpose of this study. It will survey only one population of fifth grade students in a single school district. Because of the availability of this population to this writer on such a limited basis, the study will be evaluated on a single exposure to a selected program on educational television.

In addition, this study is limited because the experimental group has specific purposes set for viewing the telecast, and it will not test if these specific purposes interfere with the learning of the other material presented.
Summary

Research has shown a need to investigate the effect of television on learning. To examine the effect of television, a study will be made of a fifth grade using a program selected on an education television station to analyze vocabulary and comprehension skills.
CHAPTER II

REVIEW OF THE LITERATURE

**Purpose**

The purpose of this study is to examine the effect of guided television viewing on vocabulary and comprehension of fifth grade students.

The research related to this study has been divided into the following categories: Television as a Learning Tool, Need for Critical Viewing, Educational Television, and Uses of Commercial and Educational Television in the Classroom.

**Television as a Learning Tool**

Television is one of the mass media having a tremendous effect in the lives of today's children. Television provides the student with a supply of information, knowledge, news, romance, and advertisements, without having to set foot outside the door (Harris, 1971). History, such as the moon walk and Presidential debates, is presented in the making. Schramm (1961) states that television can present information which is harder to present through pictures or sound or print alone. It is a medium taking the viewer to places that he can not see otherwise.

In years before the child begins reading, when his horizon is still narrow and his curiosity boundless, when almost everything beyond his home and his little family circle is new—that is the time when television has a unique opportunity to contribute information and vocabulary skill (Schramm, 1961, p. 77).
Schramm pointed out that an event seems more realistic to a child when he sees it happen. He cited statistics that show children who are exposed to television come to school with larger vocabularies and more familiarity with wider worlds, and they are better able to relate to their school work. For slower children, the television can make up for a lack of motivation because it absorbs them and leads them to more incidental learning (Schramm, 1961).

Television has been referred to as the wonder child of the mass media (Bluem, 1966). Eighty-six percent of seventh grade subjects in an attitude survey preferred learning via the television medium (Ayers, 1973). It provides its audience with a face to face contact reaching the entire population.

Television has the advantage of being visual. Studies show one learns through sight more quickly and comprehensively (Gattegno, 1969). In a news study, the illustrations used had an influence on the retention of the message. However, there were no differences found in moving versus still mode presentation (Findehl, 1971).

Television has been observed to command more complete attention from its audience than other medium, especially for children. Gadberry's study (1974) showed children exhibited less motor and verbal activity during television viewing compared to their level at play.

Most information learned from television is retained well (Klapper, 1960). Retention is not affected by a black and white versus a color presentation (Toronto Board of Education, 1972). However, like any other medium, the manner in which it is used will determine how effective it relays its message (Bluem, 1966). Many production
techniques have been found to influence the overall effectiveness of
the communication. These techniques may include format, pace, and
camera angles (Klapper, 1960).

Critical Viewing

Seldes (1968) points out that through television and other mass
media, Americans are a well-informed nation. Because of the interest
created by the television set, listeners must become thoughtful critics.
The Bulletin of the American Society of Newspaper Editors defined
television criticism.

Television criticism means to report, interpret, and evaluate
from a background of knowledge the activities of the television
industry, its programming and its responsibility in society
to alert and involve the viewing public so that it will demand
and get the television fare which is truly in its own interest
(Seldes, 1968, p. 344).

Dr. Frank Stanton, in testimony before the F.C.C., commented
that in free societies, sometimes the fastest way to grow is often the
wrong way. He said that the public must be critical in accepting what
is good and in rejecting what is bad. Americans are educated to become
useful and responsible members of society after leaving the classroom.
This means that an active part in the evaluating of the media must be
taken rather than being passive recipients (Boutwell, 1962).

Education and culture have been included under the Television
Code of the National Association of Broadcasters. It is stated as
follows:

Education via television may be taken to mean that process by
which the individual is brought toward informed adjustment
to his society. Television is also responsible for the
presentation of overtly instructional and cultural program
scheduled so as to reach the viewers who are naturally drawn
to such programs, and produced so as to attract the largest
possible audience (Schramm, 1960, p. 637).
There is also a clause expressing the responsibility of television broadcasting toward children.

The education of children involves giving them a sense of the world at large. Crime, violence, and sex are a part of the world they will be called upon to meet, and a certain amount of proper presentation of such is helpful in orienting the child to his social surroundings. However, violence, and illicit sex shall not be presented in an attractive manner, nor to an extent such as will lead a child to believe that they play a greater part in life than they do. They should not be presented without indications of the resultant retribution and punishment (Schramm, 1960, p. 640).

Television as a tool for classroom teaching has been well demonstrated according to Schramm (1961) because it commands both eyes and ears in its absorbing quality, a most distinguishing feature. It plays an important role in the developing of children's communication skills. The proficiency of these communication skills has a direct influence on a child's reading ability. It is stated that "television, films, newspapers, and magazines are 'languages' in more frequent use than books" (Boutwell, 1962). This extensive use makes it even more necessary to set prejudices aside to evaluate the media objectively. If the mass media increased the number of individuals who do not think independently, the nation will not be safe (Seldes, 1968).

In Using Mass Media in the Schools, Boutwell (1962) has established three goals for developing television appreciation. First, it is necessary to develop discrimination in choosing programs. Second, the television must be put in its proper place among children's activities. Third, encouragement must be given to the child to communicate his reactions to stations and producers. Because of a child's great interest in the television, it is the opportune medium to assist the child with his communication skills.
Educational Television

In research and in articles discussing commercial programming, references are made to the facet of television designed for the sole purpose of education, educational television. It brings master teachers into classrooms. It supplements the social studies curriculum with public affairs, fine arts and science (Schramm, 1961 and Kern, 1959).

Gilbert Seldes in his book, The New Mass Media, states three goals of the continually growing educational television: the formal process of learning, the training of specific skills, and the awakening or a satisfying of a desire to know all that is finest in the accomplishment of mankind past and present that we distinguish as "culture."

Specific programs exposing people to "high culture" through television include "King Lear," "Othello," and "Macbeth" (Postman, 1961). It is the responsibility of the educator to qualify the enthusiasm for the television set with thoughtful criticism. Several researchers agree with Seldes and Postman that guided viewing should be encouraged (Frank, 1969 and Lyle and Hoffman, 1971).

Our guide is the historical principle that every major change in the way people communicate with one another is followed by a significant change in the structure of society (Seldes, 1968, p. 9).

The opinion has also been expressed by Seldes that intelligent viewers should accept the responsibility of encouraging good elements in broadcasting. They should express different points of view, employing listening and speaking skills.

In 1971, Chautauqua County began the operation of educational television through the Board of Cooperative Educational Services. Any member school could request a copy of a certain program. It could be
video-taped, and there was a master copy used from which as many copies as requested could be made. The tapes could be erased, and parts of programs could be updated. For slower learners, the repetition of a program with the video rerun showed a definite gain in learning (Kern, 1959). Some similar results were noted in a study conducted on the program "Sesame Street" (Ball and Bogatz, 1971). The skills that were best learned were those skills that were reinforced the most on the program. The same study concluded that the children who watched "Sesame Street" more frequently did learn the most. It was also evidenced that children who watched the telecast at home without any adult supervision made at least as many gains as those viewing the program in school (Ball and Bogatz, 1971).

Irwin (1973) noted reading improvement through the use of educational television in the Uniondale Free School District. GERTS (Graphics Expression Reading Improvement System) was an eight step process: picking a topic, doing research, preparing graphics, writing a script, practicing the reading of a script, recording a run through, evaluating the tape, and recording a final tape. The program was intended for students experiencing reading difficulties. It capitalized on the importance that television plays in the life style of today's children, especially the disadvantaged, but not exclusively. Dr. Irwin, superintendent of the Uniondale Free School District, noted that students in the program experienced four times their expected reading growth. Improvement in writing and speaking skills was also noted. A remarkable improvement was noticed in self image as well. Students in the remedial program considered themselves fortunate rather than penalized.
Uses of Commercial and Educational Television in the Classroom

The literature suggests several types of activities related to television that might be useful in aiding classroom learning. Three of these activities are: a comparison between television and literature, a field trip to a television studio, and a course in television.

Television can be systematically approached as any other literature form. It is the responsibility of the teacher to encourage a student to select a good program by announcing the viewing time of those having value and worth. Then a story such as Ibsen's Doll House might be read and discussed before viewing. Such preparation might assist the students in sharpening their senses to social context and social prejudice (Postman, 1961). After viewing the telecast, a pre-formulated question or questions may be discussed. What Neil Postman has referred to as the cross-media analysis of television and literary form such as the above will help students understand the structures of literature with neither form being considered inferior (Postman, 1961).

As an activity, a field trip can be made to a station to see its operation. Surveys can be taken of television viewing and analyzed. William Boutwell (1962) has also pointed out television can be used directly as a springboard to reading. Term papers can be researched on topics such as the history of television or a studio set-up. A review could be made using the American family life as television interprets it.

Another means of incorporating television into schools is to offer a course in television. For example, an assignment can be made to keep a log of all the television programs watched during the semester, and it can be noted at the end of the semester if there was any
and many teachers hesitate to implement new techniques. Therefore, ongoing research in the effectiveness and utilization of television for learning is necessary. However, it is the opinion of this writer that if the medium of television can be used constructively, a child's communicative skills can be developed by the use of a medium that is appealing and relevant to him.
CHAPTER III

THE RESEARCH DESIGN

Purpose

This research study is concerned with the overall effectiveness of guided television viewing as measured by results upon fifth grade students.

The Hypotheses

The hypotheses investigated in this study were as follows:

1. There is no significant difference in posttest scores of comprehension presented in the program between students viewing a telecast with a guided purpose and students viewing the telecast unguided.

2. There is no significant difference in posttest scores of vocabulary presented in the program between students viewing a telecast with a guided purpose and students viewing the telecast unguided.

3. There is no significant difference in pretest to posttest gain scores of comprehension presented in the program for students viewing a telecast with a guided purpose and for students viewing the telecast unguided.

4. There is no significant difference in pretest to posttest gain scores of vocabulary presented in the program for students viewing a telecast with a guided purpose and for students viewing the telecast unguided.
Methodology

Subjects

The subjects involved in this study were intermediate level students attending a rural school in a predominately lower middle class neighborhood.

A total of one hundred and two students participated, all fifth graders (46 males, 56 females).

Instruments and Procedure

On Tuesday, January 25, 1977, at 2:30 p.m., the program, "Community of Living Things" on Rochester, New York's educational broadcast station, Channel XXI, was viewed on one television set, with a 25-inch screen. All subjects used the cafeteria as the special viewing room.

Prior to making the assignments, the groups were matched according to the pretest scores. This test was administered on January 18, 1977, seven days prior to the study. Because students may have prior knowledge of the subject matter to be presented, they were asked to take a fifteen minute pretest (Appendix I). The test was administered in the classrooms, and the subjects were told that the quiz had no influence upon their grade, but they were asked to do their very best job.

The prepared multiple-choice pretest questions tested prior vocabulary and content knowledge of the subjects. These questions met the standards defined by William Hedges in his text, Testing and Evaluation for the Sciences as interpreted by Dr. John Glenzer (1971) of SUNY College at Fredonia, Fredonia, New York. Dr. Glenzer delineates thirteen rules that one should follow to design a multiple-choice question.
(Appendix 2). They were validated by a committee of three professionals in education prior to administering them to the subjects (Appendix 3). The subjects were instructed to circle the number corresponding to their answer choice on their papers. To control for the limited reading ability of some subjects, the multiple-choice questions were read by the experimenter to all the subjects as they responded on their papers. The pretests were then collected by the experimenter.

On the day of the television presentation, Mr. Biancolillo, principal of the Byron-Bergen Elementary School in the Byron-Bergen School District, Bergen, New York, made certain that there were to be no interruptions in the cafeteria during the viewing period and thirty minutes after it. In this way there was no unusual pressure placed on the fifth grade subjects.

Every subject was required to bring one pencil to the cafeteria. The students in the experimental group were assigned their seats as they entered the room on the right side of the cafeteria. The control group students were assigned their seats as they entered the room on the left side of the cafeteria. In each of the experimental and control groups, there were 51 students. The experimenter then told the students that they were going to be watching a program on Channel XXI. It was stressed during this time that there was to be no interaction or communication between subjects in either the experimental or control group.

The experimenter passed out the posttest to the experimental group (Appendix 4). This group was told to read the questions on their paper, and to ask the experimenter if there were any words which they were unable to read. They were instructed, however, not to do any
writing for the duration of the broadcast. The control group was told that they would be asked to answer some questions concerning the telecast after they had viewed it.

The 20-minute black and white telecast was then viewed by all the subjects. After the telecast ended, the experimental group was told to complete the posttest which they had previewed earlier. The posttest was then given to the control group. They were also instructed to read their questions over, and were told that the experimenter would help them with any word that they were unable to read. The subjects were instructed to circle the number corresponding to their answer choice on their paper. The cafeteria was adequately lighted so that the subjects had no difficulty while working on their posttests. Both groups were given as much time as they needed to complete the posttest. They were told to turn their papers over to indicate to the experimenter that they had completed their posttests. The experimenter collected the posttests from both groups after all subjects had finished. The groups were then excused to return to their appropriate classrooms.

Statistical Design

Two independent t-tests were computed to determine if there was a significant difference in posttest scores between the experimental and control groups in both comprehension and vocabulary. Correlated or dependent t-tests were computed to evaluate the mean increase scores in both comprehension and vocabulary.
Summary

This study was designed to examine the effect that guided television viewing has on comprehension and vocabulary. The results of the study were analyzed by the $t$-test for correlated samples. Mean increase scores of experimental and control groups were compared. This information was then applied in the program for dependent or correlated $t$-scores at the Statistical Laboratory at the State University College at Brockport to test the significance of differences in comprehension and vocabulary development of the experimental and control groups.
CHAPTER IV

ANALYSIS OF DATA

Purpose

The purpose of the current study is to examine the relationship between television viewed by fifth grade students with a guided purpose and television viewed unguided and to compare the performance of these two groups in vocabulary and comprehension.

Statistical Analysis

Null hypothesis one states that there is no significant difference in posttest scores of comprehension presented in the program between students viewing a telecast with a guided purpose and students viewing the telecast unguided. Null hypothesis two states that there is no significant difference in posttest scores of vocabulary presented in the program between students viewing a telecast with a guided purpose and students viewing the telecast unguided. Two independent $t$-ratios were calculated to determine if there was a significant difference between the experimental and control groups in both comprehension and vocabulary. The results of these $t$-tests are displayed in Table 1.

At the 0.01 level of significance for non-directional (two-tailed) tests, and at 100 degrees of freedom, 2.63 is needed for significance. The $t$-ratio in comprehension was calculated at .73. In vocabulary, the $t$-ratio was determined to be .41. Both of these scores fall below 2.63.
needed for significance. Thus, the data failed to reject both null hypotheses. There is no significant difference in posttest scores of comprehension and vocabulary presented in the program between students viewing a telecast with a guided purpose and students viewing the telecast unguided.

Null hypothesis three states that there is no significant difference in pretest to posttest gain scores of comprehension presented in the program for students viewing a telecast with a guided purpose and for students viewing the telecast unguided. Null hypothesis four states that there is no significant difference in pretest to posttest gain scores of vocabulary presented in the program for students viewing a telecast with a guided purpose and for students viewing the telecast unguided. In this study, the $t$-test for correlated or dependent samples tested the pretest and posttest gain scores of comprehension and vocabulary for both the experimental and control groups. Table 2 presents the $t$-test results of the gain scores.
Table 2
Dependent or Correlated t-Test Results of Gain Scores

<table>
<thead>
<tr>
<th></th>
<th>COMPREHENSION</th>
<th>VOCABULARY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Control</td>
</tr>
<tr>
<td>No. of subjects</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Pretest mean</td>
<td>2.08</td>
<td>2.16</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest mean</td>
<td>3.35</td>
<td>3.12</td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference between means</td>
<td>1.27</td>
<td>0.96</td>
</tr>
<tr>
<td>Standard Deviation of differences</td>
<td>0.28</td>
<td>0.28</td>
</tr>
<tr>
<td>Dependent t-ratio</td>
<td>4.57*</td>
<td>3.45*</td>
</tr>
</tbody>
</table>

* p < 0.01

The alpha level of significance for nondirectional (two-tailed) tests is 0.01. The degrees of freedom are N-1 = 50. At the 0.01 level and 40 degrees of freedom, the t-table indicates that 2.78 is necessary for significance and at the 0.01 level and 60 degrees of freedom, 2.66 is necessary for significance. In calculating at the 0.01 level for 50 degrees of freedom, 2.68 is necessary for significance.

In comprehension, the calculated dependent t-ratio for the experimental group is 4.57. The t-ratio for the control group is 3.45. Because the t-ratios exceed the t value of 2.68 at the 0.01 level of significance, hypothesis three is rejected. There is a significant difference in the pretest and posttest gain scores for both groups.

The t-ratio for the experimental group in vocabulary is 4.07. The t-ratio for the control group in vocabulary is 4.83. These values
exceed the t-value of 2.68 which is needed for significance at the 0.01 level. Therefore, hypothesis four is rejected. There is a significant difference in the pretest and posttest gain scores for both groups.

**Summary**

The findings presented in this chapter yield data that failed to reject the null hypotheses of no differences in posttest scores of comprehension and vocabulary presented in a television program between students viewing a telecast with a guided purpose and students viewing a telecast unguided. However, the null hypotheses of no significance in pretest to posttest gain scores of comprehension and vocabulary presented with a guided purpose and in pretest to posttest gain scores of comprehension and vocabulary from unguided viewing were rejected.
CHAPTER V

CONCLUSIONS AND IMPLICATIONS

Purpose

The study was designed to examine the effect of guided television viewing on vocabulary and comprehension of fifth grade students.

Conclusions

The results of this study showed that vocabulary and comprehension levels of fifth grade students increased during guided television viewing. However, the results also showed growth in learning without guided television viewing.

Researchers have found a similar relationship between television and learning. Kern (1959) examined the teaching potential of television and found that television instruction can yield satisfactory results. From her research several years ago, Kern suggested that television would play a more important role in the classroom of the future.

From a review of the literature, this writer concluded that television provides both motivational and academic growth for students. This study showed that academic growth occurred during both guided and unguided television viewing. However, motivational growth was not measured in the present study.
Implications for Classroom Practice

Students should benefit from practical applications of the findings of this study. Studies show that students like to watch television, and learning is evidenced from this medium. Teachers could utilize either guided or unguided television viewing to pursue their goals of teaching vocabulary and comprehension to their students. From the results of this study, greater growth was evidenced in the learning of vocabulary even though statistics did not yield a significant difference between the experimental and control groups. From this observation, a future study might investigate gains in comprehension from guided television viewing after vocabulary had been presented first. The role that television would play, however, in the classroom would depend on the district, building, building principal, and teacher philosophies. The most important of these elements, however, would be the philosophy of the teacher because of the direct influence that teachers have upon their students.

As progress has been made in research and in the programming offered to its audience, television is being gradually accepted as a medium having substantial educational value. As more research is done which support these values, many more teachers may incorporate television in their classroom programs.

Due to the fact that television affects reading ability (Boutwell, 1962 and Irwin, 1973), consideration needs to be given to how it can best be utilized in classroom practice. Television guides from educational stations and television magazines are becoming more and more a part of the educator's library. However, classroom reading instruction
can only be successful as continuing research uncovers more effective ways of implementing television viewing as a whole or as part of the curriculum.

**Implications for Further Research**

The present study sampled a limited population drawn from a fifth grade in a rural school district in Genesee County. Further research might be conducted at other grade levels and in non-rural settings. Vocabulary and comprehension are an important part of the curriculum from kindergarten through grade twelve. However, other curriculum subjects need to be examined as well. The various ways the television medium could be utilized in curriculum planning should be studied. Teacher strategies may vary in using this medium, and an evaluation must be completed in order to determine what strategies are most effective. The question also arises as to what differences would be found comparing a group of students not using television to the groups in this study. For example, one group could be presented the same material by using only textbooks. Also, the duration of time after the posttest was administered could be extended and long-term retention could also be evaluated.

Specific diagrams were used in the study. A test could be conducted to determine if the facts presented with these diagrams were remembered easier. A study of the differences in recall by various reading abilities could yield results that would show which group of students would benefit most from television learning. Also, a study could test if more than one exposure to a broadcast would yield substantial growth in the learning situation.
Summary

The purpose of this study was to examine the impact of television learning on vocabulary and comprehension of fifth grade level students. A comparison was made between students viewing a telecast guided and students viewing a telecast unguided. The students who watched the guided telecast... program yielded growth in both areas of comprehension and vocabulary. Students who watched the program unguided also showed growth in learning in both areas of comprehension and vocabulary.

Students would benefit from an application of these findings. Presently, some negative prejudices still exist over television's use and its benefits. It is this writer's concern that the future will bring more open-mindedness toward the use of television in the classroom.

Further research remains to be done in several areas. For example, the effect of guided television viewing on other populations and grade levels needs to be examined. Studies could be conducted on students of various reading abilities to determine if one group would benefit more from this approach to instruction. Also, studies could determine if more than one exposure to a broadcast would significantly increase growth.

In conclusion, satisfactory academic growth has been observed in both guided and unguided television viewing. The extent of its use in classroom practice, however, will depend on many factors. Therefore, if the use of television is to be successful, ongoing research is necessary in order to reinforce its validity as well as suggest techniques for its continual improvement.
APPENDIX I

PRETEST

PART I

1. The fastest of organisms that moves with the help of the cilia is the
   a) bryozoan b) paramecian c) amoeba d) euglena e) jellyfish

2. This animal lives on the beach and uses its muscular feet to burrow
   at approximately 15 seconds. This animal is called
   a) bean crab b) mole crab c) clam d) snail e) flatworm

3. The heart slows down when threatened in the
   a) mole crab b) bean crab c) goldfish d) water flea e) clam

4. The organism with jelly-like feet that remains on a solid surface is
   a) amoeba b) bryozoan c) paramecian d) euglena e) jellyfish

PART II

1. Animals obtain energy mostly through
   a) exercising b) sleeping c) breathing d) hibernating e) eating

2. Most animal energy is usually used in
   a) sleeping b) muscle activity c) breathing d) eating e) hibernating

3. Insects have
   a) 6 legs b) 4 legs c) 8 legs d) 2 legs e) 10 legs

4. Winged animals use up energy because they must
   a) hunt for prey b) protect themselves c) overcome gravity
   d) digest food e) move from place to place

5. For motion, a flatworm uses
   a) a pinacle b) a tail c) a claw d) cilia e) an underside foot

6. Millipedes have two legs for each segment of the body for a total of
   a) 230 legs b) 400 legs c) 180 legs d) 150 legs e) 360 legs
RULES FOR MULTIPLE-CHOICE QUESTION CONSTRUCTION

Rules for Construction:

Rule 1 - Secure copies of standardized science tests and study the questions

Rule 2 - The stem of each test item should contain a central problem

Rule 3 - The stem should be long and the distracters brief
   A. advantages
      1. duplication will be reduced
      2. students will be able to reduce their reading time and grasp each problem more readily

Rule 4 - All irrelevant material should be omitted from the stem

Rule 5 - New items should first be written as questions

Rule 6 - The optimal number of distracters is five

Rule 7 - Double negatives should be avoided

Rule 8 - All distracters should be plausible
   A. Plausible - the answer should be reached by direct selection of the correct responses rather than by easy elimination of those that are incorrect

Rule 9 - Make sure only one option is correct

Rule 10 - Whenever an item reflects a controversial opinion, authority should be cited

Rule 11 - The correct response should not be consistently longer or shorter than the decoys

Rule 12 - The distracters should be related
   A. Forms of homogeneity - spelling, length, and sound

Rule 13 - Avoid posing test situations that are impossible, highly unlikely, or ridiculous
APPENDIX 3

PROFESSIONAL COMMITTEE

I witness that both the pretest and posttest questions for this study meet the proposed standards. They are also non-biased and valid to the best of my professional knowledge.

1. [Signature]
Maryanne Blair
Certified Teacher K-6
Byron-Bergen Elementary School
Bergen, New York

2. [Signature]
Cindy Crowley
Art Department
Byron-Bergen Elementary School
Bergen, New York

3. [Signature]
Barbara Lowe
4th grade, Team Leader
Byron-Bergen Elementary School
Bergen, New York
POSTTEST

PART I

1. Several organisms together is called a
   a) habitat  b) group  c) colony  d) unit  e) community

2. An animal with fingerlike feet is called a
   a) bryozoan  b) paramcian  c) amoeba  d) euglena  e) water flea

3. The heart pumps at a rate of over 150 beats per minute in the
   a) mosquito  b) goldfish  c) vinegar eel  d) euglena  e) water flea

4. This animal moves in a thrashing way and depends on debris for movement. This animal is called a
   a) watersnake  b) euglena  c) mosquito  d) vinegar eel  e) hummingbird

PART II

1. The blood carries water, oxygen, food and
   a) disease  b) vitamins  c) energy  d) carbon dioxide  e) minerals

2. The way an animal moves varies with the type of
   a) habitat  b) weather  c) age  d) diet  e) size

3. The fastest of the land animals have
   a) 2 legs  b) 6 legs  c) 4 legs  d) 16 legs  e) 8 legs

4. A hummingbird’s wings move like a
   a) jet  b) butterfly  c) bullet  d) bee  e) helicopter

5. The pinacles of a jellyfish can stretch ______ times its length.
   a) 10 times  b) 5 times  c) 50 times  d) 100 times  e) 20 times

6. To get to the surface for air, the mosquito uses a
   a) thrashing motion  b) whiplike motion  c) straight forward motion
   d) wriggling motion  e) hopping motion
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* Highest raw score for each group.
### APPENDIX 6

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* Highest raw score attainable is 4.

** Highest raw score attainable is 6.
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