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Benefits and Costs of *Channel One* in a Middle School Setting and the Role of Media-Literacy Training

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ABSTRACT

OBJECTIVES. *Channel One* is a public-affairs program that includes 10 minutes of news and 2 minutes of paid product advertising or public service announcements. Advocates assert that it increases public-affairs knowledge, but critics charge that it garners a captive audience for teen-targeted advertising. This experiment analyzed the differential effects of *Channel One* depending on whether early-adolescent viewers received a media-literacy lesson in conjunction with viewing the program. Outcomes included perceptions of *Channel One* news programming, recall of program content and advertising, materialism, and political efficacy.

METHODS. Researchers used a posttest-only field experiment ($N = 240$) of seventh- and eighth-grade students using random assignment to conditions. Conditions included a control group, a group that received a fact-based lesson, and a group that received the same lesson content using a more emotive teaching style. It was expected that the emotion-added lesson condition would be more effective than the logic-only lesson condition because of its motivational component.

RESULTS. On average, students remembered more ads from *Channel One* than news stories. Participants in the control group remembered fewer news stories than did the groups that received the lessons. Students reported having purchased during the preceding 3 months an average of 2.5 items advertised on the program. Both fact-based and affect-added training increased student skepticism toward advertisers. As expected, student liking of the program enhanced their learning from it and was associated with higher levels of political efficacy. Students held misconceptions about the role of their school in the production of *Channel One*.

CONCLUSIONS. The use of *Channel One* by schools can have benefits, but these come with risk that some may consider unacceptable. On the positive side, student liking of the program was associated with their political efficacy. Although those who responded positively to program content and presentation style learned more from it, they also tended to want things that they saw in the advertisements. The data therefore show that the program can provide some benefits to young adolescents, but the results also provide justification for concerns about the commercialization of the classroom.

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Key Words

media effects, advertising, adolescents, schools, media literacy, *Channel One*, public affairs, efficacy, civic education

Abbreviation

AAP—American Academy of Pediatrics

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SCHOLARS AND RESEARCHERS continue to debate the commercially produced *Channel One* public-affairs program, which is shown each day in 350 000 classrooms throughout the country and reaches >25% of schools nationwide.^{1,2} Launched in 1990, the program includes 10 minutes of news and 2 minutes of paid product advertising or public service announcements. *Channel One* is designed specifically for an adolescent viewing audience and claims to reach an audience 20 times larger than MTV.² Program producers assert that it increases children's public-affairs knowledge, but critics charge that it accomplishes little beyond providing a captive audience for teen-targeted advertising.³

Health advocates and scholars increasingly argue that our media-saturated society requires that educators provide young people with the ability to understand visual elements and message subtexts that are communicated to them in media messages.⁴ Research on information processing has indicated that children's logic-based and affect-based interpretations of message content affect what they learn and the decisions that they make. For example, children and adolescents are more likely to internalize messages that seem realistic and desirable and that portray individuals who seem similar to themselves or who represent ideals to which they aspire.⁵ In addition, media-literacy education has been shown to affect these interpretations, leading to more skepticism toward content such as tobacco and alcohol advertising.^{6,7} As a result, in an attempt to bring more clarity to discussions surrounding *Channel One*, this experiment analyzed the differential effects of *Channel One* on an early-adolescent audience depending on whether viewers received a media-literacy lesson in conjunction with viewing the program.

The *Channel One* news program combines marketing with education-based objectives and is just 1 of 234 organizations that market commercial products in public schools (www.consumersunion.org). *Channel One* is particularly appealing to schools that lack financial resources. Each school that airs *Channel One* receives approximately \$30 000 worth of audiovisual equipment³ to show the daily news programming to students.

Research about *Channel One* has suggested that equipment, not curricular content, has been the main reason that schools have used the program.⁸ Indeed, schools with the least money to spend on instructional materials have been 3 times more likely to adopt *Channel One* than better-funded schools.⁹ In addition, an absence of existing equipment has been the primary reason that schools have chosen to forgo a competitor's commercial-free news program.⁸

As a result, schools which use *Channel One* gain both equipment and potentially valuable educational programming, but critics consider it a scam that takes advantage of less-privileged children. Because students may view commercials that are shown in a school setting

as more credible than those that are viewed at home,^{10,11} the program's detractors argue that the program teaches these students little while making more salient their lack of sufficient funds to purchase items that they increasingly desire.¹² Advocates of *Channel One* argue that it provides young people with current-affairs information in an informative and age-appropriate manner, and its Web site promises everything from "issues in the news to what happens in school" (www.channelone.com). Limited empirical evidence on both sides makes it important to assess the extent to which *Channel One* provides real benefits to students against profits for marketers.

Existing studies that have focused on *Channel One* report that most students have favorable attitudes toward *Channel One*,^{3,8,13} but results are mixed on whether the program has more substantial benefits, such as increasing viewers' knowledge about or interest in current events and their confidence in their ability to participate in civic affairs, called political efficacy.^{3,8,14,15} For example, a small positive effect on current-events knowledge has been documented by researchers,^{3,16} but results vary widely. Male students, high academic performers, older students, and those who discuss *Channel One* with teachers and parents are more likely to benefit from the programming.^{8,15,17} In addition, existing studies have had significant limitations in design or measurement. These have included the use of pretest-posttest quasi-experimental designs that lack control groups⁸ and the use of nonrandomized comparisons between viewing and non-viewing student groups.¹⁶ As a result, in addition to the need to implement a randomized experimental design to test the effects of *Channel One* viewing, a need exists to examine the extent to which students' liking of the program associates with outcomes such as current-events knowledge and efficacy toward public-affairs participation.

One consistent finding from civics education research has to do with the value of teacher support and teacher-led interaction to enhance student learning from a variety of programs.¹⁸ Studies that have focused on *Channel One*, however, have reported mixed results concerning teacher leadership. One survey, for example, reported that teachers largely agree that it is well produced, a valuable source of information, and a worthwhile use of school time.⁸ Conversely, other surveys have shown that teachers do not consistently discuss *Channel One* content with their students, perhaps preferring to grade papers while it is on.^{16,19-21} Teachers who discuss program content less frequently with their students tend to believe that they had little or no role in the adoption decision^{20,22} or feel unprepared to integrate it into their regular teaching topics.³ One study found that only 1 in 4 schools showed *Channel One* during times that are most conducive to relevant discussion and instruction.⁸ This suggests that schools rarely maximize the potential benefits of *Channel One* in actual practice and also suggests

that it would be useful to test the effects of guided discussion in a randomized experimental design.

Meanwhile, some studies have raised specific concerns about the persuasive effects of the program's advertising. One study, for example, found that *Channel One* viewers were more likely to believe that commercials are a good way to discover the "truth" about a product.²³ Another found that *Channel One* viewers expressed more materialistic attitudes than nonviewers.^{12,24} Research also has indicated that *Channel One* viewers are more likely to express interest in and intention to buy the products that are advertised on the program.^{3,24} Bachen,³ for example, found that >30% of adolescents who viewed *Channel One* believed that "seeing the ads on *Channel One* made me want to go out and buy these products," and 20% said that they actually did so. Research indicates that affect and logic both affect learning and persuasion from media messages,^{5,6} but no studies yet have examined the relationships and potential tradeoffs among program liking, learning of current-affairs information, and product purchasing. If program liking enhances learning more than it promotes purchasing, then communities might find the program more acceptable. Conversely, if liking of *Channel One* promotes purchasing more than it enhances learning, then a teen-targeted program would seem unnecessary and even counterproductive to curriculum goals.

These mixed results suggest that media-literacy education may represent a way to enhance the benefits of the *Channel One* program while alleviating some of the concerns. Media literacy refers to students' ability to analyze and evaluate messages in television, magazines, newspapers, and other media sources. In 1999, the American Academy of Pediatrics (AAP) Committee on Public Education released a statement recommending media-literacy education,²⁵ and in 2003, the Center for Media Literacy (www.medialit.org) endorsed the following 5 core concepts as key pieces of knowledge for media literacy: (1) all media messages are created by somebody; (2) media message makers use creative languages that have rules; (3) different people experience the same media message differently; (4) producers of media messages have their own values and points of view, which may differ from the viewer's; and (5) media messages are constructed to achieve a purpose.

This study, therefore, explored the extent to which media-literacy training and students' perceptions of the value of the programming affected their recall of *Channel One* content, political efficacy, and attitudes about advertising. On the basis of an information-processing model of media effects that acknowledges the relevance of both logic-oriented and affect-oriented reactions to content,^{5,6} it was hypothesized that students' attitudes toward the program, perceived realism of television, and affinity for the young newscasters would associate positively with their recall of program content, purchase of products

advertised, and efficacy toward public-affairs participation. Because media-literacy education is designed to make media use more personally rewarding by increasing critical thinking and skepticism, it also was hypothesized that students who received media-literacy training would recall more program content, would be more skeptical of advertisers, and would have more efficacy toward the political system.

METHODS

Sampling and Data Collection

A purposive sample of 240 middle school students from a school in Washington state that regularly showed *Channel One* in the classroom participated in a posttest-only experiment that was conducted in the field March 10 to 12, 2004. To participate, students had to receive written parental consent and provide their own written assent. Participants represented ~80% of the seventh- and eighth-grade students in attendance during the 1-week study period. Of those who indicated their gender, household income, and ethnicity, 49% ($n = 115$) were male and 51% ($n = 118$) were female; 90% considered themselves middle or higher income; and participants identified themselves as black (6%; $n = 14$), Asian (16%, $n = 38$), Latino (7%; $n = 16$), white (71%; $n = 170$), and Native American (7%; $n = 16$). Participants could indicate multiple ethnic backgrounds. They were assigned randomly to 1 of 3 groups according to procedures approved by the research university's Institutional Review Board. Students were randomly assigned to condition on the basis of the number of conditions that were running during that particular class period, which depended on the number of classrooms that were available at that time. A total of 15 classrooms were randomly assigned to conditions so that each condition had 5 classrooms participating by the end of the 3-day testing period.

Group 1 watched *Channel One*, completed a pencil-and-paper questionnaire, and then received a media-literacy lesson of ~40 to 45 minutes in length. These participants served as the control group for the rest of study because they provided the basis for comparison with the groups that received a media-literacy lesson before viewing *Channel One*.

Group 2 received an information-based media-literacy lesson, then watched *Channel One*, and then completed a paper-and-pencil questionnaire. By design, the lesson that this group received contained little in the way of emotion (anger directed toward advertisers who try to take advantage of young people). Instead, the lesson and its contents were purposefully dispassionate and represented a more logic-oriented presentation style.

Group 3 followed the same procedure as group 2 but received a media-literacy lesson that included more

emotion in the materials themselves and in the presentation of the material. The purpose of the more emotive teaching style was to generate anger among participants at marketers who try to sell products by taking advantage of children, because some research has suggested that although many message-processing skills have developed by eighth grade, even young adults who possess the skills to evaluate persuasive messages skeptically still need the motivation to activate those skills.^{26,27} As before, participants watched *Channel One* and then completed a paper-and-pencil questionnaire. This emotion-added condition made it possible for researchers to evaluate the comparative effectiveness of 2 types of teaching strategies that often are used in media-literacy education.

χ^2 tests indicated no significant differences among the groups in terms of ethnicity or gender, and analysis of variance revealed no differences in income. An approximately equal number of seventh ($n = 115$) and eighth graders ($n = 118$) participated in control and experimental groups, with a few students neglecting to indicate their grade level. Because of a combination of limited scheduling opportunities and differences in class sizes, more eighth graders ended up in a logic-oriented group ($n = 56$) than an emotion-added group ($n = 27$), and more seventh graders ended up in an emotion-added group ($n = 50$) than in a logic-only group ($n = 18$).

Media-Literacy Curriculum

Presenters gave students a definition of media and discussed the lesson's goals, which included understanding the role that media play in our lives, the importance of considering goals of the creators of media messages, and teaching students how best to learn from the media while avoiding being taken advantage of. In the emotion-added condition, the wording of the goals was modified to emphasize the potential of media messages to manipulate an audience.

To establish the pervasiveness of media influence, participants completed a worksheet to examine their media diets. Students then compared their media use with national estimates of teen media use and ownership of media products such as televisions, computers, and other media gathered from the Kaiser Family Foundation (www.kff.org). After a brief discussion about media messages and why people create them, students reviewed and discussed the 5 core concepts of media literacy.

Students then viewed their regularly scheduled *Channel One* program. After viewing, students in the logic-oriented condition discussed the purpose of *Channel One*, the lessons that they learned from the day's program, the points of view presented and left out of the program, and the purpose of the advertisements in the program. Students who participated in the emotion-added condition completed a system visualization analysis in which

they established the interrelationships among buyers, sellers, and products of commercial television. This led them to the realization that their presence as viewers is sold to advertisers by the producers of programs such as *Channel One*. This identified them as the product being sold to advertisers. As a group, these students discussed how they felt about being sold by *Channel One* and other television programmers to the advertisers.

Presenters gave students in both lesson conditions information about the contractual relationship between *Channel One* and school districts, as well as basic information about the program's audience size and profits generated by *Channel One*. Students in the emotion-added condition also discussed their feelings about being sold to advertisers and about being required to watch the ads. These participants then received an overview of how much advertisers spend annually to market to adolescents, along with a chart of teens' influence on overall purchasing of various products. Presenters also handed out price tags that contained the dollar amount that advertisers spend on each teenager in the nation and saw covers of books that are used by marketers to refine their targeting strategies for the teen market. Finally, presenters in both conditions gave students a list of questions that were intended to encourage them to think about media messages by critically evaluating the truthfulness of program and commercial claims and encouraging them to think about the techniques, points of view, and values that are contained in media messages.

Measures

Unless otherwise noted, measures used 7-point scales with "strongly agree" and "strongly disagree" as anchors and were asked of all participants, including those in the control group. The first set of measures represented interpretive responses to the programming that might affect recall and persuasion. Descriptive statistics for each construct are shown in Table 1.

Evaluation of the Media-Literacy Lesson

Researchers measured students' perceptions of the usefulness of the lesson. These statements, posed only to those who received a media-literacy lesson, included the following: "Today's lesson about the media will be useful for me," "Today's lesson about the media was interesting," "Today's lesson about the media has taught me things I did not know before," and, "Today's lesson about the media made me think." Cronbach's α , as an estimate of the average correlation among scale items, measures the internal consistency of the items that compose a scale. The α coefficient for the index was .84.

Perceived Oversight

Because concerns have been raised by organizations such as the AAP that students may be more receptive to ads that they see in school,¹² researchers measured stu-

TABLE 1 Descriptive Statistics for Constructs Used in the Analyses

Constructs	N	Mean	SD	Range	α
Evaluation of the media-literacy lesson	154	15.03	5.84	4–28	.84
My school approves <i>Channel One</i> commercials before they are shown	234	4.01	1.85	1–7	
Commercials on <i>Channel One</i> are approved by teachers	231	3.59	1.83	1–7	
Perceived realism of TV	234	11.16	3.95	3–21	.73
Similarity of teens on <i>Channel One</i>	235	8.16	3.40	3–21	.66
Identification with reporters on <i>Channel One</i>	235	7.96	4.11	3–21	.74
When I watch commercials, I want what is shown	239	2.80	1.45	1–7	
People who have a lot of money are happier	239	2.59	1.78	1–7	
Advertising helps me know what is popular	237	2.70	1.62	1–7	
Skepticism toward advertisers	239	0.97	0.19	1–7	
Usefulness of <i>Channel One</i>	235	24.93	8.37	4–28	.89
Political efficacy	237	13.34	3.98	3–21	.62

dents' perceptions that their school and teachers have oversight over the advertising on *Channel One*, using the following 2 statements: "My school approves *Channel One* commercials before they are shown," and, "Commercials on *Channel One* are approved by teachers."

Desirability

Desirability is the degree to which adolescents find media portrayals attractive and was measured as part of the message interpretation process that could predict learning and persuasion from the programming.²⁶ Researchers measured participants' desirability regarding *Channel One* using the following 3 statements: "The reporters on *Channel One* seem nice," "The reporters on *Channel One* seem like people I'd like to have as friends," and, "I like the way the reporters on *Channel One* looked." The α coefficient for the index was .72.

Perceived Realism

Perceived realism reflects the extent to which students believe that media portrayals are true to life and was measured as part of the message interpretation process that could predict learning and persuasion from the programming.²⁶ Because news by definition is based on real events, researchers measured students' perceived realism with the following 3 statements that focused on television portrayals more broadly: "TV is a good source of information on what is interesting to people my age," "TV is a good source of information on how people my age act," and, "Media provide good examples of what real teenagers do." The α coefficient for the index was .73.

Similarity

Similarity indicates the extent to which respondents believe that who are people portrayed in the media are similar to people whom they know and was measured as part of the message interpretation process that could predict learning and persuasion from the programming.²⁶ Researchers measured students' perceptions of

similarity using the following 3 statements that focused specifically on the *Channel One* program: "The teens I see on *Channel One* are a lot like me," "The teens on *Channel One* like the things I like," and, "The teens I see on *Channel One* do things that I do." The α for the index was .66.

Identification

Identification demonstrates the extent to which participants admire people who are portrayed in the media and was measured as part of the message interpretation process that could predict learning and persuasion from the programming.⁵ Researchers measured students' identification using the following 3 statements that focused specifically on the *Channel One* program: "It would be fun to look like the reporters on *Channel One*," "I wish I could do the things that the reporters on *Channel One* do," and, "I want to be like the reporters on *Channel One*." The posttest α was .74.

Materialism

Materialism indicates the extent to which participants desire money or things and has been considered a deleterious outcome of *Channel One* viewing by some scholars and critics.²⁴ As a result of its prominence in discussions surrounding the costs and benefits of the program's use, researchers measured students' materialism using the following 2 statements: "When I watch commercials, I want what is shown," and, "People who have a lot of money are happier than people who have only a little money." Researchers analyzed responses because of their use in previous evaluations of *Channel One* but examined the items separately because they were uncorrelated.

Liking of Ads

To add to an understanding of how message interpretations contribute to decisions that are based on media messages such as advertising, researchers assessed participants' positive feelings toward advertisers and

their messages using the following statements: "The commercials on *Channel One* are more interesting than other commercials I see," and, "Advertising helps me to know what is popular." Researchers analyzed responses to these items separately because they were uncorrelated.

The next set of variables represented dependent variables that were considered to be important outcomes of *Channel One* use and media-literacy education, including skepticism, recall of current-events information, recall of advertisements, perceived usefulness of the program, and efficacy toward public-affairs participation.

Skepticism Toward Advertising

This was measured by participants' responses to, "Advertisers try to take advantage of teens."

Usefulness of Channel One

Researchers assessed participants' perceptions of the usefulness of *Channel One* using the following 6 statements: "I feel I am better informed about current events as a result of watching *Channel One*," "News stories on *Channel One* are interesting," "I think my school should continue to show *Channel One*," "*Channel One* helps me find out what other teens are thinking," "I like *Channel One*," and, "*Channel One* tells me things I need to know." The α coefficient for the index was .88.

Political Efficacy

Measures of respondents' confidence in their ability to participate effectively in public affairs included statements that commonly are used in surveys of voting-aged adults but adapted to refer to future eligibility, as follows: "I believe voting is an effective way to influence what our government does"; "I can do things that influence what our government does"; and, "When I am old enough to vote, I think that my vote will make a difference." Although the α coefficient for the index was only .62, the index was retained for analysis on the basis of its accepted validity in survey research.^{28,29}

Recall of News Content

To indicate their retention of program content, respondents listed "the topics of the news stories you remember being covered on *Channel One* during the past week (including today). List as many stories as you remember." Trained coders counted the number of correct answers on the basis of an analysis of the week's programming.

Recall of Advertising Content

To indicate their retention of advertising content, respondents listed "the topics of the ads you have seen on *Channel One* for the past week (including today). List as many topics or products as you remember." Trained

coders counted the number of correct answers on the basis of an analysis of the week's programming.

Product Purchases

On the basis of a content analysis of the most recent 2 weeks of *Channel One* programming, researchers presented respondents with a list of 11 products that had been advertised, including Juicy Fruit gum, Gatorade, Acuvue contact lenses, A PS-2 game, Red Zone deodorant, food from McDonald's, a Nintendo game, Phisoderm self-heating daily scrub, Clearasil, Stridex, and an X-Box game. Respondents circled each product that they had bought ("or gotten a family member to buy for you") in the past 3 months. This longer time frame provided the potential for more variance in responses than a 2-week time frame would provide, without making unrealistic demands on students' recall of their purchasing behavior. The number of items circled was totaled. Recall measures, however, were limited to the past 2 weeks to provide parallel comparisons between news and advertising recall and because it seemed unlikely that many students would remember specifics about programming that was >2 weeks old. This item appeared after the recall questions to prevent contamination of the recall measures.

Manipulation Check

To verify that students in the media-literacy lesson conditions learned new information about the media, all students responded to a set of statements that represented a manipulation check. These included the following true/false statements: "Schools have to supply their own equipment to show *Channel One*" (false); "Everybody experiences media messages the same way" (false); "Children 2 to 17 spend an average of 6-1/2 hours with media each day" (true). The number of correct answers represented the media knowledge score.

Data Analysis

The manipulation check confirmed that students in the media-literacy lessons learned new information about the media that the control group participants did not know ($t = -4.2$, $P < .001$, $df = 233$). Correlations provided evidence of associations among students' interpretations of the programming and outcomes that were relevant to adolescent decision-making and media literacy. Researchers used analysis of variance with planned group contrasts to determine how the different lessons affected students' perceptions of *Channel One* and related variables. In some instances, researchers conducted planned comparisons even when an omnibus F test was not significant. Methodologists indicate that when statistical comparisons are planned by researchers, they typically possess relevance to a study on the basis of theory and/or previous research findings. In these cases, planned comparisons are appropriate regardless of

whether an omnibus F is significant, and additional protection from type I error is unnecessary.³⁰⁻³² It was expected that the emotion-added lesson condition would be more effective than the logic-only lesson condition because of its motivational component.

RESULTS

Recall of Advertisements and News

Overall, the students remembered more ads (mean: 3.5) from *Channel One* than news stories (mean: 2.7; $t = 4.25$, $df = 231$, $P < .001$). Nevertheless, because *Channel One* included more ads in 1 week³³ than news stories,²¹ students remembered a higher percentage of the news stories (13%) than of the ads (11%; $t = 4.00$, $df = 231$, $P < .001$).

Younger viewers (mean: 4.15) recalled more advertisements than older viewers (mean: 2.8) did ($t = 3.94$, $df = 229$, $P < .001$), and those who reported higher incomes also recalled more ads, as shown in Table 2. In addition, those who considered the teens who are shown on *Channel One* as similar to themselves and who liked and admired the reporters remembered more of the ads. Girls (mean: 3.03) remembered more news stories than boys (mean: 2.4) did ($t = -2.37$, $df = 230$, $P < .05$).

In terms of the effects of their interpretations of the content, participants who recalled more news stories tended to consider the program useful, indicated that the ads take advantage of young people, and considered themselves similar to the teens portrayed on *Channel One*. Thus, as expected, their receptivity to the program enhanced their learning from it.

Effects of Media-Literacy Lessons on Recall

Each of the media-literacy lessons also affected students' memory of program content, as expected and as shown in Fig 1. Participants in the control group, who filled out the survey before the lesson, remembered more news stories than ads, but they did not remember as many news stories as did the groups that received the lessons. The students in the emotion-added lesson remembered the most ads and news stories, followed by those in the logic-oriented lesson. Students who received the media-literacy lessons remembered more ads than news stories.

As shown in Fig 2, the media-literacy lesson helped seventh graders more than eighth graders with their recall of news stories, bringing them up to approximately the same level that eighth graders achieved with or without the lessons ($F_{1,224} = 9.50$, $P < .01$). The lessons helped seventh and eighth graders equally for recall of ads and skepticism toward advertisers.

Correlates of Product Purchases and Skepticism

Students reported that they had purchased in the past 3 months an average of 2.5 of 11 items that were listed on the survey and had been advertised on *Channel One*. Correlations indicated that, as expected, participants purchased more products when they liked advertising (considering advertisements a good source of information for what is popular), when they agreed that having more money makes someone happier, or when they agreed that they often want what they see in an advertisement.

The role of apparent school endorsement on learning and persuasion from *Channel One* exposure was unclear from these data. On a 7-point scale, only 15% of the students indicated that the school "never" approves of

TABLE 2 Correlations Between Key Constructs and Dependent Variables

	Recall of Ad Content	Recall of News Content	No. of Products Purchased	Usefulness of <i>Channel One</i>	Political Efficacy	Skepticism Toward Ads
Recall of ad content						
Recall of news content	.42 ^a					
No. of products purchased	-.06	-.12				
Usefulness of <i>Channel One</i>	.04	.20 ^b	-.05			
Political efficacy	.11	.18 ^b	-.13 ^c	.38 ^a		
Skepticism toward ads	.03	.16 ^b	-.10	-.04	.00	
Family with higher income	.20 ^b	.05	.06	.04	.06	-.05
Realism of TV	-.12	-.03	.06	.45 ^a	.30 ^a	-.05
Similarity of teens on <i>Channel One</i>	.16 ^c	.19 ^b	.09	.49 ^a	.24 ^a	.05
Desirability of <i>Channel One</i> reporters	.15 ^b	.11 ^c	-.01	.57 ^a	.27 ^a	-.01
Identification with <i>Channel One</i> reporters	.15 ^b	.14 ^b	-.04	.48 ^a	.19 ^b	-.04
Ads help me know what is popular	.08	.12 ^c	.22 ^b	.23 ^a	.06	.03
People with money are happier	-.08	-.08	.17 ^b	-.01	-.09	.01
I want things I see in ads	-.01	.01	.28 ^b	.21 ^b	.10	-.09
<i>Channel One</i> ads are interesting	.05	.02	.10	.41 ^a	.19 ^b	-.16 ^c
My school approves of the <i>Channel One</i> ads	-.03	-.06	-.02	.36 ^a	.21 ^b	-.03
Teachers approve <i>Channel One</i> ads	.05	-.09	.01	.44 ^a	.24 ^a	-.10

^a $P < .001$; ^b $P < .01$; ^c $P < .05$.

FIGURE 1

Control group versus experimental groups for mean scores on recall of news, recall of ads, and advertisers trying to take advantage of teens. ^aNews recall: control group versus experimental groups, $t_{233} = 1.81$, $P < .05$; logic group versus affect group, $t_{233} = -0.25$, $P = .40$. ^bAd recall: control group versus experimental groups, $t_{234} = 6.06$, $P < .001$; logic group versus affect group, $t_{234} = -1.84$, $P < .05$. ^cAdvertisers take advantage of teens: control group versus experimental groups, $t_{236} = 2.27$, $P < .01$; logic group versus affect group, $t_{236} = -0.72$, $P = .24$.

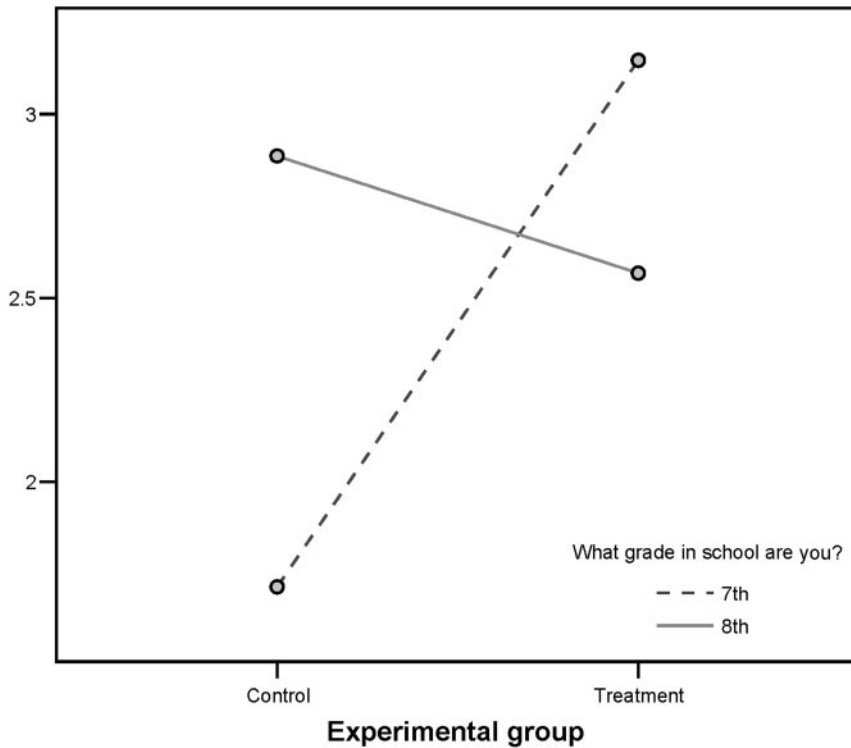
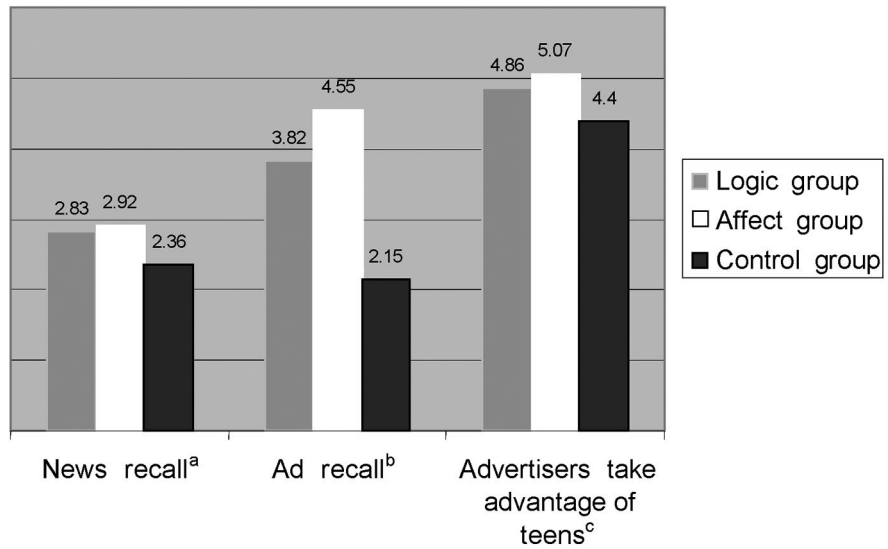


FIGURE 2
Interaction of media-literacy lesson with grade level for number of news stories recalled.

Channel One commercials before they are shown, whereas 38% thought that this occurs “often” or “very often.” Similarly, 27% agreed or strongly agreed that the commercials are approved by teachers. Seventh graders were more likely to think that the school (mean: 4.3) and the teachers (mean: 3.8) provide oversight than eighth graders were (mean: 3.8 and 3.3, respectively; $t = 2.19$, $df = 225$, $P < .05$ for school, and $t = 2.46$, $df = 222$, $P < .05$ for teachers). These beliefs were uncorrelated with beliefs about advertising or materialism and also

were uncorrelated with recall of ads or product purchasing.

Students who received a media-literacy lesson were more skeptical (likely to believe that advertisers try to take advantage of teenagers), also as hypothesized. The lessons were equally effective with seventh and eighth graders. Although greater skepticism could affect students’ future purchasing decisions, this study evaluated only past purchasing decisions, making a correlation test spurious between skepticism and purchasing. Similarly,

a test of group differences on purchasing behavior would be spurious because the media-literacy lessons took place after purchases already had been made.

Correlates of Opinions Concerning the Continued Use of Channel One

Students varied widely on their opinions about continuing to receive *Channel One* (mean: 4.71; SD: 2.11 on a scale of 1–7). This put 27% of the students below the midpoint on the scale, with 57% above the midpoint and 15% neutral. As shown in Table 2, students who considered the program useful tended to recall more of the news stories, consider themselves similar to the teens shown on the program, found the teens that are shown on *Channel One* appealing, admired the reporters on *Channel One*, found the advertisements on *Channel One* interesting, believed that teachers and the school had oversight over the program, and believed that television generally is realistic. Students' beliefs about the program had no relationship to their recall of advertisements. These findings further supported the hypothesis that their liking of the program would enhance their learning from it.

Public-Affairs Involvement

Many schools show *Channel One* to encourage students to participate in the political system when they become adults. As expected, the results show that students with higher political efficacy tended to consider the program useful, think television is realistic, find the ads interesting, like and admire the newscasters on the program, consider themselves similar to the teens portrayed on the program, and think that the teachers and the school had oversight over the program. These results further indicated that students' appreciation of the program seemed to enhance its potential benefits.

DISCUSSION

The results of this experiment suggest that use of *Channel One* by schools can have some benefit but that these benefits come with risks that some may consider unacceptable. Media-literacy training magnified potential benefits, such as recall of program content, and decreased potential risks by increasing skepticism toward advertisers. Seventh graders benefited somewhat more than eighth graders. Limitations of the study design, including the narrow measure of skepticism, made it impossible to determine the extent to which students' enhanced skepticism would affect future purchasing decisions or materialistic attitudes. The use of a control group with random assignment has provided this study with an advantage over previous examinations of *Channel One*, but it should be noted that this study could not collect baseline data on the dependent measures to establish long-term effects of the program or of media-literacy education on public-affairs learning and persua-

sion. In addition, the low reliability for the similarity and political efficacy scales made effects related to those constructs more difficult to detect.

The seventh- and eighth-grade students in this experiment had wide-ranging views about *Channel One* and demonstrated a range of effects. A majority liked the programming, but a significant minority disliked it. Those who liked the program seemed to do so because they saw things that seemed relevant to their lives. Those who responded positively to the content and presentation style learned more from it but also tended to want things that they saw in the advertisements. In addition, students' liking of the program was associated with their political efficacy, the belief that they can make a difference through civic involvement. Students' confidence in television as a realistic source of information also was associated with their receptivity to the *Channel One* program specifically. This could indicate that perceived realism, which is generally used to refer to fictional content, is nonetheless related to perceptions of nonfiction content, perhaps through its relationship to source credibility.

The data show that despite some apparent benefits to young adolescents from exposure to the program, the AAP's concerns about the commercialization of the classroom seem justified. Students tended to remember a greater number of ads than news stories, and students had purchased up to 8 of the 11 advertised items listed on the survey. It seems unlikely that the program would attract advertisers if the advertising did not work, and the data showed that students who liked the program tended to like the ads, and students who liked the ads purchased more products. Primedia asserts that growth at *Channel One* has contributed to a 10% increase in net revenue for its education holdings.³³

This study does not establish the long-term effects of in-class viewing of advertising, but the results raise concerns regarding the degree to which adolescents trust their schools to provide oversight of the content that they view in the classroom. Only 15% of the students correctly believed that their school "never" approves of *Channel One* commercials before they are shown, and 25% agreed or strongly agreed that *Channel One* commercials are approved by teachers. Seventh graders were more likely than eighth graders to think that the school and the teachers had oversight over the program. These misconceptions, however, did not correlate with students' liking of the ads or with the number of products that they had purchased. This could indicate that the students' perceptions of the school's apparent endorsement of the advertising does not matter, but it also could be an artifact of the study design, which could not account for influences that accumulate over a long period of time.

It may seem worrisome to some that students who received the media-literacy lessons recalled more news

stories but also recalled more ads. It seems likely, however, that these students did not remember the ads in a positive light, because the results showed that those who received the lessons were more skeptical of the advertisers. Instead, these students probably remembered the ads because of the sometimes critical in-class discussions of *Channel One* and its advertising targeting teens. That their skepticism seemed to enhance their memory of program content without decreasing their perceptions of the program's usefulness represents a positive result for media-literacy education. Nevertheless, the cross-sectional design of this study could not account for whether persuasive effects of the advertising would be eliminated, and the correlations between liking of ads and product purchases indicated that persuasive effects did exist. The study also did not examine the extent to which media-literacy education increased students' ability to distinguish between true and false claims in ads or between useful and manipulative content more generally, which would provide a more sensitive measure of skepticism and its implications for learning and persuasion.

This combination of results does confirm that *Channel One* offers the potential for positive effects along with the likelihood of effective persuasion by advertisers and the potential for the cultivation of materialism. Positive and protective effects such as current-affairs knowledge, political efficacy, and skepticism toward advertisers were enhanced by media-literacy training. These results therefore suggest that schools that wish to use commercial programming such as *Channel One* should include in-service training for teachers on media-literacy education and should require that media literacy be taught with specific reference to the programming. Whether schools should use commercial programs such as *Channel One* at all remains a question of ethics that empirical data such as these cannot resolve.

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Benefits and Costs of Channel One in a Middle School Setting and the Role of Media-Literacy Training

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