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ABSTRACT

The impact of news film on children's learning was investigated by presenting 193 fifth, seventh, ninth, and eleventh grade students with one of two versions of a newscast. The children viewed a videotape of a newscaster introducing film reports of six stories or listened to the newscaster reading the news stories. The children provided responses to questions about their general television exposure, news exposure, how they rated media credibility, why they watched the news, and what they could remember about the stories in the newscast. The results showed that a number of factors were associated with children's learning from a television newscast. The use of film in the one version helped children in both their aided and their unaided recall of the stories, and students understood more of the stories presented with film than those presented without film. There was a grade-by-film interaction so that film helped understanding in the higher grades more than it did in the lower grades. Despite the advantages of film, large percentages of children, even in the eleventh grade, did not remember or understand important hard news stories presented in the newscast, an indication that news programs for young people need to be presented in a clear and simple manner. The data also indicated that even young children understood the structure of newscasts, realizing that the most important stories were presented first, though they differentiated between importance and their own liking of the stories. (RL)

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Radio-Television Journalism Division

Children's Learning from a Television Newscast

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## Children's Learning from a Television Newscast

Communication researchers are becoming increasingly interested in the role of television in the socialization of children. They have investigated the relationship between television viewing and the learning of: aggressive behavior, prosocial behavior, consumer behavior and sex roles. They have studied also the process by which children learn this behavior.<sup>1</sup>

The bulk of this research deals with entertainment programming. Yet, the child audience for news programming is large. Atkin and Gantz report that television news viewing begins early in elementary school and increases monotonically with age.<sup>2</sup> Drew and Reeves found that nearly 15 percent of a third through seventh grade sample reported watching local television news "almost every day" while another 32 percent said they watch "sometimes". A CBS news program designed especially for children, "In the News," attracted the largest news audience among these children with 40 percent saying they watch it almost every week.<sup>3</sup>

There is also evidence that children learn from this exposure to news and public affairs programming. Chaffee, Ward and Tipton found that public affairs media exposure during the 1970 presidential campaign was moderately related to adolescents' political knowledge.<sup>4</sup> Atkin and Gantz found that the amount of news exposure was related to children's ability to identify leaders, issues, cities and countries in the news.<sup>5</sup> Similarly, Conway, Stevens and Smith showed that exposure to television news increased preadolescents' ability to differentiate the policies of political parties, their awareness of the law-making process in government and knowledge of governmental roles.<sup>6</sup>

Few of these studies, however, look at the underlying process of

learning from informational television programming or at message variables, such as film use or program organization, that affect learning. Yet, Drew and Reeves found that childrens' perceptions of a news story are related to learning. Children who understood the information function of news, liked the news and believed the news learned more than others.

This field experiment looks at the impact of news film on childrens' learning and its impact on their judgments of importance and liking of news stories. It also looks at the relationship between some of the perceptual variables mentioned above and learning and compares these variables across a wide range of ages to see if they affect children of different ages differently.

The impact of film has long been of interest to researchers involved with television news, and their work has produced conflicting results. Jorgensen conducted the pioneer study in which he showed groups newscasts with a newscaster alone, a newscaster with still photos and a newscaster with film. There was no difference in information gain across conditions.<sup>8</sup> Hazared conducted a similar study and again found that film added little in terms of viewer information gain or interest in the stories.<sup>9</sup>

McDaniel, on the other hand, found inconsistent effects of film on information gain. It helped with some stories and not with others. McDaniel suggested that film impact is dependent on story content, and that it might help learning in stories which have redundancy between the audio and video channels.<sup>10</sup>

In other studies, Findahl found that the use of stills in a newscast helped retention and interest in stories, but film added nothing more to learning.<sup>11</sup> On the other hand, Edwardson, Grooms and Pringle found the subjects remembered stories with film no better than stories presented by a

newscaster alone. Thus, the issue remains unresolved.

One might suspect, however, that the impact of film would be greater on children than adults because of its ability to attract and hold attention. Also, with the changes in video technology over the past few years, film and tape are more prevalent in television news and young people may have become more accustomed to seeing visualization in television newscasts.

Film may not affect all children the same, however, since children bring differing cognitive abilities and ideas about the news to their viewing. This study also looks at viewing habits, ideas about credibility of the media, expectations about what they want from the media, and perceptions of media functions and their relationship to learning.

Film may affect the importance children attach to stories they see in a newscast and their liking for stories also. The idea of importance is an intriguing one because research with children indicates that their thinking is often qualitatively different from that of adults.<sup>13</sup> Yet, adults program news for children and structure newscasts according to adult values. Greenberg, for example, compared childrens' and programmers' perceptions of childrens' programs and found them to be quite different.<sup>14</sup>

This study tests the following hypotheses.

1. Children, regardless of age, will remember more stories from a newscast with film stories than from a newscast without film stories.
2. Children, regardless of age, will understand more stories from a newscast with film than from one without.
3. Children who rank television high in credibility, who watch a lot of news, understand the function of news, and use television news for information, will learn more from newscasts than those who score low on these measures.

In addition, the study poses the questions: How do childrens' rankings

of news stories in terms of importance compare with adult rankings, and how is their liking of news stories related to their ideas of importance? Are these judgments affected by use of film?

Methods

A series of news stories was videotaped from early evening network newscasts. Six film stories were chosen for inclusion in the newscast because they represented a variety of story types ranging from feature to hard news, typically found in newscasts. The first was a story about problems President Reagan's proposed budget cuts were running into on Capitol Hill. The second was a story about a presidential commission recommending that federal laws be established to permit workers to carry pension plans with them when they move from one job to another. The third described U.S. anger at Cuba for allegedly sending arms to El Salvador. The fourth described the near crash of an airliner into the World Trade Center. The fifth was a story about a school which had improved learning and reduced vandalism by going back to the "basics." The final story was a feature about a town in Wisconsin that was turning to solar energy.

The audio track of the film stories was transcribed into a script for use in the newscast that didn't have film. A professional newscaster read the stories in the no-film condition and introduced the stories in the film condition. The content of both newscasts was identical except for the absence of story introductions in the no-film condition. The film version of the newscast ran about 11 minutes and the second newscast was about a minute shorter.

A two-part questionnaire was used to measure the other variables. Children were asked about general TV exposure and news exposure. They were asked also to rate media credibility and to respond to a series of questions



about why they watch the news. After they completed this part of the questionnaire the children watched one of the two versions of the newscast. Then they were asked to recall as many of the stories as they could and write what they remembered about them. Next they were given a list of the stories that appeared in the newscast and asked to write anything they could remember about any of the stories. Following this recall portion of the experiment children were given a list of the stories in scrambled order and asked to rank them by importance. Next they were given another scrambled list and asked to rank them by liking. A series of questions then asked why they thought two of the stories--the one about the airliner and the story about the pensioner's plans--were included in the newscast. Responses were ranked on a four-point scale ranging from entertainment to information.

Subjects for the study were 193 5th, 7th, 9th, and 11th graders in a small Wisconsin community. Two classes of each grade viewed the film, and conditions were randomly assigned to grades.

In the content analysis of responses to the recall question, children were given credit for remembering the story if they could recall anything about it. For example if a child said there was "something about the president's budget," he/she was given credit for recall. The responses were coded also for story understanding, which was defined as the recall of the basic elements in the story and the relationship among them. Thus, a child who said there was a "story about congress arguing over president's budget," was credited with understanding. Percentage of agreement among coders for both elements of the content analysis was .98.

#### Results

The data strongly support the first hypothesis (See Tables 1 and 2).

Analysis of Variance of both aided and unaided recall show significant main effects for grade and film. The children in higher grades remembered more stories from the newscast than children in the lower grades, and they remembered more stories from the newscast with film than they did from the one without film. There was no grade by film interaction, however, indicating that the effect of film was consistent across grades.

Inspection of the means also provides some interesting information. With unaided recall the 5th graders in the no-film condition remembered an average of only 1.9 of the six stories in the newscast. The 11th graders in the film condition, who did best, remembered an average of 3.8 stories. The three hard news stories at the beginning of the newscast gave children the most problems in terms of unaided recall. Seventy-eight percent could not remember the pension story, 76 percent couldn't remember the president's budget story and 62 percent didn't remember the El Salvador story. The children did best with the story about solar energy.

Although the figures indicate that there may be a recency effect with the last three stories of the newscast remembered better than the first three, it's impossible to tell because the three "hardest" stories were in the beginning. Thus, it may be that they remember the certain types of stories better than others.

The analysis of variance produced main effects supporting hypothesis two, also. Children in the earlier grades understood fewer stories than those in the later grades, and those who saw the film version of the newscast understood more than those who saw the no-film version. In addition the analysis produced a film by grade interaction. Inspection of means shows that film had an increasing impact on understanding from the lower to the higher grades. For example, in the 5th grade, children in the no-film



condition understood an average of 1.1 of the stories while those in the film condition understood an average of 1.5 stories. In the 11th grade, however, students in the no-film condition understood an average of 2.1 stories while those in the film condition understood more than twice that number (4.8).

It may be that there was a ceiling on the abilities of the younger children that prevented film from adding a great deal to understanding. With the older children who have greater cognitive skills, however, the use of film and its ability to hold attention produced significantly stronger results.

Analysis of the percentages of children remembering the various stories provides a pattern similar to that for recall. The least understood story was the lead item about the president's budget. Ninety-one percent of the children did not grasp it. The pension story was next with 86 percent failing to understand, and the El Salvador story was third with 78 percent unable to understand.

The youngsters' ranking of news stories by importance provides interesting results. Table 4 shows that the children ordered the newscast in much the same way that adults did. Although the Pension and El Salvador stories are tied at second, the three hard news stories are all at the beginning of the newscast with the president's budget story first. The only story clearly out of order was the solar energy story which they placed in the middle of the newscast.

It would appear that the children "learned" the ranking of the stories from the newscast they had watched, indicating that even young children have learned to "read the structure" of television newscasts.

An analysis of variance was performed to see if use of film affected the ranking of stories by importance. The only consistent result with grade was a tendency of the younger children to rank the airplane story higher than

the older children ranked it ( $p < .04$ ).

There were some significant results from film, however. Children in all grades who saw the film version of the budget story ranked it higher than children who saw the no-film version ( $p < .05$ ). The pension story produced a film by grade interaction ( $p < .05$ ). Film boosted importance with the youngest and oldest children, but had little effect with the two middle grades. These figures seem to indicate that children may see a hard news story that uses film as more important than one that does not use film.

Table 4 shows also that children make distinctions between what they like and what they think is important in a television newscast. The rankings of the story by liking is nearly the exact reverse of the ranking by importance. The hard news stories, which children said were most important were placed at the bottom of the liking list.

Analysis of variance of the liking rankings produced no consistent results. The youngsters in the higher grades generally viewed the pension and budget stories more favorably than those in the young earlier grades. Film produced no consistent patterns in terms of liking.

Correlation of items from the survey portion of the questionnaire show that a number of variables, in addition to film and grade, are associated with learning from the newscast and understanding the stories. TV viewing in general had a negative correlation with recall ( $-.23$ ) and understanding ( $-.20$ ). This relationship appears to be working primarily through grade. Students in the later grades watch less television than those in the earlier grades.

Table 5, however, shows that watching the national news is associated with both recall and understanding and viewing local news is associated

with recall. Grade does not account for this relationship. It seems logical to assume that children who watch news, especially national news, are familiar with the issues covered in the stories and perhaps are more interested in news. The fact that newspaper reading is correlated with recall (.18) and understanding (.24) adds support to this idea.

Believing television news also is associated with story recall, but this may be operating through grade in as much as the older children are more likely to believe television news than the younger children. Newspaper and radio credibility scales show a similar relationship.

Only one of the eight gratification items in the study correlated with learning and understanding. Children who say they usually watch television news to "learn about things happening in the world" do better than those who watch because parents do, etc. This variable does not appear to be operating through grade.

As one might expect, children who do better in school recall and understand more of the stories than their peers. The children were asked to rate how well they did in school on a three-point scale from "below average" to "above average." Surprisingly, it provided variance.

A similar relationship appears for understanding the function of two stories in the newscast. Those who understood that the function of the airplane story was one of information rather than entertainment did better on story recall and those who understood the function of the pension story scored higher on understanding. Since the students who rated themselves higher academically understood the functions better, some of this variance seems to be the result of academic ability.

#### Summary and Conclusions

This field experiment of 5th, 7th, 9th, and 11th graders showed that a

number of factors are associated with childrens' learning from a television newscast. The use of film helped children remember stories both through aided and unaided recall. It was probably film's ability to attract and hold attention that produced this effect. In addition students understood more of the stories presented with film than those presented without film. There was a grade by film interaction with film helping understanding in the higher grades more than it did in the lower grades.

Despite the advantages of film it's important to note that large percentages of children, even in the 11th grade, did not remember or understand important hard news stories presented in the newscast. This indicates that those producing news programs for young people need to take great care to present public affairs stories in a clear and simple manner that children will understand.

The data also indicate that even young children understand the structure of newscasts. They seemed to understand that the most important stories were presented first and they followed this in their own ranking of the stories. It's also interesting to note that they differentiate between importance and their own liking of stories.

Finally, a number of other variables are associated with remembering and understanding stories in a newscast. Those who watched news, believe the news, and understand the function of news get more out of newscasts. This seems to imply that schools might help students become better news consumers by teaching them about the news media.

Table 1

## Analysis of Variance of Unaided Recall

Source of Variation	Sum of Squares	DF	Mean Square	F
Main Effects	64.110	4	16.028	10.856 *
Film	21.731	1	21.731	14.719 *
Grade	42.110	3	14.037	9.508 *
Interaction				
Film by Grade	.083	3	.028	.019

\*p&lt;.000

Table 2

## Analysis of Variance of Aided Recall

Source of Variation	Sum of Squares	DF	Mean Square	F
Main Effects	9.920	4	2.480	3.288 *
Film	3.276	1	3.276	4.343 *
Grade	6.238	3	2.079	2.757 *
Interaction				
Film by Grade	1.150	3	.383	.508

\*p&lt;.05

Table 3

## Analysis of Variance of Story Understanding

Source of Variation	Sum of Squares	DF	Mean Square	F
Main Effects	173.621	4	43.405	12.336 *
Film	58.178	1	58.178	16.534 *
Grade	115.798	3	38.599	10.9670 *
Interaction				
Film by Grade	41.384	3	13.795	3.921 *

\*p&lt;.01

Table 4

Childrens' Ranking of Stories by Importance and Liking

Story Order in Newscast	Childrens' Ranking by Importance	Childrens' Ranking by Liking
1. Budget	Budget	Airplane
2. Pension	Pension and El Salvador	Solar Energy
3. El Salvador	Solar Energy	School
4. Airplane	Airplane and School	El Salvador
5. School		Pension
6. Solar Energy		Budget

Table 5

Correlations of Survey Items  
With Recall and Understanding

	1	2	3	4	5	6	7	8	9
1. National News Viewing									
2. Local News Viewing	.32								
3. TV Credibility	.14	.12							
4. Learning Grat.	.31	.26	.25						
5. Academic Ability	NS	NS	.19	NS					
6. Grade	NS	NS	.11	NS	NS				
7. Function of Airplane Story	NS	NS	.13	NS	.22	NS			
8. Function of Pension Story	NS	NS	NS	NS	.12	NS	.17		
9. Total Story Recall	.17	.15	.15	.13	.26	.32	.13	NS	
10. Story Understanding	.18	NS	NS	.17	.15	.36	NS	.13	.50

All correlations listed in Table p 05

## Footnotes

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