

1954

Exploratory Studies in the Evaluation of Educational Telecasts

Sam L. Becker
State University of Iowa

Copyright © Copyright 1954 by the Iowa Academy of Science, Inc.
Follow this and additional works at: <https://scholarworks.uni.edu/pias>

Recommended Citation

Becker, Sam L. (1954) "Exploratory Studies in the Evaluation of Educational Telecasts," *Proceedings of the Iowa Academy of Science*: Vol. 61: No. 1, Article 41.
Available at: <https://scholarworks.uni.edu/pias/vol61/iss1/41>

This Research is brought to you for free and open access by UNI ScholarWorks. It has been accepted for inclusion in Proceedings of the Iowa Academy of Science by an authorized editor of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Exploratory Studies in the Evaluation of Educational Telecasts

By SAM L. BECKER

Throughout the country today a new electronic dimension is being added to many classrooms—television. A tremendous amount of effort, time, and money is being spent to produce and transmit educational television programs to the schools and it appears that this output has not yet even approached its peak. In view of this fact, one would expect to find a somewhat proportionate amount of research being carried out to evaluate television as an educational tool so that it can be determined how it can be maximally effective. Such, though, is not the case. There is a surprising dearth of such research.

It must be noted that this research is difficult. First of all, no criteria for evaluation have been firmly established. There are many variables which complicate any form of measurement. Teachers vary greatly in their ability to tie programs in with what is meaningful to the specific school situation. Schools vary in the amount of pre-program and post-program activities in which they engage for the purpose of pointing up the major points of each program. The programs are often viewed by different grade levels in different schools. Not all schools use them in conjunction with regular courses. Measurement is further complicated by the fact that many of the programs are not designed to teach objective information, which is comparatively simple to test, but rather aim at motivating the students to take a greater interest in the subject matter and, in the case of one series of programs produced by the University of Iowa during the past two years, to achieve a higher degree of personal adjustment.

Despite these limitations, it is felt by this writer that even crude research is better than none and that such research can point the way toward hypotheses which might later be established in more controlled investigations. Such preliminary investigations can also furnish clues for possible improvement of the programs until the completion of the aforementioned research.

The present investigations were concerned with parts of Iowa TV Schoolltime. This is a series of television programs produced for the past two years by the Iowa Joint Committee on Educational

Television, an organization composed of representatives of the State University of Iowa, Iowa State College, and Iowa State Teachers College. These programs, telecast over WOI-TV in Ames, were viewed in the classroom during school hours.

There were three categories of subjects for the studies here reported:

1. 622 Junior High School students in 14 schools which had been selected in a stratified-random method from among those who had viewed some of the weekly programs on Guidance which was produced by the State University of Iowa.*
2. 37 Junior High School teachers who had utilized the Guidance series in their classes, ** and
3. 56 principals and superintendents of schools and school districts within a 25-mile radius of the transmitting station who had earlier indicated that their schools were using none of the Iowa TV Schoolttime programs.

All of these investigations were carried on through mail questionnaires. A return of 75.2% was received on the student questionnaire, 70.3% on the teacher questionnaire, and 75.0% on the school administrator questionnaire. Most of the results of these studies applied to specific programs being produced at the University. Only the results that appear to have general significance are here reported.

In spite of the fact that they were not using any of the Iowa TV Schoolttime porgrams at the beginning of the current year, 64.7% of the school administrators voiced a need for educational television programs in the classroom. When asked whether they thought the need sufficiently urgent that a recommendation should be made to the school board to purchase a television set, the affirmative responses dropped to 40.6% with an additional 9.5% giving qualified answers. As can be noted in Tables I and II, there were few differences in these respects between the administrators of small town and consolidated schools as against those in Ames and Des Moines. The greatest differences were between the High School principals and the other respondents. The fact that most of the High Schools had television sets by the time this investigation was made, which wasn't true of most of the other schools, might have

*From Masters research in progress being conducted by Robert Oesterling, State University of Iowa.

**From Masters research in progress being carried on by Robert Snyder, State University of Iowa.

Table I

Question: Do you feel that there is a need for educational television programs in the classroom?

	Yes	Qualified	No	Don't know	No response	Total
City	66.7 %	11.1	11.1	3.7	7.4	100.0%
Town	60.0	20.0	20.0			100.0
Elementary*	56.6	13.03	17.37	4.35	8.7	100.0
High School	85.7		14.3			100.0
Superintendent	66.66	25.0	8.34			100.0

*Includes both Elementary and Junior High School Principals

Table II

Question: If you responded "yes" to the question of need for educational television programs in the classroom, do you think the need is sufficiently urgent that a principal or superintendent should recommend the purchase of a television set to the school board?*

	Yes	Qualified	No	Total
City	37.1%	14.8	14.8	66.7 %
Town	40.0	6.66	13.33	60.0
Elementary	26.1	13.1	17.4	56.6
High School	85.7			85.7
Superintendent	41.7	8.34	16.68	66.66

*Percentages are based on total N of each group.

affected this result to a great extent. It is interesting to note that Elementary School principals were most conservative in this respect.

The most frequent comments or qualifications made by the respondents to these questions were:

1. Educational television programs must be geared to present school programs—they must fit in with courses now being taught in the schools.

2. There are not yet enough educational programs available to make an investment in a television set worthwhile.

3. There are too many problems of good viewing facilities and set scheduling.

4. There are other audio-visual aids which should be purchased before a television set.

Science, Social Studies, and Art were the three subject matter areas in which television programs would be most profitable, according to those school administrators who stated a felt need for educational programs in the classroom. There were no major differences between the school administrators for the small school systems and those from Des Moines and Ames on this question. There were differences, as one would expect, between the High School principals, Elementary principals, and the Superintendents. These can be seen in Table III. There appears to be an interesting

Table III

Subject matter areas in which programs would be most profitable*

City		Town	
83.5	% Science	66.66	Science
83.5	Social studies	66.66	Art
50.0	Art	55.6	Social studies
22.2	Music	33.3	Guidance
16.65	Literature	11.1	Music
11.1	English	11.1	English
16.65	Current Events		
11.1	Guidance		

Elementary		High School		Superintendents	
84.7	Science	100.0	Social studies	87.5	Science
77.0	Social studies	66.0	English	62.6	Art
77.0	Art	50.0	Science	50.0	Social studies
38.5	Music	50.0	Current events	50.0	Guidance
23.05	Drama				
23.05	Literature				

*Percentage based on those responding affirmatively to the question of need for educational television programs in the classroom.

phenomenon present in these results, one that has occurred in similar research in commercial radio and television and which warrants further investigation. That is the tendency for respondents to answer such a question only in terms of the programs now being offered. This apparent tendency should be considered in the evaluation of Table III.

Within the 25-mile radius of the transmitting television station, it was found that the elementary schools which used any of the Iowa TV Schoolttime programs were smaller, on the average, than those not using the series. These averages were based only on survey respondents. Mean size of elementary schools using some of the programs was 262.39. Mean size of those not using any was 456.68. This difference was significant at the pre-set 5% level. The pri-

mary schools using some programs ranged from those with an enrollment of 80 to an enrollment of 697. Those not using any of the programs ranged from an 82 enrollment to 1104.

The investigations of pupil and teacher reactions to the Guidance programs present an opportunity to compare the two groups, though it should be done with care as questions asked of the two were not identical.

There was very little agreement among the teachers as to which programs were most effective in imparting information to the student. There was even less agreement between these ratings by the teachers and the order in which the programs were rated by students when the latter were asked which *two* programs they "liked best." This would appear to point up the question of the relationship between "liking" and "learning" or even between "liking" and "motivation." This is a subject upon which much more research is needed.

A careful evaluation of those programs in the series which student respondents indicated that they "liked best" and "liked least" produced the following possible causes for program popularity:

1. Greater deviation from lecture-type programs.
2. Unusual visual aids.
3. Demonstrations.
4. A variety of persons on the program, other than the regular program personalities.
 - a. Use of children of the same age as those viewing the programs appears to be especially effective.
5. Decreased use of technical terminology.

Other clues to factors in program effectiveness might be found in the teacher responses to the questions of why they thought some programs were most effective and others least effective. The reasons given for program effectiveness and the percentage of times each was cited are:

- | | |
|--------|---|
| 42.35% | Visual aids used effectively |
| 30.7 | Material presented in logical sequence |
| 30.7 | Information presented in interesting manner |
| 23.05 | Students very interested in subject matter |
| 19.2 | Language very suitable |
| 19.2 | Related effectively with the course |
| 11.5 | Humorous |

The reasons for programs being least effective, in most cases the reverse of the above, were:

- | | |
|--------|---|
| 38.5 % | Language too adult |
| 23.1 | Presentation of materials was uninteresting |

- 19.2 Not humorous enough
- 11.5 Not enough visual aids
- 11.5 Students not interested in subject matter
- 3.85 Visual aids poorly used
- 3.85 Material not related to the course

A question often raised among those planning television programs for in-school use is whether to put children on the program. 57.6% of the student respondents to this investigation said they liked "very much" to see students of their own age appear on the programs. 21.4% said they liked it "a little." Only 4% said they disliked seeing them either "a little" or "very much." This would appear to strengthen the similar conclusion drawn from the program analyses.

SUMMARY

The author feels that to call the summary of these findings "conclusions" might be misleading to the reader. They would better be termed "hypotheses" which must be established or discarded through further investigations.

These hypotheses are:

1. Among elementary schools, in-school telecasts will be utilized to a greater extent by those with comparatively small enrollments.
2. Science, social studies, and art are the subject matter areas in which school administrators feel television programs would be most profitable.
3. Approximately two-thirds of school administrators not now using educational television in their schools feel a need for this activity, though only two-fifths feel that the need is urgent enough to warrant recommending the purchase of a television set to the school board. High School principals are most favorable toward educational television in the classroom, Superintendents next, and Elementary principals least.
4. More school administrators would favor educational television programs and the purchase of a set if:
 - a. The programs fit better with present courses taught in the schools,
 - b. There were more educational programs available
 - c. Problems of viewing facilities and set scheduling could be solved, and
 - d. Other audio-visual materials needed in the school could first be purchased.

5. The following are factors which contribute to the effectiveness of educational programs for Junior High School students:

- a. Unusual visual aids
- b. Material presented in a logical sequence
- c. Non-lecture presentation
- d. Suitable language and avoidance of technical terminology
- e. Close relationship with the regular course of instruction
- f. Variety of persons on program, especially children of like age to the viewers
- g. Humor
- h. Material itself inherently interesting.

SAM L. BECKER

RADIO, TELEVISION. FILM DIVISION

STATE UNIVERSITY OF IOWA

IOWA CITY, IOWA