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The impact of follow-up discussion on student learning from Channel One

Gary Arthur Borlaug
University of Northern Iowa

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THE IMPACT OF FOLLOW-UP DISCUSSION
ON STUDENT LEARNING
FROM CHANNEL ONE

An Abstract of a Dissertation
Submitted
In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

Approved:

Faculty Advisor
Dr. Carmen Montecinos

Dean of the Graduate College
Dr. John W. Somervill

Gary Arthur Borlaug
University of Northern Iowa
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ABSTRACT

Channel One, a news and features program delivered via satellite to over 40% of junior and senior high school students in the United States, has been the subject of persistent scrutiny regarding the educational value of its daily 10-minute presence in schools. Channel One's curriculum includes three major components: (a) current events; (b) social issues such as drug abuse, teen pregnancy, depression, prejudice, and so on; and (c) commercial advertisements. Previous studies have been conducted to examine the impact of the current events and advertisement components but not of the social issues component. Studies designed to measure how much students learned about current events from watching the program, have shown a statistically significant, but small, effect size in favor of watching the program (i.e., Johnston & Brzezinski, 1992; Tiene, 1993; Walsh, 1994). Among other things, these researchers have speculated that the small amount of learning that takes place might be traced to the low level of involvement that students and teachers typically have with the Channel One curriculum. Most often, after watching the program students are not asked to engage in learning activities that capitalize on what was watched.

The current study was designed to investigate the impact of follow-up discussion on students' acquisition of knowledge about a social issue presented in Channel One. To fulfill the purpose of this investigation two studies, utilizing a posttest only quasi-experimental 3x2 repeated measures design, were conducted.
In Study One, three seventh grade classes were randomly assigned to one of the following treatment conditions: (a) watched a two-day series on depression and discussed it (n = 20), (b) watched the series without follow-up discussion (n = 15), and (c) watched an edited version of Channel One that had the segment on depression deleted (n = 19). Students were tested three days after the completion of the series and again two weeks later.

The major finding of Study One was that students who watched and discussed the feature on depression scored significantly higher on a test designed to measure retention of the information presented than those students who either watched without discussion or did not watch the feature at all. Students who did not watch the feature did as well as those who watched it but did not discuss it. These findings were observed both at the immediate and delayed testing.

Study Two attempted to replicate these findings in the context of the following modifications: (a) three high school classes were randomly assigned to each treatment condition (n = 9), (b) students were tested both on their acquisition of information about the current events and the social issues feature presented on three consecutive days (a three-day series on drug abuse). It was expected that test performance differences in favor of the group that watched and discussed would be observed on the drug abuse test scores but not on the current events test scores. Findings provided partial support for the hypothesized outcomes. First, as expected, there was no treatment, time of testing, or interaction effects on performance on the current events test.
Second, there was a main effect for treatment on the social issues test score as well as a significant interaction effect between time of testing and treatment. Contrary to expectations, at the immediate testing groups that watched and discussed performed significantly better than those that did not watch the feature but not better than those that watched without discussion. At the delayed testing, students who watched and discussed performed better than those who watched without discussion as well as those who did not watch the feature.

Overall results suggest that the educational impact that Channel One might have on students' learning can be enhanced by the use of follow-up discussion. A cross-study analysis suggests that the use of follow-up discussion might be more valuable in the context of social issues on which students have little prior knowledge. Findings also suggest that in the context of a social issue that is more familiar to students, follow-up discussion enhances the long term retention of the information covered in the program.
Acknowledgements

This dissertation marks the end of a very long undertaking. I could not have finished but for the help of God and the understanding and assistance of my wife, Anne, and my children, Eric, Sarah, and James, and the continuing support of my parents, Art and Ann Borlaug. I also wish to thank my committee members, especially Dr. Montecinos who went the extra mile to see this project through to completion.
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CHAPTER I
THE PROBLEM AND ITS SETTING

Overview

On almost every school day in tens of thousands of classrooms across the United States, television sets are automatically activated engaging the attention of millions of students and teachers in a program called Channel One. Channel One is a television news and feature magazine, including advertisements, designed to be viewed in schools by students in grades six through 12. It was introduced into schools in 1989 in the midst of a controversy which has not abated. At the center of this controversy are two broad issues. First, opponents of Channel One question the ethics of allowing schools to show commercial advertisements to a captive audience of students who are not in a position to decide whether or not they want to watch them. The second set of concerns, and the focus of this investigation, centers around the Channel One curriculum.

Among this last set of concerns are questions about the instructional value of Channel One. As with any curricular evaluation, the learning effects of Channel One's curriculum need to be examined in relationship to such things as goals and objectives, content, delivery method, students' and teachers' characteristics and behaviors, and so on. Several studies have shown that students do learn through the viewing of Channel One but that the amount learned is small relative to the amount of instructional time it takes, about 60 minutes a week (i.e. Hayes, 1991; Johnston & Brzezinski, 1992; Tiene, 1993). Studies

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conducted thus far show that the amount of learning that occurs after watching Channel One varies as a function of school site (Johnston & Brzezinski, 1992). Walsh (1993) identified factors that may have accounted for observed differences in learning reported in the Johnston and Brzezinski (1992) study. Among other things, he hypothesized, that teachers' actions and attitudes (especially in encouraging follow-up discussion) appeared to mediate the impact of Channel One on students' acquisition of knowledge about current events. The primary purpose of the current study was to provide an experimental test of Walsh's (1993) hypothesis. More specifically, this study used a quasi-experimental design to investigate whether student learning from viewing Channel One was enhanced when the program was accompanied by classroom discussion.

An examination of the learning effects of Channel One needs to address its three major curricular components: current events, social issues, and commercial advertisements. Previous research, however, has mainly focused on the educational value of the current events component (Celano & Neuman, 1995; Hayes, 1991; Houston, 1992; Johnston & Brzezinski, 1992; Tiene, 1993). Although central to the program, current events and news make up less than half of the Channel One content; another 30% addresses social issues such as drug abuse and teen pregnancy. The social issues typically addressed by Channel One correspond very closely to current educational legislation enacted across the country which mandates that schools teach about social problems such as child abuse, A.I.D.S., misuse of drugs and alcohol, teen pregnancy, sexual abuse, teen violence, suicide, and so on (Iowa
Department of Education, 1988). The secondary purpose of this study was to investigate the impact, if any, that follow-up discussion had on students' learning about the social issues featured in Channel One.

The Context of Channel One

Before providing a description of Channel One, it is important to understand the social context that allowed Channel One to come to be seen daily by more than 40% of students in grades six through eight in over 12 thousand schools in the United States (Johnston, Brzezinski, & Anderman, 1994). To make the presence of Channel One possible in over one third of the country's junior and senior high schools, a number of circumstances needed to converge. As delineated in the paragraphs below, dissatisfaction with schools, the use of technology to address the problems identified, beliefs in the value of increasing school/business partnerships, and demands that schools address social issues, were major factors that helped to prepare the way for the introduction of Channel One.

Widespread public criticism of American schools and the corresponding call for them to change was one factor that eased the introduction of Channel One into schools. Dissatisfaction with schools, however, is not a phenomenon of the '90s. In the 1960s the inadequacy of schools was identified as the reason why the Soviet Union bested the United States in the race to launch the first artificial satellite. Sputnik also spurred the investment of large sums of money into mathematics and science programs (Gutek, 1986). In the next decade Silberman (1970) spoke out against educational stagnation and the need
for schools to do things differently. Later, Goodlad (1983) voiced a note of frustration when he published the results of a study that documented that all of the money and attention that had been given to schools in the seventies had caused little measurable change. In the 1980s the Carnegie Commission's *A Nation At Risk* again indicted our schools as being deficient and lacking academic rigor (National Commission on Excellence in Education, 1983).

In the 1990s educators are being told that they must transform schools, become more relevant, and teach skills that will enable United States workers to compete against the better educated workers of other countries (Department of Labor, 1991). Educators are also being told that they must take the responsibility for all students getting a quality education in the basics and learning those specific pieces of information which define a culturally literate American (Hirsch, 1993). Congress has instituted the National Assessment of Educational Progress, also called The Nation's Report Card, to ascertain whether the learning of students in the United States is equal to that of students in other countries (National Academy of Education, 1987). The pressure of criticism of public schools and calls for change and accountability created an environment which encouraged school officials to try new methods for improving student performance. Channel One provided one new method of delivering information to students. This method also capitalized on a second element that promised to change and improve our nation's schools, technology.
Many people advocated that essential to producing an increase in learning outcomes was an increase in the uses of electronic technologies in the delivery of curricula. Technology, however, is fairly expensive and many schools found themselves struggling to find the monies to make television monitors, video cassette recorders and other items available to all students. When a school signed a contract with Channel One, they were promised $50,000 worth of free equipment consisting of satellite receiving dishes, closed circuit wiring, video recorders, and monitors (Sutton-Collins, 1992). In many school districts administrators saw Channel One as an inexpensive way of updating their schools technologically (Folkemer & Hobbs, 1994; Washington State Office of the Superintendent of Public Instruction, 1991).

Channel One's offer to give schools this equipment was congruent with increasing instances of private business ventures into U.S. schools. Perhaps, if Channel One had been the first attempt of business to gain access to the schools and the huge market represented by students, then there might have been greater resistance to the idea. However, as schools' need for resources to update equipment became greater, business's offer to help in exchange for certain considerations was seen as a viable solution. For years companies have provided free or low cost educational materials to schools. The materials may have fit a curricular need and may have been of high quality, but they often revealed a clear bias toward a product or point of view (Olson, 1990; Wartella, 1995). Moore (1989) and Wartella (1995) cite several examples of methods businesses have used to get their products and advertising...
into schools. Pizza Hut's "Book-it" program, Minute Maid's "Take the Minute Maid Challenge" summer reading program, Pepsi Cola machines in the halls, Tab and Troll book clubs, and many similar programs made the presence of commercialism commonplace in schools.

In addition to the three factors outlined above, Channel One also appeared to meet a new demand which had been placed on schools. Even as they were being criticized for not adequately educating students in the basics, schools were placed under added pressure as states demanded that schools take on new responsibilities for addressing some of society's social problems. State and national governments, under pressure from a concerned citizenry to address such problems as child abuse, A.I.D.S., misuse of drugs and alcohol, teen pregnancy, sexual abuse, teen violence, and suicide, looked to the schools to address such issues. Standards were written to ensure that social issues, as well as transformational issues referred to in previous paragraphs, were either taught as a separate subject or integrated into the existing curriculum (Iowa Department of Education, 1988).

Whether the producers of Channel One were aware of the task schools faced in finding ways to address social issues, or whether it was merely serendipity, Channel One regularly focused on many of these subjects, sometimes dedicating a series of programs to a single topic. During the 1992-93 school year, for instance, Channel One featured extended series on A.I.D.S., alcoholism, anorexia-nervosa, steroids, cultural diversity inside and outside of the United States (several series), censorship, child abuse, civil rights, free speech, guns in schools, human rights,
suicide, smoking, and women in leadership (see Appendix A for a complete
list of Channel One programming). Noting that these and other social
issues were often addressed by Channel One, some school officials
eagerly embraced Channel One as a means of addressing topics which had
not before been considered to be a part of their curriculum but which
they were now required to address.

History of Channel One

Channel One was begun in 1989 by Christopher Whittle. Whittle
founded Whittle Communications to fill an advertising niche by placing
specially designed magazines and posters into places such as doctors'
waiting rooms and beauty parlors where people sought reading material.
Whittle then approached schools, offering them free bulletin boards if
each month they would display educational posters which also featured
advertisements. Whittle's early success in schools prompted him to
expand his project. He developed a plan which would allow his company
to deliver daily an electronic educational product which would be paid
for by advertising. The project was called Channel One. The
educational bulletin boards and posters were replaced by 10 minutes of
news and features, and the static advertisements on posters were
replaced by two minutes of commercials. The cost of the program and all
of the equipment was to be covered entirely by the sale of advertising
time. Whittle invested $200 million and offered schools programming and
the equipment necessary to provide their building with a nearly complete
closed circuit television system.
Whittle brought together a group of educational experts and practitioners to offer advice on what should be the structure and goals of Channel One. The program was structured around the following five educational goals: (a) to enhance cultural literacy, (b) to promote critical thinking, (c) to provide a common language and shared experience, (d) to provide relevance and motivation, and (e) to strengthen character and build a sense of responsibility. By intent or by accident, these goals and the later programs presented to fulfill them, fit very closely with what some states were asking schools to begin to include in their curricula. For example, Iowa had mandated that schools infuse global and multi-cultural objectives into all courses (Iowa Department of Education, 1988). This was addressed by Channel One's first goal and was the subject of at least eight segments during the 1992-3 school year (see Appendix A).

Criticism of Channel One

Since its inception, Channel One has been the focus of controversy. The controversy lies in the discrepancy between the critics' fears that allowing Channel One into the classrooms is equivalent to selling our children to profit seeking businesses and the supporters' confidence that the programming is a beneficial addition to the curriculum. Four topics have been at the center of critics' concerns about Channel One. First, critics have argued that schools are not really interested in the content of Channel One but are merely showing the program as a method of bringing high tech equipment into their schools and classrooms (Kubey, 1993). The second, and most vocal, criticism has been against the

By allowing commercials in the classrooms, it was argued, schools have abandoned public trust to guard the children from outside influences. The third area of criticism of Channel One relates to the potential power that those in control of television and sophisticated production techniques have to influence curriculum, learning, and classroom practices. Critics fear that curricular decisions are being made by individuals whose goals and values are not necessarily the same as those embraced by a school district. Similarly, some have noted that the producers of this program might not have the welfare of the students as their primary motivation (Rudinow, 1990; Washington State Office of the Superintendent of Public Instruction, 1991; Zoglin, 1990). The fourth major criticism of Channel One contends that it is an ineffective teaching tool.

This last issue is the one of chief interest to the current investigation. One might think of Channel One (or films, filmstrips, or video tapes for that matter) as a teaching machine in front of which a student could be placed to automatically learn about the dangers of drug abuse, the value of an education, what life is like for a Russian teenager, and so on. But the question of whether students learn from viewing Channel One has been the subject of continuous debate. Most of the studies that have been conducted to assess students' learning from
viewing Channel One indicate that little knowledge is gained through the mere showing of the program (Celano & Neuman, 1995; Hayes, 1991; Houston, 1992; Johnston & Brzezinski, 1992; Tiene, 1993). The major study in this area was commissioned by Whittle Communications to the Institute for Social Research at the University of Michigan. The purpose of that study was to see if there was a measurable improvement in cognitive knowledge about current events and geography due to daily exposure to Channel One. The results of the study indicated only minor improvements traceable to daily viewing of Channel One (Johnston & Brzezinski, 1992).

At least four researchers have suggested that students' learning needs to be examined in relationship to teachers' actions. For instance, it has been noted that students may have acquired more knowledge when the viewing of Channel One was followed by class discussion promoted by the teacher (e.g. Johnston et al., 1994; Sutton-Collins, 1992; Tiene, 1993; Walsh, 1994). The influence of teacher mediation echoes the findings of an earlier, very comprehensive review of research studies on teaching through television conducted by Chu and Schramm (1975). These researchers strongly suggested that learning from television may be measurably enhanced through accompanying classroom discussion.

In spite of research findings which suggested the role that classroom discussion might have in mediating learning from television, research has shown that most teachers do not often discuss Channel One with their students. Sutton-Collins (1992) found that 91% of teachers
rarely or never made assignments in conjunction with Channel One, and only 23.3% of teachers followed Channel One with discussion more than once a month. This lack of teacher involvement was somewhat surprising since 65.3% of the teachers in her study felt that students learned a significant amount from Channel One.

The studies conducted so far to assess the instructional value of Channel One have concentrated on the geography and current events component of the program. It was reasonable that researchers should choose to measure knowledge in these areas since Channel One was sold to schools with the implication that the highly publicized deficiencies in current events and geography knowledge would be addressed by the program. The author's analysis of a year of Channel One programming indicated that while news was a major part of Channel One, it made up less than half of the average day's programming. In three randomly selected weeks of Channel One programs totalling 10,800 seconds, 4,137 seconds (38.3%) were used for news, but 3,295 seconds were used for features on A.I.D.S., juveniles in the justice system, animal rights, Martin Luther King and his heritage, and alcoholism. This constituted a sizable portion of time (30.5%) that was spent in teaching about social issues. As Rossell and Bachen (1993) noted:

Channel One programs cover not only current events, but also social problems and life skills that are necessary in becoming productive adults (e.g. managing and saving money, getting and holding a job, buying a car, behaving in a socially responsible way with regard to alcohol, drugs, sex, etc.). The impact of all of these positive messages should be evaluated if one is to determine the full educational value of Channel One. To date this has not been done. (p. 103)
Purposes and Significance of the Study

Channel One appeared at a time in which educators were told to transform, to teach about social issues, to work in partnership with business, and to utilize modern technology. Its appealing price tag and promises, made it attractive to teachers and school administrators as they tried to address the call for transformation. Even though it was strongly criticized for exposing students to commercials in the classroom and for taking over control of the curriculum, Channel One grew rapidly as thousands of schools signed contracts to include it in their day. As it pervaded school life, a question has been asked persistently, "Do students learn from viewing Channel One?" If, indeed, students are learning very little from viewing Channel One, then it would be difficult for schools to justify its presence in students' daily instructional time.

If certain conditions are necessary for students to learn from Channel One, then research needs to be conducted to determine what these conditions might be. One condition affecting learning from Channel One might be the way in which teachers mediate the delivery of Channel One; another condition might be when Channel One is shown (Walsh, 1993). Presently, schools have the option of showing Channel One at any single time in the daily schedule, during class, in home room, at lunch, or at another time; and in many schools it is shown at a time which makes follow-up discussion impossible. If teacher-facilitated discussion of the material presented on Channel One is to be effective in fostering student learning, then this finding would suggest that greater attention
needs to be placed on when and how Channel One might best be shown in the school day.

The primary purpose of this study was to investigate the effect, if any, that follow-up discussion can have on students' learning from the viewing of Channel One. To test hypotheses about the impact of follow-up discussion, two studies were conducted. The first study was designed to pilot the experimental procedure and measured only student gains in learning about the social issue of depression which was featured on Channel One over a two day period. The second study measured gains in students' knowledge of both current events and the social issue of drug abuse which was featured over a three day period. Both studies compared student knowledge of social issues as a function of three types of exposure to Channel One: (a) viewing a Channel One program followed by 10 minutes of discussion on the social issue feature, (b) viewing a Channel One program with no follow-up discussion of the social issue feature, and (c) viewing a version of the Channel One program from which the social issue feature had been deleted. The impact of these interventions was examined both on an immediate recall task (three days after completion of the treatment) and on a delayed recall task (17 days after the completion of treatment).

The secondary purpose, in contrast to previous research on this topic which dealt only with measuring knowledge of current events, was to examine if Channel One could be effective in teaching about social issues. Examining student learning about social issues covered on Channel One seems particularly important given that many teachers are
required to address some of these social issues in their curricula (Iowa Department of Education, 1988). If teachers are able to enhance the impact of Channel One through the use of discussion, then this study would suggest an instructional approach for more effectively utilizing Channel One to teach about social issues in the classroom. If, on the other hand, the study were to suggest that Channel One, with or without discussion, does not provide an effective way for addressing such social issues, then the appropriateness of using mere exposure to Channel One to meet state curriculum mandates needs to be addressed.

Research Questions

Study 1 dealt only with student learning from Channel One related to the social issue of depression. It examined the following questions:

1. Will there be a difference in performance on a measure of knowledge about social issues among groups receiving three different treatments?

2. Will there be a difference in performance on a measure of knowledge about social issues when tested soon (three days) after treatment as compared to performance on a delayed (17 days) measure of knowledge about social issues?

3. Will there be an interaction effect between treatment and time of testing?

The second study dealt with both the current events and the social issue of drug abuse presented on Channel One during the week of treatment. It examined the following six research questions:
1. Will there be a difference in performance on a measure of knowledge about social issues among groups receiving three different treatments?

2. Will there be a difference in performance on a measure of knowledge about social issues when tested soon (three days) after treatment as compared to performance on a delayed (17 days) measure of knowledge about social issues?

3. Will there be an interaction effect between treatment and time of testing on a measure of knowledge about social issues?

4. Will there be a difference in performance on a measure of knowledge about current events among the three different treatment groups?

5. Will there be a difference in performance on a measure of knowledge about current events when tested soon (three days) after treatment as compared to performance on a delayed (17 days) measure of knowledge about current events?

6. Will there be an interaction effect between treatment and time of testing on a measure of knowledge about current events?

Assumptions

This study was based on the following assumption:

1. The population from which the sample was selected was representative of students from the midwestern geographical area of the United States.
Definition of Terms

**Social Issue Feature:** Those subjects covered by Channel One which are not current events or news, but which deal with a topic of interest or importance to a large percentage of society. Social issue features during the 1992-1993 school year included among other topics: A.I.D.S., alcoholism, anorexia nervosa, steroid abuse, Black-American cultural roots, the budget deficit, censorship of student writing, child abuse, choosing and paying for a college, curfews for young people, the death penalty, endangered species, free speech and music, guns in school, health care, human rights, how to get a job, assisted suicide, the juvenile justice system, school prayer, steroids, teaching in the '90s, cults, and women in leadership roles (see Appendix A).
CHAPTER II

REVIEW OF LITERATURE

This review of the related literature is presented in three sections:

1. The first section consists of a description of Channel One and an analysis of previous studies that have been done on the instructional value of Channel One.

2. Section two draws from the literature on the use of television in the classroom, emphasizing a review of studies that support the use of follow-up discussion as an instructional strategy for enhancing learning.

3. The last section examines what are some of the best approaches to class discussion. Special attention is given to the discussion techniques followed by teachers in this study.

Channel One

Channel One is a news and feature television presentation. It is similar to other television news shows in that it presents important stories of the day and features on topics of interest. Yet Channel One is different because it is viewed in the schools and because it claims to be educational (Whittle Communications, 1989b). This section of Chapter II will present first a description of what a school receives with Channel One. Next, the Channel One program itself will be described from three aspects: what was promised, what is delivered, and what does a classroom look like during the showing of Channel One.
Equipment and Services Supplied with Channel One

Schools that show Channel One enter into a contractual agreement with Channel One Communications. Until the sale of Channel One to K-III Communications Corporation in the fall of 1994, schools signed a contract with Whittle Communications. The schools agree to show Channel One to nearly all of their students nearly every day. In return, they receive not only the program but also the equipment through which to present it. The equipment supplied to schools consists of the following: (a) a fixed satellite dish installed on school grounds; (b) receiving equipment; (c) a video tape recorder dedicated to automatically receive the Channel One broadcast; (d) a second video tape recorder for copying the Channel One program if desired or for capturing other educational programming beamed from the satellite; (e) a specially equipped 19 inch color television monitor for each 23 students in the building (The monitors have an automatic activation feature which causes them to switch on when the Channel One broadcast is played through the system.); (f) wiring for closed circuit television throughout the building. According to the contract, the equipment may be used for purposes other than viewing Channel One (Whittle Communications, 1994b). Schools are occasionally reminded that the equipment belongs to Channel One Communications; when the time to renew its contract nears, a school receives notification that if it chooses to stop showing Channel One and not renew its contract, the equipment is needed elsewhere and will be removed (Whittle Communications, 1994b).
In addition to Channel One and the equipment, schools contracting with Channel One Communications also are given access and recording rights to two other types of educational programming. Whittle refers to these as the Classroom Channel and the Educators Channel. The three programs do differ in their focus. The Classroom Channel is not usually a Channel One Communications production. It is a rebroadcast of non-commercial educational programming developed and aired by the 43 public television stations of the Pacific Mountain Network. The programs on this "channel" vary in subject matter from physics to foreign language study, from drama to careers. The length of each transmission ranges from 15 minutes to two hours. The Classroom Channel also includes Channel One Communications produced material often intended to supplement Channel One; for example, a non-commercial compilation of the month's programming, full coverage of the Presidential inauguration, or a non-commercial rebroadcast of a Channel One social issue feature. The Channel One Communications supplied teachers guide gives a summary of upcoming programming up to one month in advance.

The Educators' Channel addresses topics of interest to educators. It is not broadcast as often as the Classroom Channel. In February of 1993 the only offering was a rebroadcast of the February 3, 1993, "National Town Meeting on Education." In March of 1993 again there was only one offering (Whittle Communications, 1993). As with the Classroom Channel, the source of much of the programming on the Educators' Channel is the Pacific Mountain Network (Whittle Communications, 1989). Although the Classroom Channel and the Educators' Channel are available
to schools contracting with Channel One Communications, and although they also deal with social issues at times, the educational value of these resources will not be investigated in this study.

Description of Channel One Programs

What is it that students watch when they tune into Channel One? Three alternative ways of describing the curriculum of Channel One are provided to answer this question. First, the program is described in terms of how program developers conceptualize its format. Next, the program is described in terms of a content analysis of three randomly selected weeks. Lastly, is a description of the researcher's observations of a classroom that was shown Channel One.

Channel One as Described by Whittle Communications

In 1989 Whittle Communications distributed promotional literature to prospective Channel One schools. One of those documents gave the following description of the Channel One format: (a) "Up Front"--2 1/2 minutes of national and international news stories; (b) one minute of commercials; (c) "News Focus"--1 1/2 minutes devoted to covering one of the "Up Front" stories in greater depth; (d) "World Class"--a 3 1/2 minute segment of a five part series on a single topic; (e) one minute of commercials; (f) "Special Feature"--2 1/2 minutes devoted to a relevant topic (often an issue of social concern) not directly covered in the normal school curriculum (Whittle Communications, 1989).

As it was documented by this researcher's analysis of a year's broadcasts (found in Appendix A), this format is not rigid, and new elements have been added. Johnston et al. (1994) noted that the format
and tone of Channel One changed in 1993; Channel One began to emphasize more hard news and presented it in a more serious tone. When events warranted it, for example, an entire show might be dedicated to one major story as it was during the Clarence Thomas hearings or the inauguration of President Clinton. The only part of the format that seems to be stable is that having to do with the commercials, but even here there is variation in their placement and their length. Although the total length of all commercials is nearly always two minutes, the length of the individual commercial message will vary from 15 seconds to two full minutes.

**Content Analysis of Channel One**

To more clearly describe the make-up of Channel One programs and the types and nature of the segments presented, the researcher conducted a content analysis of three randomly selected weeks of Channel One programs presented during the 1992-1993 school year. The enacted curriculum followed the following format:

1. Introductory segments. There were 15 introductory segments in the three weeks selected. These usually consisted of the program's usual sign on trailer and a brief greeting from the day's anchors. The average length of the introduction was 26 seconds.

2. Preview. On four occasions students were advised about what would be appearing later in the day or week. These segments averaged 33 seconds.
3. News. News made up the largest part of the program. There were 48 news stories averaging 86 seconds in length. This accounted for about 43% of total programming.

4. Social issues features. These segments were usually presented as a series on three or four sequential days. They dealt with animal rights, Martin Luther King and his heritage, alcoholism, A.I.D.S., and juveniles in the justice system. They were usually given longer periods of time than were other types of segments. There were 13 of these segments, and they averaged just under four minutes per segment (235 seconds).

5. Commercials. There were 43 commercials averaging 31 seconds.

6. Public service announcements. These displaced the commercials six times and averaged 30 seconds; on those six days students saw only 1.5 minutes of commercials.

7. Pop quizzes. Twenty-four segments were devoted to this, 12 to the questions and 12 to the answers. The average length of each segment was 24 seconds.

8. Fast Facts. Two segments, averaging 15 seconds, were given to incidental facts relating to the days program.

9. You Decide. This segment shared two sides of a controversial issue (using animals for product and medical research) and featured interviews with students in Channel One schools who talked about their feelings on the issue. It was six minutes long.
10. Closing. There were 12 closings, averaging 13 seconds in the three week period. On three days the closing consisted of a simple, "Good-bye" and the Channel One logo.

The findings of this content analysis of Channel One programming were similar to Rossell and Bachen's (1993) findings. They wrote: "Channel One programs cover not only current events, but also social problems and life skills that are necessary in becoming productive adults" (p. 103). They also suggested that the impact of all of these positive messages needs to be evaluated if one is to determine the full educational value of Channel One.

Experiencing Channel One

What happens in a classroom that is showing Channel One? As the previously mentioned segments are shown, are the students equally engaged in all of them? Do their activities vary as the program moves from news to commercials to quizzes? The answers to these questions can be gleaned from the researcher's classroom observations gathered over a two year period prior to the conducting of this study. These observations were usually made unobtrusively through an open door from outside of the classroom. A description of one of those open door observations of a classroom watching a fairly typical Channel One presentation follows.

It was 8:25 A.M. on Tuesday, December 7, 1992. The bell had just signaled the beginning of the school day. The teacher was at his desk answering a pupil's question as other students were visiting quietly or frantically finishing assignments. Few noticed as the 19 inch color...
television mounted on the wall in the front of the room flickered to life. A couple of students looked at the screen as a bell began to toll from the speaker, accompanying a 10 second countdown.

...3...2...1...Suddenly, the room was filled with music, the screen radiated vibrant colors and a flood of split second images of people, events, and places seemed to tumble into the room. As quickly as they had begun, the images faded out to be replaced by two young people (apparently between the ages of 18 and 22) sitting casually in a setting that looked more like a den than a news room. Lisa Ling (an attractive Asian American) and Craig Jackson (an attractive African American) introduced themselves and immediately began talking about the day's "top story, the introduction of American troops into Somalia. A taped, on the scene, report by Anderson Cooper, a young man who appeared to be in his early 20s (and who has since become a reporter for a major network), filled most of the air time.

In the classroom three students seemed more interested in finishing homework, but the attention of most of the class remained focused on the screen. After a quick, "Thank you," from Ling and a "We'll be right back" from Jackson, two 30 second commercials, one for Fruit of the Loom and the other for Reebok shoes, continued to hold half of the class's attention. Ling and Jackson returned with a 45 second piece on Bill Clinton's naming Lloyd Benson to be Secretary of Agriculture, and then Ling asked the day's "Pop Quiz" question? "Which two members of George Washington's Cabinet appear on U.S. Currency?" She invited the audience to talk about the question until she returned.
As commercials for Certs and Burger King played, a few members of the class speculated on what the answer might be, and more students just visited; some continued to watch the set. A minute later Ling returned with the answer: Jefferson and Hamilton. The two news anchors took on a more serious aspect as they introduced the next segment; a piece on the use, abuse, and dangers of anabolic steroids. Commentator Hicks Neal, who also appeared to be in his late teens or early twenties, interviewed athletes who said that they had ruined their health by abusing steroids, and he interviewed doctors who told why steroids were dangerous. Four and a half minutes later Ling and Jackson returned to echo Neal's warning, say good-bye, and introduce a ten second greetings tape which had been produced and submitted by students from a high school participating in Channel One. As the words "Whittle Communications" faded from the screen, the teacher walked to the front of the room, shut off the television, and asked the class to open their books to page 253 (Field notes, sophomore English class, Dec. 11, 1992).

Criticism of Channel One

Even before Channel One was introduced, some major educational associations have taken a stand against it. Among others, these critics have included the directors of the American Association of Colleges of Teacher Education (AACTE), the American Association of School Administrators (AASA), the American Federation of Teachers (AFT), the Association for Supervision and Curriculum Development (ASCD), the National Association of Elementary School Principals (NAESP), the
National Association of Secondary School Principals (NASSP), the National Association of State Boards of Education (NASBE), the National Council for the Social Studies (NCSS), the National Education Association (NEA), and the National Parent Teacher Association (PTA).

This is not to say that Channel One does not have its supporters. In fact, as studies elaborated upon later reveal, of those teachers and students who actually see and use the program on a daily basis, a large majority feel that it is of high quality and would like to see it continue (Henshaw, 1992; Huffman, 1991; Jazzar, 1992; Johnston et al., 1994).

Critics of Channel One's presence in the schools have asked four general types of questions: (a) Should advertising and business involvement be allowed in schools? (b) Are schools more interested in the equipment supplied with Channel One than they are with the program? (c) Are schools surrendering control of curriculum to an outside body? (d) Are students learning from Channel One? The first two of these questions will be briefly discussed, but the focus of this review will be on the final two.

It is safe to say that the earliest and most vocal criticism of Channel One centered around its inclusion of advertisements. Critics such as Bill Honig, California's State Superintendent of Education, felt that forcing students to watch programs laced with commercials violated the students' rights. He was as concerned with the values being taught in the commercials as he was with what was being taught by the program (Congress of the United States, 1991). The power of television to shape
values and habits should not be underestimated. Writers such as Apple (1992), Meyers (1984), Moog (1990), Packard (1957), and Shrank (1975) have iterated and reiterated that television is an extremely sophisticated medium and that it is used daily by advertisers, politicians and other interest groups to manipulate public opinion. With this in mind, researchers have argued that careful watch should be kept on programs such as Channel One to ensure that the messages presented do not attempt to subvert the culture and philosophy of the community (Hoffman, 1991; Wulfemeyer & Mueller, 1990).

The overt attempts of Channel One advertisers to sway viewers' opinions were studied by Wulfemeyer and Mueller (1990) who analyzed advertising on Channel One. They concluded that there was a "surprising . . . lack of any blatant examples of materialism themes" (p. 16), but that more study was needed to determine whether advertisers shape values. Nevertheless, Hoffman (1991) warned that the very appearance of Channel One should serve to alert educators to the need to monitor the obvious and subtle value laden messages presented on the program.

Of all of the concerns that have been raised regarding Channel One, two of them are most relevant to this study. The first, which will be explored briefly, has to do with questions of curriculum control. The second, which will be explored in greater detail, has to do with the educational value of Channel One programming.

**Ceding Curricular Control**

Even though the most vocal criticism of Channel One has been over inclusion of commercials, Rudinow (1990) asserted that it is probably
the surrendering of control of the classroom that carries the deepest implications for American education. He wrote:

Thus, perhaps one of the most dangerous, though least discussed, implications of the Channel One proposal is the transfer of substantial control over curriculum and content from individuals and institutions that are locally responsible—teachers, school boards, and parent groups—to a remote corporate hierarchy. (p. 72)

Few would disagree that curriculum, materials, and practices in schools are influenced by outside sources. Eisner (1985) identified the choice of textbooks, the imposition of state standards, and district-wide moves to introduce new materials or teaching methods into the classroom as a few examples of factors that influence practices and bring about changes in a school's curriculum. Each of these influences, however, share a commonality; each of them is reliant on the individual teacher's decision to admit them into the classroom. Each day each teacher must choose to include the new text, or address the state standard, or utilize the new teaching method. The technology which accompanies Channel One transforms that choice. When a school subscribes to Channel One, it is given a special television monitor for each 23 students. It is this special monitor which serves as the battering ram for gaining entrance to classrooms. If the producers of Channel One relied on regular television monitors to bring the program into classrooms, teachers would still have the option of turning the set on or not turning it on as they do with regular educational television. Involvement with other classroom activities, assessment, or projects could conceivably cause some teachers to choose not to turn on their sets on a given day. Although outwardly no different than any other
television set, the special Channel One monitors overcame this barrier to the classroom by including remote power controls. Each day when the school official charged with running Channel One presses the "play" button on the master control panel, all of the Channel One Communications monitors in the building are activated. The teacher could be in the middle of a sentence or the students in the middle of a project when their attention is immediately diverted by the light and sound from the monitor in the room. The teacher still has the option of going over and switching off the monitor, but the nature of the decision has now been altered; instead of having to make an active decision and effort to include Channel One, the teacher must now make an active decision and effort if he or she wishes to exclude the program.

Proponents of Channel One do not seem to be concerned with surrender of curricular control to an outside body so long as the curriculum presented is of high quality and does not run counter to their own values. The fact that teachers do not make choices about what will be shown in their classes should not be simplisticly understood as a total lack of control on their part any more than teachers lack control regarding every piece of information covered in a textbook they have adopted. For example, when teachers select an anthology, they have no control over what specific pieces are included. Although they might choose to call students attention to some pieces and not others, ultimately it is the student who decides what he or she will read.

Secondly, teachers sense of control over the Channel One curriculum can also be enhanced when they actively engage the Channel One curriculum to
expand upon, provide a counterpoint to, or supplement their own instructional goals in the context of contributing to the holistic development of students.

**Educational Value of Channel One**

Questions raised by critics about the educational value of Channel One are at the center of this study. Though it was promoted to schools as a tool for teaching, the studies reported on in the following pages do not all agree about the effectiveness of Channel One for increasing knowledge. Given that Channel One is only six years old, the empirical evidence collected so far is not extensive. Of the studies that have been done, there have been two types: studies of student, teacher, and administrator perceptions of Channel One; and studies of student learning from Channel One. These are briefly reviewed next.

**Student and Teacher Perceptions of Channel One**

**Teacher Perceptions**

The five main studies which focused on teacher perceptions of Channel One and its effectiveness have yielded similar findings of generally positive feelings toward Channel One. Though the survey methodologies of Henshaw (1992), Huffman (1991), Jazzar (1992), Johnston et al. (1994), and Sutton-Collins (1992) were roughly the same, and though all surveyed both senior and junior high teachers, the size and scope of their samples varied widely. Huffman surveyed 125 teachers in two adjoining medium sized school districts; in Henshaw's study 460 teachers in a single large district were surveyed; in Sutton-Collins study 192 secondary teachers in the same telephone area code zone.
responded to her survey; Jazzer surveyed 100 randomly chosen public and private school teachers in the entire state of Michigan, and Johnston et al. (1994) surveyed 2,155 teachers in randomly selected schools throughout the country. In all of these studies the majority of respondents felt that their students learned from watching Channel One and rated it favorably ("A" or "B"). The favorable ratings ranged from 87% in the Johnston et al. (1994) study to 54.4% in the Sutton-Collins (1992) study. In spite of the relatively high marks given to the program, these survey studies all showed that the majority of teachers tended not to discuss Channel One with their students on a regular basis and that only a very small percentage attempted to integrate Channel One into their curriculum. Among the reasons which teachers gave for this lack of integration of Channel One were a lack of training in how to integrate it, a feeling that to discuss Channel One programs took time away from their traditional curriculum (Sutton-Collins, 1992). Other researchers have included the scheduling of Channel One at a time which leaves no opportunity for discussion (Tiene, 1993).

**Student Attitudes**

With the exception of Sutton-Collins (1992), all of the studies which have examined teacher perceptions of Channel One have also surveyed secondary students' attitudes toward Channel One and whether they thought that they learned from the program. Again the findings were consistent with each other. The majority of students also rated the program highly and felt that they knew more about current events because of it. It is noteworthy and of some concern that most of these
researchers asked students (and teachers) about their perceptions of current events, but failed to address the social issues features which make up nearly a third of Channel One's curriculum. Only the Johnston et al. (1994) study addressed social issues by asking about the coverage of A.I.D.S. and similar types of issues.

Learning from Channel One

Whether teachers and students like Channel One is important, but perhaps more important is whether students learn from Channel One. The Channel One curriculum can be broadly described as having three components: current events, social issues and commercial advertisements. An examination of the literature concerning Channel One shows that current events has received most of the empirical attention regarding evaluating learning outcomes. The social issues component had not been previously investigated in this respect. Hayes (1991) ran one of the earliest studies on the learning effect of Channel One on current events knowledge. Utilizing a posttest only control group design, he administered a series of five current events tests to 1,300 students in two neighboring junior high schools. Because Hayes was interested in studying whether watching Channel One raised students' knowledge of current events in general rather than studying whether students retained what they saw on Channel One, his measuring devices were developed from material found in a weekly news magazine and included topics which were not covered on Channel One. Hayes' concluded that students in Channel One schools performed no better (52.89%) than those who never saw the program (52.48%). Moreover, examination of the data showed a slight but
steady improvement in total scores of both the treatment and control groups as the study progressed over seven months. This increasing trend in scores could represent the Hawthorne effect as students in both groups became aware that they were being regularly tested on current events. Since the instrument covered current events in general rather than specific topics that had been addressed by Channel One, and since the study groups and the control groups were tested continually on current events over the length of the study, the study's conclusion might have been expected.

Tiene's (1993) study of Channel One addressed whether or not students actually learn the material presented on Channel One. He utilized a posttest only control group design and administered a 27 item test (covering two weeks of Channel One) to 303 junior high students who had seen the Channel One programs and to 216 junior high students in a neighboring school district which did not receive Channel One. In Tiene's study students who had seen Channel One averaged 60% on a test of current events topics covered on the program. The control group averaged 52% correct. This difference was statistically significant at the .001 level. Tiene (1993) summarized his study by concluding that Channel One raised student interest in current events, allowed students to remember "a bit" more about the news, and was, as a whole, worthwhile.

Houston's (1992) study was similar to Tiene's in that it was carried out with junior high school students and dealt with current events material covered by Channel One over a two week period. It
differed from Tiene's (and was more similar to the present study) in that Houston was concerned with measuring differences between three groups of students who discussed current events after watching Channel One and three groups of students who watched Channel One but did not discuss it. Her measuring instrument, a 20-question multiple-choice test, was administered to 90 students. In Houston's study the students who did not engage in follow-up discussion averaged 66.25%, while the students who did engage in follow-up discussion averaged 81.63%. This difference was highly significant.

The most comprehensive study of learning from Channel One was commissioned by Whittle Communications in 1990 and carried out by the Institute for Social Research at the University of Michigan. This three year study looked at the effectiveness of Channel One as well as student, teacher, and administrator perceptions of the program. Fifty-six schools in 19 states across the country took part in some aspect of the study. The study involved 3,200 junior and senior high school students in 11 matched pairs of schools in a part of the study which utilized a pretest posttest control group design to measure learning from Channel One. The leaders of the study, Johnston and Brzezinski (1992), found that teachers and students liked Channel One, and students felt that they knew more about current events. When they were tested, however, students in the Channel One schools scored only 3.3% better than those students in non-Channel One schools. Johnston et al. (1994), noted that students in some schools scored higher (6% higher than non-Channel One schools). They speculated that a reason might be that
"... the faculty in these schools figured out how to take advantage of what the news program brought into the school" (p. 3). Walsh's (1993) further analysis of the Johnston and Brzezinski (1992) data yields some interesting results which stress the role of teachers as mediators of Channel One's learning effect. He is worth quoting at length:

Students in six Channel One schools who scored best on a current events test based on the 12 minute daily television program were in schools where teachers made students pay attention to the show then discussed the news with them or worked it into the curriculum... In the three schools where students had shown strong gains, the researchers found several common factors... the commitment of teachers to utilizing the show's material in the curriculum... Also at these schools, Channel One was scheduled during an extended academic period when there was time to devote to a discussion of the news without eliminating the scheduled class lesson. (p. 9)

While these studies did not show large amounts of learning from viewing Channel One, they all (with the exception of the Hayes study which showed no differences, but did not test on material necessarily covered on Channel One) showed statistically significant differences (at a .001 level) on a measure of knowledge about current events favoring students who viewed Channel One. Interestingly, other than the students in the Houston (1992) study who engaged in follow-up discussion of the current events material presented on Channel One, students in all of the other studies reviewed scored relatively low, averaging near or below 60%. Whether or not it is worth the five minutes per day which Channel One typically allot to current events for a three to eight percent increase in knowledge of the topics, is a question that schools must decide for themselves.
Educational Television in the Classroom

Channel One's way into the classroom was prepared by the education community's previous experience with television and other electronic educational media. Since the 1950s, States, communities, and foundations have attempted to provide their citizens with educational opportunities via television (Rossi & Biddle, 1966). Each day teachers have had access to a variety of programming ranging from pre-reading to calculus (Iowa Public Television, 1993). Teachers could either use the program as it was broadcast, or they could tape it for viewing at another time. Teachers also typically have had access to libraries of video tapes and could use them to present educational material. When the Channel One monitors first appeared in the classroom, they did not appear to be out of place to teachers and students who were already accustomed to frequent use of television sets and video cassette recorders.

Evaluating the validity of the criticisms that have been leveled against the instructional value of Channel One, requires an in-depth examination of research on the delivery of educational television. Traditionally teachers have used television in the classroom for three basic purposes: (a) to document classroom performances and presentations, (b) for evaluation of performance (both student and teacher), and (c) to present instructional material. The documentation of classroom presentations might include taping student projects or plays or demonstrations by teachers or students (Kinross, 1968). The creation of video student portfolios is also an option used by some
schools (Bruder, 1993). Using television for evaluation might take the form of taping a student speech at the beginning, middle, and end of a term for self and peer evaluation (Asp, 1992). It might also be used by a teacher for self evaluation and/or peer evaluation (Charles City Schools, 1989), or administrative evaluation (Acheson, 1989). The most obvious use of television in the classroom is to present curriculum related material.

Since its inception, the instructional use of television has taken many paths. For instance, in a project called MPATI (Midwest Program on Airborne Television Instruction), six states in the midwest operated a transmitting station from a converted DC-6 bomber (Rossi & Biddle, 1966). Other city and state educational institutions have set up closed circuit or low power transmitting facilities (Hilliard, 1976). In 1961, the American Samoan School System began a project designed to provide nearly 100% of instruction via broadcast television to 5,100 students on several isolated islands. The project drew a great deal of attention, and there were early reports of success, but gradually the amount of broadcasting decreased, and in 1970 the project ended (Hayes, 1991). The educational material presented via these systems has usually been pre-recorded. Teachers and students were told when to expect the program, and they tuned in to view the taped material (Rossi & Biddle, 1966). Additionally, through the use of video tapes and films, teachers have had access to thousands of selections of taped presentations offered by such organizations as Britannica Films and the National Geographic Society.
Considerable research has been done on the effectiveness of this type of distance learning. McKeachie (1966) summarized the evidence available by saying that, at least in a college setting, students learn just about as well from television as by traditional instruction. Chu and Schramm (1975) carried out an extensive analysis of hundreds of studies on learning from instructional television. In summarizing their findings, they stated,

... (T)here is no longer any reason to raise the question whether instructional television can serve as an efficient tool of learning . . . (i)t can. The questions worth asking are no longer whether students learn from it, but rather, (1) does the situation call for it? and (2) how . . . can it be used effectively. (p. 98)

Differences Between Channel One and Traditional Educational Television

Unlike educational video tapes, films, and filmstrips, the news and features which students see on Channel One do not incorporate traditional elements of curriculum design (e.g. unit description, learning objectives, and assessment). Following the style of the television documentary, Channel One features are prepared in a comparatively short time and beamed to the school a few hours before being shown. Channel One differs from its forerunners in that it is presented nearly immediately after production, utilizes a fast pace, features youthful presenters, does not have a prewritten, formal curriculum, and speaks to its viewers in the present tense on the day of its production.

Because they are prerecorded, traditional film, educational television, and video tape presentations may be utilized by teachers in previously planned lessons, but Channel One is difficult to include in
lesson plans; features that were scheduled for a specific day are often preempted by an important breaking news story. In its monthly teachers' guide, Whittle Communications (1994a) gives the two following warnings which may discourage teachers from trying to integrate Channel One features into their classroom:

(1) Look for the following series to be broadcast to your school during October. (Please bear with us: developing news sometimes requires that we change our programming at the last minute.)
(2) And remember, since complex subjects are covered in each series, it's important that the entire series be viewed. One side of an issue may be covered one day, the other side the next day.

(p. 2)

Channel One also differs from traditional educational video media in that it is paid for by the sale of advertising time. Although one of the more controversial aspects of Channel One, these ads pay the cost of the program and the equipment.

Though there are differences between traditional uses of television in the classroom and Channel One, there is a basic underlying commonality; all purport to be effective teaching tools. Nevertheless, a tool does little good unless it is wielded skillfully. The following paragraphs explore what has been learned about teaching with television.

Research on Teaching with Television

As one looks at the literature on teaching with educational television, it becomes apparent that in previous decades others have concluded that television's educational effectiveness may be enhanced through the application of good teaching methods. In a compilation of research about teaching through instructional television Chu and Schramm (1975) uncovered studies which showed that certain conditions were
basically irrelevant when teaching with television. These irrelevant factors included screen size, color, and the presence or absence of humor or animation. However, they concluded that other factors did make a difference in student learning from television. They uncovered several studies that suggested that teacher follow-up of a television presentation was even more effective than repeated showings of the program. Some of the studies they cite are specifically related to the use of discussion to enhance student learning from television. For instance, they cite the work of Stuit (1956) and the Australia Commonwealth Office of Education (1950) who found that the addition of discussion rather than the presentation itself improved learning from film in teenage boys. Devault, Houston, and Boyd (1962) sought to discover if learning from television was enhanced by active student involvement. They divided 87 teachers into two groups. One group was taught by television, and the other was taught by the television instructor. Half of each group had access to consultants with whom they could discuss the program, and the other half did not. Though the students in both groups learned, those students taught by television who had access to people with whom they could discuss the lesson learned more than the group that did not have access. Almstead and Graf (1960) reached a similar conclusion when they found that students learned more through interactive television when discussion with the television instructor could occur than they did from a one-way television presentation. Though most of the studies uncovered by Chu and Schramm found that students learned more from television when they could
interact with the teacher, a consultant, or each other, they also cited Wilkins (1962) who found that third grade students who discussed a mathematics lesson with the teacher and classmates learned no more than did those who merely saw the lesson. Westley and Barrow (1959) also found no significant differences in learning between sixth grade students who saw and discussed a news program and students who only saw the news program (Chu & Schramm, 1975).

Lietke (1983) carried out a study to determine if questions inserted in video have an impact on learning. Lietke hypothesized that learning would be enhanced through discussion or reflection initiated by the teacher through inserted questions. He further explored whether the placement of the questions before, during, or after the video presentation produced different amounts of knowledge, and whether the level of the questions (high or low on Bloome's taxonomy) made a difference. He found that inserted questions do foster learning. He also found that asking post-questions was more effective than asking questions before a presentation. This latter finding is relevant to this study since because Channel One is seen for the first time by the teacher at same time that students see it, if teachers were to use questions to guide discussion, they would not have the opportunity to prepare and ask questions of the students prior to viewing. Lietke cited a study by Faw and Waller (1976) which dealt with inserted questions in prose. This study found that not only did post-questions facilitate learning, but they were more effective in facilitating both intentional and incidental learning. Lietke was also concerned with how
the questions were asked and whether the exact wording had an impact on results. He found that there were no "significant differences in effects of verbatim questions, paraphrased questions, and applications questions" (p. 29).

In his textbook on audio-visual methods, Dale (1969) made the assumption that the teacher could make a difference in learning when he provided a list of suggestions for teaching with television. The list includes working along with the television teacher, walking among the students, and talking over the television teacher when appropriate. He also said that the teacher should, "... discuss important aspects of the lesson and clarify anything which may puzzle your students" (p. 369). Hilliard and Field (1976) echoed Dale. They encouraged the teacher to participate actively in the television learning process and to provide follow-up. Like Dale, they saw the follow-up as being necessary for clarifying the questions of students rather than as a way of enhancing learning.

The Use of Questions to Promote Discussion and Learning

The use of questioning techniques to promote discussion, involve students, and focus their attention is perhaps the oldest pedagogical technique on record. It can be traced back at least to Socrates who used questioning and discussion as a teaching method in 450 B.C. (Allen, 1966). While 18th and 19th century pedagogy advocated recitation as the method of choice for educating students, John Dewey in the 1920s and beyond tried to focus educators again on questioning and discussion techniques and encouragement of learning through involvement. Today it
is widely accepted that most important educational objectives require more than simple recall; students also need to be able to evaluate, synthesize, and apply knowledge. Lietke (1983), among many others, concluded that utilizing questioning and discussion techniques might serve to promote these higher order levels of knowledge. This conclusion is consistent with previous research on the use of classroom discussion to augment or enhance understanding. Ruddick (1978) contended that discussion involved the student and allows him/her to explore and discover personal meaning. Hill (1977) made the point that new material must be internalized in some way for learning to be meaningful. In fact, he went so far as to say that, "Acquired knowledge that is not internalized and remains ego-alien is either readily forgotten, or results in the creation of arid scholasticism or mere pedantry" (p. 28). Classroom discussion is not the only avenue to this internalization, but it is a readily available and commonly utilized method.

Discussion Techniques

There are several well known, formalized discussion techniques commonly used in education. These often have been developed to accomplish specific tasks. For instance, the RISK method is used to analyze suggested solutions to problems to determine best procedures and associated dangers (Brilhart & Galanes, 1992). The Program Evaluation and Review Technique (P.E.R.T.), can be helpful during the final stage of problem solving (Brilhart & Galanes, 1992). Delbecq and Van de Ven developed the Nominal Group Technique as an alternative that attempts to
derive the major advantages of group discussion without the major disadvantages. A nominal or "in name only" group alternates between verbal interaction and individual work in the presence of others. The method may be used to discuss a variety of topics (Brilhart & Galanes, 1992).

For classroom discussion to be most effective, methods must be devised to keep a few from dominating the discussion and to give everyone the opportunity to participate (Harnack, et al., 1977). There are many effective methods for encouragement and control of discussion. Some of these methods deal with enabling all to participate. It is not easy for all participants to be involved when discussion groups are large. It is often necessary to divide the class into smaller "buzz groups". "Most persons participate actively and readily in a small private discussion but hesitate to do so in large public types of discussion. When small group conditions can be simulated in a large audience . . . , participation is frequently increased" (Potter & Anderson, 1964, p. 171). "Following the principle of the least-sized groups, a group should be as small as possible so long as members have the necessary variety of information and skills to accomplish its task" (Brilhart & Galanes, 1992, p. 39).

To be effective for instruction, discussion must be focused and controlled. Hill (1977) described a discussion method which he calls Learning Thru Discussion (L.T.D.). He stated that merely giving a group a topic and asking them to discuss it does not promote learning. "Mastery of difficult material can be achieved through the discussion
group, but not with permissive and unstructured approaches" (p. 15). He advocates that the instructor's task is to present a plan or map for discussion and to see to it that the plan is followed. Hill advocates a nine-step plan for classroom discussion:

1. Definition of terms and concepts.
2. General statement of author's message.
3. Identification of major themes or subtopics.
5. Discussion of major themes and subtopics.
6. Integration of material with other knowledge.
7. Application of the material.

Hill's (1977, p. 15) nine steps are intended to result in "mastery of difficult material" while the present study intended to use discussion to focus student attention and establish understanding through relevance. Hyman (1980), referring to discussion in general, takes the position that the structure of a discussion should vary according to the purpose of the discussion. Hyman identified five types of discussion: (a) policy, (b) problem solving, (c) explaining, (d) predicting, and (e) debriefing. Classroom discussion of a social issues feature would fall under the debriefing category. Hyman's "Questioning Strategy for a Debriefing Discussion" included five questions (variations of which were used to guide discussion in the present study):
1. What are some of the specifics that occurred to you during the activity such as events you observed, decisions you made, and feelings you had?

2. What did you learn about the situation, yourself, and other people from this activity?

3. What are the key ideas that this activity teaches us?

4. In what ways are the actions rules, events, facts, and outcomes of this activity similar to other parts of your life?

5. In what ways can we change this activity to make it more like the real events? (p. 46).

Variations of these questions were utilized for this study.

Summary

The effectiveness of Channel One for addressing educational objectives has been a subject of several studies since its introduction into schools four years ago. Most of these studies have shown that a small but statistically significant amount of learning from viewing Channel One takes place in classrooms where it is used. Johnston et al. (1994) and Walsh (1993), noting that teacher involvement with the program might increase learning, suggested that more study is needed to explore ways in which the amount of learning from viewing Channel One might be increased. This suggestion is consistent with previous research on learning from educational television which indicates that students can and do learn through this medium and other research which found that the role of the teacher in promoting discussion is important to learning from television. This study attempted to discover if there
was a difference in knowledge between classrooms that viewed Channel One and discussed it according to a specific discussion procedure and classrooms that watched Channel One with no discussion.
CHAPTER III
DESIGN OF THE STUDY

Overview

This chapter focuses on a description of the research methodology utilized to fulfill the purposes of this study. It describes the school site, participants, variables, instruments, design, and experimental procedures. This investigation was made up of two separate studies conducted in the junior high (Study 1) and the senior high (Study 2) of the same school district located in a rural midwestern community of about 9,000 people. A description of each study will be provided separately. This chapter is concluded with a discussion of the limitations of the research design, followed by a description of the data analysis techniques and a statement of the research and statistical hypotheses.

Study 1

Site

The junior high school chosen as the site had an enrollment of 414 students at the time of the study. The school employed 33 teachers, one principal, one assistant principal, one full time and one half time guidance counselor, and one media specialist. The school had been receiving and showing Channel One for only one year.

Of the 414 students in the seventh, eighth, and ninth grades of the junior high, 222 (54%) were female, and 192 (46%) were male. Forty-three percent of the students were on free or reduced lunch. The student body was predominantly Caucasian with 2% Asian, 2% African
American, and 1% Hispanic. The average normal curve equivalent composite score on the Iowa Test of Basic Skills (ITBS) over the three years prior to the study had been 65.06.

Sample

The researcher first obtained the district superintendent's consent to conduct the study. He then enlisted the aid of the building principal and received a list of all classes which met during the showing of Channel One. The researcher gathered information about each of these classes including the grade level, gender distribution, and ITBS composite score. Three seventh grade classes proved to be most similar on these attributes: a geography class, a social studies class, and a science class (n = 54) (see Table 1). Teachers of these classes were asked to participate in this study and all agreed to do so.

<p>| Table 1 |
| Study 1 Comparison Data |</p>
<table>
<thead>
<tr>
<th>N</th>
<th>ITBS Scores</th>
<th>Gender</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Group A</td>
<td>20</td>
<td>66.75</td>
<td>11.53</td>
</tr>
<tr>
<td>Group B</td>
<td>15</td>
<td>64.93</td>
<td>20.09</td>
</tr>
<tr>
<td>Group C</td>
<td>19</td>
<td>58.95</td>
<td>21.66</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>63.50</td>
<td>18.04</td>
</tr>
</tbody>
</table>
Design

A posttest-only, control group, 3 x 2 repeated measure quasi-experimental design as described by Campbell and Stanley (1963) and illustrated in Table 2 was utilized to examine the research questions. The between groups factor was the treatment: Group A (n = 20) watched the Channel One social issue feature and then discussed it, Group B (n = 15) watched the Channel One social issue feature but did not discuss it, Group C (n = 19) neither watched nor discussed the Channel One social issue feature. The within subjects factor was the time of testing. Students' knowledge of depression was measured twice, once three days after, and once 17 days after, the social issue feature had been seen.

Table 2

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Immediate Posttest</th>
<th>Delayed Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>T₁ -- W / D</td>
<td>Y₁</td>
<td>Y₂</td>
</tr>
<tr>
<td>T₂ -- W / 0</td>
<td>Y₁</td>
<td>Y₂</td>
</tr>
<tr>
<td>T₃ -- 0 / 0</td>
<td>Y₁</td>
<td>Y₂</td>
</tr>
</tbody>
</table>

Note. T₁ Watched the Channel One presentation on depression and discussed it; T₂ Watched the Channel One presentation on depression but did not discuss it; T₃ saw a version of Channel One from which the depression feature had been removed. Y₁ refers to the immediate measurement of knowledge; Y₂ refers to the delayed measurement.
Treatment Procedures

After the participation of teachers had been secured, classes were randomly assigned to the three treatments. The names of the teachers were written on slips of paper and drawn from a container. The first name drawn became the teacher of treatment Group A, the second name drawn became the teacher of treatment Group B, the third name drawn became the teacher of treatment Group C.

Depression was chosen as the topic for the study because of its relationship to teen suicide, a topic which is mandated by the state to be taught in the school. In the week prior to the treatment, the researcher met with the participating teachers to explain the procedures. At that meeting the teachers were told that they would be helping with a study being conducted on Channel One, but they were not told the specific hypotheses of the study. The teachers were advised that it was very important that they comply exactly with treatment procedures. Treatment was implemented during the full presentation of a social issue feature on depression. The series aired on a Wednesday and a Thursday.

Treatment Conditions

Group A

Students in treatment Group A watched Channel One as usual. At the conclusion of the program the teacher assigned the students to groups of three to five with contiguously seated classmates. When groups had formed, students were asked to discuss three questions. The questions were taken from Hyman's (1980) "Questioning Strategy for a Debriefing
Discussion." The researcher modified three of Hyman's questions to fit the Channel One social issues format. They were as follows: (a) What are some of the specifics that occurred to you as you watched the feature on depression, such as things you observed, decisions you made, and feelings you had? (b) What did you learn about the situation, yourself, and other people from this feature? (c) What are the key ideas presented in this feature? A person in each group was asked to record answers on a sheet of newsprint. (These comments may be found in Appendix B.)

The teacher asked the first question, and then the students were given a few minutes to discuss the question among themselves. As the small groups were discussing, the teacher posted a large page of newsprint on which this question had been written so that the students could refer to it as they discussed. After the students had had enough time for each to contribute, the teacher offered each person an opportunity to share an observation, a decision, or a feeling described in the group. The groups were then asked to respond to the next question: (b) What did you learn about the situation, yourself, and other people from this feature? Again, the teacher posted this question at the front of the room so that the students could refer to it as they discussed. After the students had had enough time for each to contribute and to get answers down on the newsprint, the teacher again offered an opportunity for each person to share something learned about the situation, himself or herself, or other people which had been described in the group.
Finally, the groups were asked to respond to the last question:
(c) What were the key ideas presented in this feature? Again, the teacher posted a large page of newsprint on which this question had been written at the front of the room. After the students had had enough time for each to contribute and to get answers down on the newsprint, the teacher offered each group an opportunity to share a key idea about the topic.

The teacher then collected each group's written comments, removed the questions from the front of the room, and proceeded with the class's planned activities. This procedure was followed for each day of the feature. If the teacher was careful in attending to time limits for discussion, the treatment could take as little as 12 minutes.

**Group B**

Students in treatment Group B watched Channel One as usual. No instructions or explanation was given to them. If students asked questions about, or tried to discuss, the social issues feature, the teacher was to say that it was not a good time to discuss it and that perhaps the class could do so at a later time. (The teachers were told that they could discuss the topic in the class after the second posttest, approximately two weeks later.)

**Group C**

Group C served as the control group. They saw a version of Channel One from which the social issue feature had been removed. The researcher arrived at the site at approximately 6:00 A.M. on each morning of the study. He made a copy of the day's Channel One program.
from which he deleted the social issues feature. This edited version of
the program was shown in place of Channel One program seen by the rest
of the school. At the end of the study teachers were given a video tape
of the deleted feature to be shown at their discretion.

**Instrument**

Given the nature of the study, content validity was the
primary validity concern in developing test items. The instrument used
to measure retention of information was a 29 item matching test based on
information presented on Channel One during the time of treatment and
constructed by the researcher. The instrument dealt only with the
social issue feature on depression. Two disinterested education
professionals assisted in the construction of the instrument and
suggested modifications. A copy of the instrument may be found in
Appendix C.

**Data Analysis**

A 3 × 2 ANOVA with repeated measures on one factor was conducted to
determine if test results indicated a difference in knowledge among the
groups receiving the three treatments. The between groups factor was
the treatment to which each group was exposed. The within subjects
factor was the time of testing (three days vs. 17 days). The dependent
measure was the individual student scores obtained on the social issues
test. Additional analyses performed included procedures for testing the
reliability of the instruments and comparisons of group equivalence on
ITBS ability as measured by an ANOVA.
Study 2

Site

The high school had an enrollment of 439 students. The school employed 32 teachers, one principal, one assistant principal, one full time and one half time guidance counselor, and one media specialist. The high school had been receiving and showing Channel One since it was first available. Surveys and interviews conducted by the researcher in the spring of 1993 indicate that Channel One had been fairly well received by most of the students and faculty.

Of the students, 215 (49%) were female, and 224 (51%) were male. Forty-two percent of the students were on free or reduced lunch. The student body was predominantly Caucasian with 1% Asian, 1% African American, and 1% Hispanic. The average normal curve equivalent composite score on the Iowa Test of Educational Development (ITED) over the three years prior to the study had been 61. The male average score was 59, and the female average score was 63.

The researcher enlisted the aid of the building principal and received a list of all classes which met first period during the showing of Channel One. Information was gathered about each of these classes including the grade level, gender distribution, and ITED composite score. Nine classrooms were selected based on their similarity according to these attributes. The subject taught in the class was also a consideration. Since Channel One is shown to all classrooms in a school building simultaneously, the researcher was not necessarily concerned with the specific type of class (for example, English, social
studies, science). However, since one in three of the classrooms would be randomly assigned to discuss the Channel One social issue feature, it was important that all classes be in a setting conducive to classroom discussion; therefore, activity based classes such as physical education classes or music classes were avoided.

**Design**

A posttest-only, control group, 3 x 2 repeated measure quasi-experimental design as described by Campbell and Stanley (1963) was utilized to examine the research questions. The between groups factor was the three treatments: Group A watched the Channel One social issue feature and then discussed it, Group B watched the Channel One social issue feature but did not discuss it, Group C neither watched nor discussed the Channel One social issue feature. The within subjects factor was the time of testing: differences were measured twice, once three days after the completion of the social issue feature and once 17 days after its completion. The design of Study 2 differed from Study 1 in that, in addition to measuring recall regarding social issues, recall of current events material presented on Channel One during the time of the study was also measured. All groups saw the current events component of the Channel One program, but no group discussed it. Current events knowledge was measured at the same time as social issues knowledge. Another difference in Study 2 was that three classes were assigned to each treatment in contrast to the single class assigned to each treatment in Study 1.
Table 3

**Design of Study 2**

<table>
<thead>
<tr>
<th>Social Issues Component</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$T_1$ -- $W / D$</td>
</tr>
<tr>
<td></td>
<td>$T_2$ -- $W / 0$</td>
</tr>
<tr>
<td></td>
<td>$T_3$ -- $0 / 0$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Events component</th>
<th>Treatment</th>
<th>Immediate Posttest</th>
<th>Delayed Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$T_2$ -- $W / 0$</td>
<td>$Y_1$</td>
<td>$Y_2$</td>
</tr>
</tbody>
</table>

**Note.** $T_1$ Watched the Channel One presentation and discussed it; $T_2$ watched the Channel One presentation but did not discuss it; $T_3$ saw a version of Channel One from which the drug abuse feature had been removed. $Y_1$ refers to the immediate measurement of knowledge; $Y_2$ refers to the delayed measurement.

**Procedure**

In Study 2, nine classrooms, three each from grades 10, 11, and 12, were selected, trying to match for ability, subject taught, and gender ratio. Three classrooms were randomly assigned to each of the three treatment conditions described above. The treatment ran for three days, the length of the social issues series on drug abuse. At the beginning of the following week, a test designed to measure knowledge about the
topic addressed was administered to students in all of the classrooms. The test was administered again two weeks later. Upon completion of the delayed post test, teachers of treatment Group B students were advised that they could discuss the topic with their classes if they wished, and teachers of students in Group C were given a tape of the social issues feature so that they could show it to their classes at their discretion.

**Instrument**

Given the nature of the study, content validity was the primary validity concern in developing test items. The three treatment groups were measured by means of a 32 item multiple choice test designed to assess recall of discrete facts from the social issues features and current events information presented during the week of treatment. The instrument was prepared by the researcher and two disinterested educators experienced in test design. It was then submitted to the researcher's committee chairs for approval and modification. After it had been approved, the test was duplicated for administration to all students in groups A, B, and C. Immediately following the Channel One program on the Monday following the treatment, all students involved in the study were asked to complete the instrument. Fourteen days later, the same instrument was again administered to all students involved in the study.

**Data Analysis**

A 3 x 2 ANOVA with repeated measures on one factor was conducted to determine if test results indicated a difference in knowledge between the groups receiving the three treatments. The between factor was the
treatment to which each group was exposed. The within factor was the
time of testing (3 days vs. 17 days). The unit of randomization was the
class; therefore, the dependent measures were the mean classroom scores
obtained on the immediate and delayed current events test and the
immediate and delayed social issues test.

Limitations of the Research Design

Campbell and Stanley (1963) noted that though powerful, the quasi-
experimental nature of the design used for this study makes it
vulnerable to several threats to validity. Below, the impact of these
threats for the current study are discussed.

History

Student prior knowledge of the social issue topics presented during
the week of the study was probably a factor in their performance. The
depression topic used in Study 1 was fairly unfamiliar to the students.
It was not present in their written curriculum, and it had not been
covered previously on Channel One. On the other hand, drug abuse, the
social issues topic covered during Study 2, is part of the school's
curriculum in every year. It had also been covered previously on
Channel One. Given that nearly all students had had the same exposure
to prior knowledge, it was expected that the scores of all groups should
have been impacted similarly.

Testing

Though groups B and C did not discuss Channel One, it is possible
that their being tested on the topics could have raised their awareness
of the topic. Nevertheless, since the testing occurred after treatment, this influence was probably minimal.

**Instrumentation**

The research design was also limited in that an instrument for measuring learning had to be constructed from a very small amount of material. The limited number of discrete facts presented forced the researcher to include test items covering fairly unimportant facts; however, the retention of facts rather than their quality was the focus of this study. A reliability analysis was conducted on the current events instrument and on the two social issues instruments. The small number of items (seven) used to measure learning about current events in Study 2 resulted in a low internal consistency coefficient (.52 on the immediate measure and .5 on the delayed measure). Nonetheless, the reliability coefficient for the instrument in Study 1 was fairly high (.80) and adequate for the social issues section of Study 2 (.61).

**Selection**

In Study 1 only a single classroom was used for each treatment. Though every effort was made to pick classes that were equivalent with respect to ability, gender balance and class type prior to their random assignment to treatment, it was impossible to find classes that were equal in all respects. This limitation was mitigated in Study 2 with the inclusion of three classrooms for each treatment. In each study an ANOVA was performed to identify differences within each treatment group as measured by composite scores on the Iowa Test of Basic Skills in Study 1 and the Iowa Test of Educational Development in Study 2. The
following ANOVA summary tables show that no significant differences between treatment groups were identified.

Table 4
ANOVA Summary Table Comparisons on ITBS Scores by Treatment Groups, Study 1

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups</td>
<td>2</td>
<td>687.31</td>
<td>343.65</td>
<td>1.06</td>
<td>.355</td>
</tr>
<tr>
<td>Error</td>
<td>51</td>
<td>16568.19</td>
<td>324.87</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total 53 17255.50

Table 5
ANOVA Summary Table for Comparisons ITED Scores by Treatment Groups, Study 2

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups</td>
<td>2</td>
<td>107.65</td>
<td>53.82</td>
<td>.60</td>
<td>.577</td>
</tr>
<tr>
<td>Error</td>
<td>6</td>
<td>534.5</td>
<td>89.08</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total 8 642.15
Mortality

Though it was not a problem in Study 1, mortality played a larger role in Study 2 than the researcher had anticipated. If a student missed more than a day of the treatment or either of the two posttests, he or she was removed from the study. This led to the low number of students shown in several of the classes (see Table 6), but it was felt that a lower $n$ was preferable to including students who may not have received the treatment.

Table 6
Mortality in Study 2

<table>
<thead>
<tr>
<th>Original class size</th>
<th>Study Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Group A</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
</tr>
<tr>
<td>Group B</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
</tr>
<tr>
<td>Group C</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
</tr>
</tbody>
</table>
Null Hypotheses

The first three of the following research hypotheses were tested in Study 1. All six research hypotheses were tested in Study 2.

1. (Treatment main effect) There will be no difference in performance on a measure of knowledge about social issues among groups receiving three different treatments.

2. (Immediate vs. delayed testing main effect) There will be no difference in performance on a measure of knowledge about social issues when tested soon (three days) after treatment as compared to performance on a delayed (17 days) measure of knowledge about social issues.

3. (Interaction effect) There will be no interaction between treatment and time of testing on a measure of knowledge about social issues.

4. (Treatment main effect) There will be no difference in performance on a measure of knowledge about current events among the three treatment groups.

5. (Immediate vs. delayed testing main effect) There will be no difference in performance on a measure of knowledge about current events when tested soon (three days) after treatment as compared to performance on a delayed (17 days) measure of knowledge about current events.

6. (Interaction effect) There will be no interaction between treatment and time of testing on a measure of knowledge about current events.
Expectations

With respect to performance on the social issues test, it was expected that because groups A and B saw the Channel One social issue feature and Group C did not, there would be a difference between Group C and both Groups A and B on both the immediate and the delayed posttest. Since Group A discussed the Channel One social issue feature and Group B did not, it was also expected that there would be a difference between Group A and Group B on both the immediate and the delayed posttest.

In Study 2 all groups received the same treatment on the current events portion of the test. It was, therefore, expected that there would be no difference among groups on either the immediate or the delayed posttest.
CHAPTER IV
RESULTS

The results of this study are presented in three sections. First will be presented data that were used to establish group equivalence, including ITBS/ITED scores, gender, grade, and class type. Next, a reliability analysis of the instruments used for data collection will be presented. Third, will be a presentation of the repeated measure 3 x 2 ANOVA performed to test the hypotheses of this study. Results for Study 1 will be presented first followed by data analysis for Study 2.

Study 1
Analysis of Group Equivalence

Table 1 characterizes the three seventh grade classes in terms of ITBS scores, gender, and the class in which Channel One was shown. An ANOVA was performed to determine if the treatment groups differed significantly on academic ability as measured by the ITBS. Results showed that there were no statistically significant differences among the three treatment groups, $F(2, 51) = 1.06$, n.s. (see Table 6).

Reliability Analysis

The instrument used to measure retention of information was a 28 item matching test based on information about depression presented on Channel One. Results of a reliability analysis conducted using Cronbach's alpha, yielded an internal consistency coefficient of .80 on the immediate posttest and .84 on the delayed posttest. The test-retest reliability coefficient (immediate and delayed posttest) was .80, $p < .000$. 

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Research Hypotheses

Table 7 presents the means and standard deviations for each group on the immediate and delayed social issue posttests. The statistical test used to examine for treatment effects, time effect, and time by treatment effect was a 3 x 2 (treatment by time) repeated measure ANOVA on one factor. Although the units of randomization were the intact seventh grade classes, because there was only one class per treatment condition, the unit of analysis was the students' scores. Results indicated that there was a main effect for treatment, \( F(2, 51) = 11.13, p < .0001 \), and that the main effect for time and the interaction effect failed to reach statistical significance (see Table 8).

Table 7

<table>
<thead>
<tr>
<th></th>
<th>Immediate</th>
<th></th>
<th>Delayed</th>
<th></th>
<th>Average</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>SD</td>
<td>n</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Group A</td>
<td>20</td>
<td>18.45</td>
<td>2.98</td>
<td>18.65</td>
<td>3.66</td>
<td>18.55</td>
</tr>
<tr>
<td>Group C</td>
<td>18</td>
<td>11.61</td>
<td>3.88</td>
<td>12.50</td>
<td>4.84</td>
<td>12.06</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>14.81</td>
<td>5.09</td>
<td>15.57</td>
<td>5.53</td>
<td>12.06</td>
</tr>
</tbody>
</table>

Note: Group A saw Channel One and discussed the Social Issue segment on depression. Group B saw Channel One but did not discuss the social issue segment. Group C saw an edited version of Channel One from which the social issue segment had been removed.

Possible scores ranged from 0 to 28.
Table 8
ANOVA Summary Table for Depression Scores as a Function of Treatment

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>819.16</td>
<td>2</td>
<td>409.58</td>
<td>11.13</td>
<td>.0001</td>
</tr>
<tr>
<td>Error Between</td>
<td>1877.26</td>
<td>51</td>
<td>36.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>17.16</td>
<td>1</td>
<td>17.16</td>
<td>3.00</td>
<td>.089</td>
</tr>
<tr>
<td>Treatment by time</td>
<td>5.73</td>
<td>2</td>
<td>2.86</td>
<td>.50</td>
<td>.609</td>
</tr>
<tr>
<td>Error Within</td>
<td>291.21</td>
<td>51</td>
<td>5.71</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Scheffe procedures were used to follow up on the treatment main effect. Results showed that only two comparisons were statistically significant. The discussion group ($M = 18.55$) scored significantly higher than the other two groups ($M = 14.53$ for the group that viewed without discussion and $M = 12.05$ for the group that did not watch).

There was not a statistically significant difference between the performance of the group that watched the Channel One presentation on depression and the performance of the group which saw a version of Channel One from which the depression segment had been deleted. The performance for each group by time of testing is presented in Figure 1.
Comparison of Group Equivalence

Because this was a quasi-experimental study in which the subjects tested were a part of preexisting classes, it was necessary to choose groups which were most similar before they were randomly assigned to one of the three treatments. Tenth, 11th, and 12th grade classes were available for the study. Table 9 shows how these classes compared in size, ITED score, gender, and class type. An ANOVA was performed to determine if the treatment groups differed significantly on academic
ability as measured by the ITED. Results showed that there were no statistically significant differences among the three treatment groups, $F(2, 6) = .60, n.s.$ (see Table 5).

Table 9
Study 2 Comparison Data

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>ITED M</th>
<th>SD</th>
<th>Male</th>
<th>Female</th>
<th>Grade</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>11</td>
<td>64.82</td>
<td>20.95</td>
<td>6</td>
<td>5</td>
<td>10</td>
<td>Social Studies</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>49.50</td>
<td>7.56</td>
<td>4</td>
<td>4</td>
<td>11</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>65.89</td>
<td>17.04</td>
<td>6</td>
<td>3</td>
<td>12</td>
<td>Government</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>60.07</td>
<td>18.18</td>
<td>16</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>67.27</td>
<td>16.70</td>
<td>5</td>
<td>6</td>
<td>10</td>
<td>Biology</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>57.80</td>
<td>10.22</td>
<td>5</td>
<td>5</td>
<td>11</td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>62.57</td>
<td>19.72</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>Social Studies</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>63.55</td>
<td>15.55</td>
<td>15</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>7</td>
<td>83.14</td>
<td>9.99</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>62.22</td>
<td>17.46</td>
<td>4</td>
<td>5</td>
<td>11</td>
<td>Psychology</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>57.30</td>
<td>16.20</td>
<td>7</td>
<td>3</td>
<td>12</td>
<td>Family Living</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>67.55</td>
<td>18.27</td>
<td>14</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Social Issue

Reliability Analysis

The instrument used to measure retention of information on the social issue section of Study 2 was a 23 item multiple choice test based on information about drug abuse presented on Channel One. Two items were deleted because their presence lowered the reliability coefficient. Results of a reliability analysis conducted using Cronbach’s alpha, yielded an internal consistency coefficient of .61 on the immediate posttest and .61 on the delayed posttest. Test-retest reliability (immediate and delayed posttest) was .90, \( p < .01 \).

Research Hypotheses

Table 10 presents the means and standard deviations for each group on the immediate and delayed posttests. The statistical test used to test for treatment effects, time effect, and time by treatment effect was a 3 x 2 (treatment by time) repeated measure ANOVA on one factor. The units of randomization were intact 10th, 11th and 12th grade classes, the units of analysis were the mean scores for each classroom. Results showed a main effect for treatment, \( F(6, 2) = 26.93, p < .001 \). The main effect for time failed to reach a level of significance, \( F(6, 1) = 1.01, n.s \). The time by treatment interaction showed to be significant, \( F(2, 1) = 6.73, p < .03 \), (see Table 11).
Table 10

**Immediate and Delayed Social Issue Posttest Means**

<table>
<thead>
<tr>
<th></th>
<th>Immediate M</th>
<th>Immediate SD</th>
<th>Delayed M</th>
<th>Delayed SD</th>
<th>Average M</th>
<th>Average SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>13.83</td>
<td>.50</td>
<td>13.12</td>
<td>.64</td>
<td>13.48</td>
<td>.54</td>
</tr>
<tr>
<td>Group B</td>
<td>13.28</td>
<td>.17</td>
<td>12.41</td>
<td>1.25</td>
<td>12.85</td>
<td>.98</td>
</tr>
<tr>
<td>Group C</td>
<td>9.24</td>
<td>.61</td>
<td>10.16</td>
<td>.88</td>
<td>9.70</td>
<td>.88</td>
</tr>
<tr>
<td>Total</td>
<td>12.12</td>
<td>2.21</td>
<td>11.90</td>
<td>1.58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11

**ANOVA Summary Table for Drug Abuse Scores as a Function of Treatment**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>49.12</td>
<td>2</td>
<td>24.56</td>
<td>26.93</td>
<td>.001</td>
</tr>
<tr>
<td>Error Between</td>
<td>5.47</td>
<td>6</td>
<td>.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>.22</td>
<td>1</td>
<td>.22</td>
<td>1.01</td>
<td>.354</td>
</tr>
<tr>
<td>Treatment by time</td>
<td>2.94</td>
<td>2</td>
<td>1.47</td>
<td>6.73</td>
<td>.029</td>
</tr>
<tr>
<td>Error Within</td>
<td>1.31</td>
<td>6</td>
<td>.22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To follow up on the interaction effect, a simple main effect analysis was conducted to examine the treatment main effect at each time of measurement. Scheffe analysis showed that on the immediate posttest Group A (watched with discussion, M = 13.83) and Group B (watched with no discussion, M = 13.28) both scored significantly higher at the .05 level.
level than Group C (neither watched nor discussed, $M = 9.24$). On the
delayed posttest, only Group A ($M = 13.12$) scored significantly higher
at the .05 level than Group C ($M = 10.16$). The performance for each
group by time of testing is presented in Figure 2.

![Figure 2. Social issues immediate and delayed posttest.](image)

Current Events

Reliability Analysis

The instrument used to measure retention of information on the
current events section of the instrument was a nine item multiple choice
test based on information presented on Channel One during the study.
Two items were deleted because their presence lowered the reliability coefficient. Results of a reliability analysis conducted on the remaining seven items using Cronbach's alpha yielded an internal consistency coefficient of .59 on the immediate posttest and .56 on the delayed posttest. Test-retest reliability (immediate and delayed posttest) was .37, n.s. It is believed that the low number of items is partially responsible for the low reliability. An additional factor could be a lack of learning and retention of information presented, as well as repeated exposure to current events information during the two week interval between the immediate and delayed posttest.

**Research Hypotheses**

Table 12 presents the means and standard deviations for each group on the immediate and delayed posttests. The statistical test used to test for treatment effect, time effect, and time by treatment effect was a 3 x 2 repeated measure ANOVA on one factor. The units of randomization were the nine intact 10th, 11th and 12th grade classrooms; therefore, the units of analysis were the mean scores for each classroom. Results from the repeated measure ANOVA showed that the treatment effect failed to reach statistical significance, F(2,6) = .49, n.s., as did the time effect, F(1, 6) = 3.56, n.s. Because of the low reliability of the current events instrument, significance was set at .01; therefore, the interaction effect was interpreted as not significant, F(2,6)= 5.16, p < .050 (see Table 13). The performance for each group by time of testing is presented in Figure 3.
### Table 12

**Immediate and Delayed Current Events Posttest Means**

<table>
<thead>
<tr>
<th></th>
<th>Immediate</th>
<th></th>
<th>Delayed</th>
<th></th>
<th>Average</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>----</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Group A</td>
<td>3</td>
<td>4.44</td>
<td>1.06</td>
<td>3.93</td>
<td>.76</td>
<td>4.19</td>
</tr>
<tr>
<td>Group B</td>
<td>3</td>
<td>3.43</td>
<td>.55</td>
<td>3.97</td>
<td>.57</td>
<td>3.69</td>
</tr>
<tr>
<td>Group C</td>
<td>3</td>
<td>3.05</td>
<td>1.00</td>
<td>4.28</td>
<td>.69</td>
<td>3.66</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>3.64</td>
<td>1.00</td>
<td>4.06</td>
<td>.61</td>
<td></td>
</tr>
</tbody>
</table>

### Table 13

**ANOVA Summary Table for Current Events Scores as a Function of Treatment**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>1.01</td>
<td>2</td>
<td>.51</td>
<td>.49</td>
<td>.637</td>
</tr>
<tr>
<td>Error Between</td>
<td>6.25</td>
<td>6</td>
<td>1.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>.79</td>
<td>1</td>
<td>.79</td>
<td>3.56</td>
<td>.108</td>
</tr>
<tr>
<td>Treatment by time</td>
<td>2.30</td>
<td>2</td>
<td>1.15</td>
<td>5.16</td>
<td>.050</td>
</tr>
<tr>
<td>Error Within</td>
<td>1.34</td>
<td>6</td>
<td>.22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 3. Current events immediate and delayed posttest.

- Δ = Group A
- 0 = Group B
- * = Group C

Current Events Immediate and Delayed Posttest Scores

4.75
4.50
4.25
4.00
3.75
3.50
3.25
3.00
2.75
2.50

Immediate Posttest  Delayed Posttest

Time of Testing
CHAPTER V
SUMMARY OF FINDINGS, DISCUSSION, AND RECOMMENDATIONS

The purpose of this study was to investigate whether student learning from viewing Channel One was enhanced when the program was accompanied by teacher facilitated classroom discussion. The secondary purpose of the study was to investigate the impact that follow-up discussion had on students' memory of the social issues from the viewing of Channel One. Findings of each of the two studies that were conducted to fulfill these purposes will be presented first followed by a cross study discussion of findings.

Results of Study 1 showed that seventh graders who watched a unit on depression with follow-up discussion outperformed both those who watched without discussion and those who did not watch that segment on Channel One. Those who did not watch the social issue feature performed as well as those who watched the program but did not discuss it.

In the second study (Study 2), three intact classes were assigned to each treatment, and treatment groups were compared on recall of social issues and current events. In Study 2 students who watched the Channel One social issue feature on drug abuse with discussion outperformed only those who did not see the feature; there was no significant difference between those who discussed the drug abuse feature and those who only watched the program. In Study 2 all groups received the same treatment with regard to current events; all viewed the presentation, and no group discussed it. As expected, no groups differed on this measure.
The researcher speculates that the difference in findings between Study 1 and Study 2 could be attributed to the content of the social issue features covered in each of the studies. In Study 1 the series presented on Channel One dealt with depression, a topic which was unfamiliar to the general student body, had not been previously addressed on Channel One, and which was not a part of the school's curriculum. It could be assumed, therefore, that the level of prior knowledge about depression was low across all treatment groups. One could speculate that since the depression topic was less familiar to the students than was the drug abuse topic, discussion helped to define the concept of depression for some students and led to greater retention of knowledge than did passive watching. Written comments from students gathered during their discussion of the program (compiled in Appendix B) suggest that discussion of depression sometimes allowed them to connect the topic to their personal lives. On the other hand, drug abuse, the social issue topic dealt with in Study 2, is a common one both on Channel One (See Appendix A for a compilation of a year's program topics.) and in the curriculum of the school in which the study was conducted. It could be assumed that because the level of prior knowledge about the topic of drug abuse was relatively high and the concept was already clearly defined for most students, adding discussion did not significantly enhance learning.

A second difference between Study 1 and Study 2 was the presence of a time by treatment interaction effect in Study 2 that was not present in Study 1. When tested just three days after the treatment, both the
classes that discussed the feature on drug abuse and the classes which only watched it scored significantly higher than the classes which neither saw nor discussed the feature. When tested two weeks later, only the scores of the classes that discussed the feature were significantly higher than those of the classes which did not see it. This would suggest that discussion of drug abuse did not result in short term differences in knowledge between the classes which discussed the feature and those that did not. However, classes which did not discuss the topic were unable to maintain a difference in level of knowledge over an extended period about drug abuse over those who did not see the feature.

These results suggest that discussing a social issue featured on Channel One with a class can impact learning in two ways. First, if the content is unfamiliar, discussion appears to enhance both immediate learning and long term retention. Second, if the content is familiar to students, discussion appears to improve long term retention of information. This would imply that schools wishing to use Channel One to teach about social issues should consider showing the program at a time when there would be an opportunity to discuss the program after viewing and might want to encourage discussion when topics which they consider important to their curriculum are presented. The Channel One programming guide makes short term planning for this type of activity possible; however, in practice, Channel One's tendency to change programming plans at the last minute makes long range planning difficult and flexibility essential.
The suggestion that short and/or long term learning may be impacted by discussion is important when one realizes that nearly half of the secondary school age children in the United States watch Channel One and can potentially be informed about a social issue, current event, or some other topic on any given day or in any given week. If schools are willing to commit to training teachers in how to use Channel One and to show the program at a time and in a setting conducive to discussion, information on A.I.D.S., teenage suicide, drug abuse, teen pregnancy, and many other topics can be delivered for virtually no additional cost in money or time to students in schools which receive Channel One. Even if students learn only a little about a topic from a single viewing, one must realize that many students watch the program nearly every school day for up to seven years. That is over 1,000 viewings, over 200 hours, much more time than a student would spend in a two semester course. The cumulative effect of that many regular viewings could be very substantial.

If Channel One’s potential for doing good in teaching about social issues and other topics is large, the potential for misuse as a sales and propaganda device is also great (Moog, 1990; Wulfemeyer & Mueller, 1990). Faced with a tool of such negative potential, some will be, and have been, tempted to call for its cessation. We live in an age in which we are continuously bombarded by propaganda of all types and in which our behavior, values, and beliefs are being continuously “adjusted” by the political and commercial interest groups which control the mass media (Moog, 1990; Packard, 1957). The results of the current
study suggest that under certain conditions, Channel One can be an effective instructional tool. When used with teacher and student involvement, Channel One seems to be effective in teaching about social issues. Previous studies have shown that Channel One makes a difference in learning about current events (Celano & Neuman, 1995; Houston, 1992; Johnston & Brzezinski, 1992; Tiene, 1993). Channel One has the further advantage of allowing adults, in this case teachers, access to the information and values being given to students. As Sutton-Collins (1992) and Tiene (1993) note, teachers and administrators should be trained in discussing Channel One with their students. They should also be trained in identifying and discussing with their classes the different types of sophisticated propaganda techniques to which all citizens are exposed in various types of media (Hoffman, 1991; Moog, 1990; Wartella, 1995; Wulfemeyer & Mueller, 1990). This continued vigilance may ensure Channel One's value as an educational tool.

The interpretations and conclusions drawn above need to be understood in light of the limitations of the current investigation. More specifically, reliability problems with instruments used in the study require consideration. The differences in reliability coefficients between Study 1 and 2 could reflect differences in test format; Study 1 involved matching items, and Study 2 involved multiple choice items. Although the reliability obtained for social issues in Study 2 is within acceptable ranges for research purposes, it would have been desirable if it had been in the .80 and above range. Ary, Jacobs, and Razavieh (1985) noted that, "If the measurements results are to be
used for making a decision about a group or even for research purposes, a lower reliability coefficient (in the range of .30 to .50) might be acceptable" (p. 237). Nevertheless, the results of the second study should be interpreted cautiously because of the relatively low reliability measure of the instrument. For instance, the low test-retest as well internal consistency coefficients found for the current events do not allow one to determine if the impact of follow-up discussion on the social issue component is transferred to the other components of the Channel One curriculum. Do students who know they will discuss the social issue tend to pay more attention to other parts of the program too?

A second source of caution stems from the use of a quasi-experimental design. Although measures were taken to establish group equivalence, selection could still be a threat to the internal validity of the study.

Summary

This study investigated whether learning from Channel One was impacted by student involvement in follow-up discussion. The study also looked at whether students may learn about social issues presented on Channel One. Results revealed that in some situations discussion positively impacts student learning from Channel One and that involvement in discussion about the social issue topics covered by the program might lead to better long term retention of the material presented. The following recommendations are made in consideration of these findings.
Recommendations for Further Study

1. Students in these studies were tested after viewing a single Channel One social issues feature. Following the design of Johnston et al. (1994) who conducted a three year examination of the impact of Channel One's current events curriculum, studies should be done to determine the impact of Channel One's social issues curriculum over a three year period.

2. It was hypothesized that differences in outcomes in Study 1 and Study 2 were due to different levels in prior knowledge. Further studies could be done to test this hypothesis.

3. Because of the small amount of information available to construct an instrument, it was necessary to test on specific details drawn from the presentation rather than basic understanding of the topic. Future studies should be carried out over longer periods and multiple and repeated topics to determine if the use of follow-up discussion leads to a deeper understanding of social issues.

4. Schools are often mandated to teach about various social issues. It might be helpful to compare the level of learning about specific social issues among groups of students who receive the material through a conventional classroom presentation or program, groups of students who receive the material through Channel One only, and groups of students who receive the material through a combination of Channel One and a conventional classroom presentation.

5. Not wanting the skills of the discussion leader to influence the results, this study utilized a small group discussion technique in
which the teacher's part was merely that of coordinator. Studies should be done to determine if the type of discussion carried out after watching Channel One has an effect on the level of retention.

6. Studies should be done to determine whether techniques other than discussion, such as testing or journal writing, are more effective in increasing student learning from Channel One.
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Charles City Community Schools Phase III Plan, (1989). (Available from Charles City Community Schools, Charles City, Iowa).


Congress of the United States (1991). Channel One, educational television and technology hearing on examining current educational television programming and to examine new technologies which could impact the future of educational television, focusing of Channel One, a news and information program designed for a teenage audience, before the subcommittee on education, arts, and humanities of the committee on labor and human resources. United States Senate, 102nd


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Walsh, M. (1994, Feb. 9). Channel One impact on performance found to be 'moderate'. *Education Week*, p. 4.


Whittle Communications. (1989a). *Channel One: Helping to make the classroom more relevant to the world in which students live*. Knoxville, TN: Author.


APPENDIX A

A Description of a Full Year of

Channel One Programming

Compiled by the Researcher
Following is a description of Channel One programming delivered during the 1992-1993 school year. The researcher taped each broadcast and then replayed each to record the types of segments and the length of each segment.

Opening

There were 165 introductory "Hello" segments which averaged 24 seconds. It followed a ten second countdown to the broadcast. Most often this opening consisted of the playing of the Channel One theme, a greeting, and a short description of what was to be the main story or activity of the day. A commercial usually followed.

Channel One related programming

There were 21 segments that had to do with the Channel One program and its promotions. The total time spent on these segments was 1,723 seconds. Each segment averaged 82 seconds in length. Topics included:

5 segments on the "Channel One Vote" (a mock election held several days before the 1992 election),
7 segments in which student produced material and student participants were solicited,
1 segment dealing with a Channel One reporter's description what it was like to interview the President,
1 segment announcing of a current events contest,
1 segment covering the reaction of several schools to Channel One's coverage of the Somalia famine,
1 segment of holiday greetings from Channel One,
2 announcements of schedule changes,
1 presentation of student artwork,
1 report on "Make a Difference" promotion,
1 thank you for student submissions.

**Public Service Announcements**

Twenty-three public service announcements were aired. They totaled 678 seconds and averaged 29 seconds apiece. They were usually offered instead of commercials. Several of the commercial announcements were also of this type and dealt with topics such as drug abuse or staying in school rather than presenting traditional commercial announcements.

**Polls**

There were 10 segments that had to do with student polls. Several of the polls dealt with the presidential election. The total time spent on these segment was 380 seconds. Each segment averaged 38 seconds in length.

**"Pop Quiz"**

There were 251 "Pop Quiz" segments. The quiz usually had to do with the top story of the day. Most often the question segment was presented before a commercial, and the answer segment was presented after. Occasionally both were presented as a single segment. The total time spent on these segment was 5839 seconds. Each segment averaged 23.3 seconds in length.

**Preview**

There were 37 preview segments that had to do with upcoming features and events. The total time spent on these segment was 634 seconds. Each segment averaged 17 seconds in length.
"Fast Facts"
Eight "Fast Facts" averaged 18.75 seconds.

"You Decide"
A type of presentation called "You Decide" had students giving their opinions, ideas and feelings on controversial issues. In the year following this catalog, "You Decide" was presented more often.

There were 11 presented during the 1992-3 school year. Subjects covered included (in chronological order): homosexuals in the military, should girls be allowed to play high school football, Israel deporting Palestinians, reaction to President Clinton's economic address, should the U.S. get involved in Bosnia Herzegovina, gun control, teen driving and curfew, should the U.S. trade with human rights violators; should the U.S. ease immigration restrictions on Haitians, should baseball teams have to obey anti-trust laws, should women be allowed combat roles in the military.

The total time spent on these segment was 3,653 seconds. Each segment averaged 332 seconds in length.

Closing
There were 150 closing segments. The total time spent on these segments was 1,643 seconds. Each segment averaged 82 seconds in length.

Commercial Announcements
There were 559 commercial announcements. The total time spent on these segments was 17,955 seconds. Each segment averaged 32.1 seconds in length. Of these commercials
30 were for acne treatment cream (Clearasil),
3 were for AFS Foreign exchange student opportunities,
103 were for beverages:
   (25 for Gatorade products,
    18 for Mountain Dew,
    60 for Pepsi Cola varieties),
11 were for breath mints (Certs),
11 were for cameras (Kodak),
126 were for candy:
   (4 for Milky Way candy bars,
    28 for Snickers candy bars,
    9 for Three Muskateers candy bars,
    12 for Twix candy bars,
    17 for Cinnaburst candy,
    35 for M&M candies,
    8 for Skittles candy,
    13 for Starburst candy),
42 were for snack foods:
   (23 for Doritos chips,
    13 for Lays potato chips,
    6 for Combos),
6 were for clothing (Fruit of the Loom),
19 were for deodorant:
   (5 for Secret,
    14 for Sure),
6 were for electronics products (Magnavox),
25 were for skin cream:
   (15 for Noxema, 
   10 for Oil of Olay),
23 were for chewing gum:
   (4 for Bubblicious, 
   7 for Doublemint, 
   10 for Extra, 
   2 for Juicy Fruit),
10 were for magazines (Time),
5 were for mouthwash (Scope),
29 were for motion pictures,
75 were for fast food restaurants:
   (48 for Burger King, 
   4 McDonalds, 
   23 Pizza Hut),
11 were for safety razors (Gilette Sensor for women),
21 were for shoes (Reabok),
4 were for video games (Nintendo),
1 was for the National Student Press Association.

Social Issue Features

Non-news features made up a substantial part of the non-news
programming. There were 122 features which ran from one to five days.
They totaled 26,291 seconds and averaged 215.5 seconds. On several days
there was more than one feature. A feature of running for several days
would be accompanied by a single day feature which might be designed to
explain something that was happening in the news. For example, during the week that the feature on anorexia-nervosa was being shown, a siege of Sarajevo was taking place. A few minutes was spent explaining what a siege was and how the siege had been used at other times in history.

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News

News constituted the largest proportion of broadcast time. There were 447 news stories totaling 51,588 seconds and averaging 115.4 seconds.
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10/7/92  90  Yugoslavian war crimes
10/8/92  165  election--political ads
10/8/92  40  Peru trial Guzman sentenced to life
10/9/92  105  Bush attack on Clinton patriotism
10/9/92  60  Columbus memorial on Hispaniola
10/12/92  30  intro to debate
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APPENDIX B

Student Recorded Comments
Collected During Treatment
The following comments were collected from seventh grade students as they discussed the Channel 1 feature on depression. Students were asked to react to the following discussion questions in small groups:

1. What are some of the specifics that occurred to you as you watched the feature on depression?

2. What did you learn about the situation, yourself, and other people from this feature?

3. What are the key ideas presented in this feature?

One member of each group recorded the comments on newsprint. The comments are arranged by question. All of the comments to question one from all groups are followed by all of the comments to question two which are followed by all of the comments to question three.

Question 1—What thoughts or specifics occurred to you as you watched the feature on depression?

Group 1

Day 1: 1. When my kitty died.
   2. When you get dumped.
   3. When my mom and dad were in the hospital.
   4. When I moved away from my mom.
   5. When I get left out of "the" group.
   6. When someone leaves and you don't see them for a long time.
   7. When someone dies.
   8. When you get a bad grade when you thought you'd do good.
9. When you fail at something.
10. When you get yelled at.
11. When people talk about you behind your back.
12. When someone says mean things to you.
13. When your parent won't let you do something you want to do.
14. When you move away from your friends.

       2. Same things.
       3. You do need support from your family members if you are going through a state of depression.
       4. That just because I'm not depressed that doesn't mean other people are not.

Group 2

Day 1:  1. Problems at homes of other people.
       2. What does "depression" really mean.
       3. My uncle's suicide, How does "depression" start?

Day 2:  1. Parents don't always understand it.
       2. Medicine and a doctor doesn't cure it completely.
       3. Runs in family.

Group 3

Day 1:  1. That it could happen to anyone.
       2. There are people who could help you.
       3. There are different symptoms.
       4. Slowly lose interest in things you like.
5. Start having family problems.
6. Grades could drop.
7. Feel bad about yourself.
8. Won't care about anything.
10. People around you could be depressed also.

Day 2:
1. That medicine can be used to help you.
2. You have to try to get better.
3. It can run in the family.
4. That you can get over it.
5. Other people have to have patience to help you.
6. It can be a long process to get better.
7. It has to be noticeable.

Group 4

Day 1:
1. Know people who have been depressed.
2. What it would be like in that position.
3. Know someone who needs help in this position.

Day 2:
1. If it runs in the family.
2. How they cure it.
3. How people lived with it.

Group 5

Day 1:
1. If I was anything like that.
2. Try to get help or talk to someone.
3. How many people have it in our school.
Day 2:  1. It takes a long time to get cured.
     2. It runs in the family.

Group 6

Day 1:  1. Wondering if one of your friends is depressed.
     2. Why people are depressed.
     3. How people get depressed.
     4. How can you tell if you are actually depressed?
     5. How can you help people who are depressed.
     6. If someone in my town was depressed, who would they see
to help them with their depression.

Day 2:  1. It takes so long to get out of depression.
     2. Family and friends might not understand.
     3. Runs in the family.

Question 2—What did you learn about the situation, yourself, and other
people from this feature?

Group 1

Day 1:  1. That everyone, just like me, has some point of
depression in your life.
     2. That I have high self-esteem compared to some people.
     3. That I am not depressed very often unlike some other
people.
     4. That different depression is coped with in different
ways.
     5. Depression can have different effects on different
people.
6. That you need to express your depression in different ways orally and maybe see a counselor you can trust or talk to.

2. That it is not easy to cope with.
3. Lose interest in sports, activities, etc.
4. Hard to get through.
5. Need to get help.
6. Don't care....
7. Hard to get over.
8. Parents don't always understand it.
10. Struggles.
11. Cures.
12. Understand.

Group 3

Day 1: 1. That it could easily happen to me.
2. That I am not depressed.
3. That there are people to help me if I have it.
4. That there are many different things to try to get over it.
5. That anyone can get it.
6. You don't see much of it around.
7. If I am having a lot of fights with my family, I could be depressed.
8. That popular people can get depressed too.
9. Can lose appetite and not be able to sleep.

Group 3

Day 2: 1. You have to understand it.
        2. It takes a lot of patience to help the other person.
        3. That you have to be supportive.
        4. That medicine and doctors can help you but not completely.
        5. It would be hard for me to get it because I have a high self esteem.

Group 4

Day 1: 1. How other people coped with the depression.
        2. How you can cope with depression.
        3. We learned what depression is.
        4. What other people did during depression.
        5. We learned that someone we know might be depressed.

Group 4

Day 2: 1. That you need support.
        2. How the family deals with it.
        3. How they got cured.

Group 5

Day 1: 1. That it can be very serious.
        2. That it can lead to a person killing themselves.
        3. People have bad feelings about themselves.
Day 2: 1. People have a hard time figuring out that they have depression.

Group 6

Day 1: 1. That maybe I was depressed.
2. Maybe my cat was depressed.
3. How you feel when you're in the stage of depression.
4. How do you cope with depression.

Day 2: 1. Even the most popular, "perfect" people can get depressed.
2. Symptoms: sadness, appetite, family problems, loss of interest.
3. You have to be supportive.
4. It's hard to get over.
5. You don't rally get over it.

Question 3--What are the key ideas presented in this feature?

Group 1

Day 1: 1. That it is normal to get depressed.
2. That there are many different ways to conquer depression.
3. You should get help from someone you trust to get over your depression.
4. A way to tell if you have a depression is that you lose interest in something that is important to you before.

Day 2: 1. That medication and doctors are not all you need to get over depression.
2. You also need to be "pactionate", need support from others.

3. Your family matters.

4. You have to conquer the depression a lot of it by yourself.

Group 2


2. Low self-esteem.

3. Bad attitude towards stuff.

Day 2: 1. Don't give up.

2. Parents don't always understand.

3. People that have depression realize it.

4. How depression starts.

Group 3

Day 1: 1. What can happen if you're depressed.

2. Anyone can be depressed.

3. That it sucks to be depressed.

4. A lot of people have it and not know it.

5. That you can hurt yourself by not eating and sleeping.

Day 2: 1. Low self esteem.

2. Hospitalized.

3. Medicine can be given to a point.

4. Runs in the family.

5. Hard to get over.

6. Needs to be noticeable.
7. Other people can help you but need patience.

Group 4

Day 1: 1. How people cope with it.
       2. Symptoms of depression.
       3. How people felt about it.

Day 2: 1. It runs in the family.
       2. How they cured it.
       3. What the cure for it was.
       4. You could get hospitalized for it.

Group 5

Day 1: 1. How can you get help.
       2. Who can you talk to.
       3. How you know that you are depressed.
       4. What you can get depressed from.

Day 2: 1. Don't give up trying to recover.
       2. Symptoms of depression.
       3. How many people have depression each year.
       4. How old does depression occur.
       5. Runs in the family.
       6. You might need professional help.
       7. You may be hospitalized for it.

Group 6

       2. Need and should get help.

Day 2: 1. Runs in the family.
2. Person that has depression knows it, but other people don't.

High School Student Comments

The following comments were collected from students as they discussed Channel 1. The comments address the following discussion items:

1. What are some of the specifics that occurred to you as you watched the feature on substance abuse?
2. What did you learn about the situation, yourself, and other people from this feature?
3. What are the key ideas presented in this feature?

All of the comments from all groups for the first question are followed by all of the comments addressing the second question, which are followed by all of the comments relating to the third question.

Question #1—What are some of the specifics that occurred to you as you watched the feature on substance abuse?

Grade 10

Group 1

Day 1: 1. More People in federal prisons than what we thought for drugs.

2. Not to use drugs.

Day 2: 1. People who don't think that they can get addicted—they can.

Day 3: 1. It starts with just 1 drink or just 1 joint.
Group 2

Day 1: 1. More people are doing drugs in the 90's to escape from problems.
   2. Acid's on the rise.
   3. Losing the battle against drugs.
   4. Lot more people in jail because of congress passing laws.

Day 2: 1. People get strange.
   2. When you're on drugs, you lie a lot.
   3. You try to deny that you are on drugs.

Day 3: 1. Drug uses kept up with you.
   2. Beer leads to another and another.

Group 3

Day 1: 1. Has made us think about what we have done. (drinking, smoking, pot...)
   2. Decisions I have made that were bad.
   3. These decisions we have made make us realize how stupid we were.

Day 2: 1. It's a life long process to recover from drugs.
   2. It's hard to admit you have a drug/alcohol problem.
   3. Hard to tell parents/friends about your problem.

Day 3: 1. By doing drugs, you lose a lot of things.

Grade 11

Group 1
Day 1: 1. Teens think that drugs are okay and that you can use them responsibly.

Day 2: 1. It's easy for kids to get addicted to drugs.
    2. There's lots of pressure to do drugs.

Day 3: 1. There's no such thing as casual use.

Group 2

Day 1: 1. Appears that people know about drug abuse, but don't do nothing about it.
    2. The laws are not working, because everyone does it anyway.

Day 2: 1. I was outraged when I found out nicotine was most addictive.
    2. The addiction gets worse when you try to hide it.
    3. It's hard to tell when someone has problems.

Day 3: 1. You can't just do it on the weekends.

Group 3

Day 1: 1. Didn't think that many people would take drugs, or think it was all right to take them.
    2. Couldn't believe 61% prisoners were on drug charges.
    3. High percentage of increase in 8th grade drug use.

Day 2: 1. Wasn't going to let the opinions of other people affect me.
    2. It is easy to get addicted to drugs.
    3. The addiction never ends.

Day 3: 1. It would be a very difficult process for recovery.
Grade 12

Group 1

Day 1: 1. Drug abuse has increased.
2. We feel this is not good.
3. You have to be stupid to do drugs.
4. Abusers should have to go to rehab centers- They'd have to pay.
5. Make 'em quit.

Day 2: 1. High percentage of drugs in H.S.
2. Personal Choice.
3. Drink 100%.

Day 3: 1. We were amazed that the percentage increased from 1 year to the next.
2. Drugs are a big problem today in schools.
3. We were surprised that some students said that Drugs were OK!

Group 2

Day 1: 1. Starts our with alcohol and can or may lead to marijuana, LSD or other substances.

Day 2: 1. What are some of the specifics that occurred to you as you watched the feature on substance abuse?
2. You have to realize and admit you have a problem.
3. You have to want to get help in order for the help to help you.

Day 3: 1. It was basically what we said yesterday

2. Smoking is a big problem and nicotine is very addictive.

3. Drinking is a big problem.

4. There aren't many BIG drugs around here - LSD Cocaine; there are... but not many.

5. Takes a long time to recover from the addiction of drugs (life).

6. "Once an addict,... always an addict."

Group 3

Day 1: 1. Casual drug use will lead to addiction.

2. If you are foolish enough to believe in 'casual drug use', then you are pretty stupid.

Day 2: 1. They are very lost people.

2. Family life stinks.

3. They are going to try to change.

Day 3: 1. It's good that they admit their problem.

Group 4

Day 1: 1. People abusing drugs (on TV!) A. Marijuana B. LSD C. Cocaine (crack).

2. People don't know the extent of drugs.

3. Surprised they showed effects of marijuana- people don't know the dangers of the drug.
4. Side effects of Marijuana are like the common cold.

Day 2: 1. Felt bad for parents.
       2. When you start you can't stop.

Day 3: 1. We are going to flunk the test...due to our caffeine ODs last night and no sleep.
       2. When you start you can't stop.

Question #2--What did you learn about the situation, yourself, and other people from this feature?

Grade 10

Group 1

Day 1: 1. Drugs are a major problem in the United States.
       2. That its stupid to go that far into drugs.

Day 2: 1. We are glad that we don't do drugs because we don't want to go to treatment.

Day 3: 1. Drugs are harmful.
       2. None of your friends like you any more, you're alone.
       3. You lose the trust of your family and friends.

Group 2

Day 1: 1. A lot more people are on drugs than we thought
       2. A lot of bad affects to body

Day 2: 1. Many people are using drugs.
       2. Some time you don't know the people around you are using.
       3. People that are using are hurting themselves and they are trying to get away from their problems!!!

Day 3: 1. That kids do drugs to get away from their problems.
2. A lot of people use drugs.
3. They steal so they can buy drugs.

Group 3

Day 1: 1. We learned that some people feel it's all right to do drugs and some say it's stupid to do drugs.
2. Peer pressure can kill you.

Day 2: 1. It's hard to recover.
2. You have to want to recover.
3. You find out who your friends really are.

Day 3: 1. You're not missing anything by not doing drugs.
2. Why wreck your life when you're just beginning your life.

Grade 11

Group 1

Day 1: 1. Drug use has gone back up after a 20 year decline.
2. Drugs=Bad.

Day 2: 1. There are drug centers that can help.
2. Drugs affect many people, not just the one using them.

Day 3: 1. You'll be sorry when you lose your friends and family's trust.

Group 2

Day 1: 1. That more people are doing it.
2. Something must be done.
3. No one thinks of the consequences.

Day 2: 1. It can happen to anybody (even the brownies.)
Day 3: 1. There is no such thing as casual use.
2. Anything can happen.
3. It's difficult for people to trust.

Group 3

Day 1: 1. Learned that a lot of people are taking drugs.
2. High percentage think drug use is O.K.
3. Lighter drugs (pot) are being used more than (LSD, cocaine).
4. The situation is getting worse instead of improving.

Day 2: 1. Anybody can get addicted.
2. Drugs change your whole life.
3. We aren't going to do drugs.
4. Nicotine is most addictive.

Day 3: 1. Help is available.
2. You will always want more, especially during rehab.
3. No trust.

Grade 12

Group 1

Day 1: 1. Drug abuse increased.
2. The side effects.
3. Number of drug abusers in jail.
4. Channel 1 Nazi school's student opinion.
5. This is rally not new to any of us- student body-Do you think we're naive.
Day 2: 1. Some people drink to be cool-Fit in.
   2. Just want to try.
   3. Lack of things to do.
   4. Drugs solve problem.

Day 3: 1. We learned that drugs can be a very serious matter.
   2. We learned about the various side affects such as—
      sleeplessness, hallucinations, loss of concentration,
      flash backs, short term memory loss, heart lung
      failure, lung cancer.

Group 2

Day 1: 1. We didn't learn anything.

Day 2: 1. Nicotine is more addictive than caffeine, LSD, &
      Marijuana. (But the other drugs still have very
      serious side effects.)
   2. There are still many drugs that are more addictive,
      such as cocaine & heroine.

Day 3: 1. There are more people that ever imagined who are
      addicted to drugs.
   2. Admitting the addiction would probably be the hardest
      obstacle besides overcoming it.
   3. If you don't do it, you won't get addicted -> It's the
      only way you know 4 sure - ABSTINENCE.

Group 3

Day 1: 1. The people that started out as casual drug users ended
       up being massive addicts.
2. Once you start getting help, you cannot try your drugs/alcohol again, because it is easier for you to become addicted.

Day 2: 1. Everyone has problems - Could be you next.
Day 3: 1. The problem of drugs can get out of control before you know it.
2. You think you're in control, but you're not.

Group 4

Day 1: 1. Lucky because I am not an abuser of drug(s).
2. Go to grade schools.
3. Gotta start younger, not helping the problem.
4. People seeing this programs could care less, do it no matter what programs say.

Day 2: 1. Starts with smoking, drinking, etc.

Day 3: 1. It's good to talk -- HELPS!!
2. They have been where most people are.
3. They realize they can never do it again and once an addict always an addict.

Question #3--What are the key ideas presented in this feature?

Grade ten

Group 1

Day 1: 1. Effects of drugs if you use them.
2. Just say no.

Day 2: 1. The results of using drugs is treatment when addicted.

Day 3: 1. Drugs make you do stupid things.
Group 2

Day 1: 1. Drug use is on the rise!!!
2. stricter laws.

Day 2: 1. People try to get rid of their problems by using drugs.
2. A lot of it depends on the people you hang around.

Day 3: 1. Warning of what drugs will do for you.

Group 3

Day 1: 1. Tells how bad drugs are!
2. Tells what drugs are doing to people in society to Day 1!
3. You can tell pretty much what people are on drugs.

Day 2: 1. Drugs are bad for you.
2. It takes a lot of hard work to recover.

Day 3: 1. Drugs and alcohol are not worth it.
2. Get help when on drugs.

Grade 11

Group 1

Day 1: 1. Drug use is up among high school students.
2. Kids don't know the real facts about drugs or they just don't care about the affects.

Day 2: 1. Drugs change your life for the worse.

Day 3: 1. Drugs destroy your life.

Group 2

Day 1: 1. That drugs are a problem.
2. That drug abuse by teens have increased.
3. The situation is getting out of hand.

Day 2: 1. People change because of drugs.
2. Sometimes you get in the wrong crowd.

Day 3: 1. If you use drugs, you are no longer trustworthy.

Group 3

Day 1: 1. Drug use is increasing.
2. People don't think taking drugs is bad, a crime.
3. More people are taking drugs every day for no reason, just to have a good time.
4. New laws should be made!

Day 2: 1. Anyone can get addicted.
2. There is no cure.
3. Drugs change your personality.

Day 3: 1. No such thing as casual use.
2. Help is available.
3. People won't trust you when you're using.

Grade 12

Group 1

Day 1: 1. We did not learn anything—except for the pop quiz.

Day 2: 1. Drugs are bad.
2. Inform you to change thinking.
3. Didn't work—People do what they want.

Day 3: 1. Drugs are definitely getting worse—.
2. The population of drug users is increasing.
Group 2

Day 1: 1. Drugs can happen to anyone.
2. Help is available if you want it!
3. Parents have to deal with child's problem.

Day 2: 1. Drugs will ruin your life.
2. Your relationships with other people, and it takes your whole life to recover from them—well you don't ever really recover.

Day 3: 1. DON'T START!!
2. If started, get help!
3. Parents should take an active role w/ their children - they are naive!
4. Smoking a drinking are a problem @ a young age.
5. Parents are naive!
6. DRUGS ARE BAD!!

Group 3

Day 1: 1. Don't do drugs; don't be a casual drug user; if you have a problem and you want help, it is there for you.
2. Don't encourage other people to do drugs.

Day 2: 1. You can get help!
2. Save yourself.
3. Please talk to someone.
4. We love you and we care.

Day 3: 1. Drugs are bad.

Group 4
Day 1: 1. Drug use is bad

2. Don't do it - Don't start it.

3. Easier not to do it or start it than it is to stop.

4. Percentages of certain drugs increasing -LSD-Smoking.

5. Get help while you still can.

6. Don't use it- that way you don't become an addict!
APPENDIX C

Instruments Used to Assess Student Knowledge of Social Issues and Current Events
DEPRESSION TEST

Fill in blank with the number of the best answer. Most answers will not be used. Some answers may be used MORE than once.

Name ____________________________

A. A cause of depression may be a bad ___ experience.
B. A cause of depression may be difficulty in handling ___.
C. A cause of depression may be low ___.
D. Depression often runs in ___.
E. 1 800 421 4211 is the number of the institute of ___.
F. Depressed people don't know it's OK and they should get ___.
G. Depressed people know they are ___.
H. Dr. ___ was the expert in this feature.
I. The doctor was from what hospital? ___.
J. Doctors think of ___ as a true illness.
K. One in ___ teens is depressed.
L. Depression sometimes diagnosed through taking ___.
M. ___ of teens are diagnosed with depression each year.
N. Be ___ with depressed person.
O. Sometimes unsympathetic people get ___ with depressed people.
P. ___ is a good way to open up and express feelings.
Q. Depression is a feeling of ___ that won't go away.
R. In school, depressed people may find it hard to ___.
S. Depressed people may lose ___ in things that they used to like.
T. Depression lowers ___.
U. ___ disorders may be a sign of depression.
V. ___ swings may be a sign of depression.
W. Sometimes depression is severe enough to need ___.
X. Depression is a very treatable ___.
Y. Worst thing is to keep feelings ___.
Z. The girl in the feature was in the hospital how long ___.

What are the first two major steps in treating depression?

AA. ___
BB. ___
<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Answer Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A week</td>
<td>2. Ability</td>
</tr>
<tr>
<td>3. Along</td>
<td>4. Believe that you have a problem</td>
</tr>
<tr>
<td>11. Concentrate</td>
<td>12. Depressed</td>
</tr>
<tr>
<td>15. Destructive behavior</td>
<td>16. Different</td>
</tr>
<tr>
<td>17. Disease</td>
<td>18. Eating</td>
</tr>
<tr>
<td>21. Families</td>
<td>22. Family histories</td>
</tr>
<tr>
<td>23. Fifty</td>
<td>24. Firm</td>
</tr>
<tr>
<td>25. Four weeks</td>
<td>26. Get along</td>
</tr>
<tr>
<td>27. Go to a hospital</td>
<td>28. Grade</td>
</tr>
<tr>
<td>29. Grades</td>
<td>30. Help</td>
</tr>
<tr>
<td>31. Hope</td>
<td>32. Hospitalization</td>
</tr>
<tr>
<td>33. Hundreds</td>
<td>34. Imaginary disease</td>
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<tr>
<td>35. Impatient</td>
<td>36. In the open</td>
</tr>
<tr>
<td>37. Interest</td>
<td>38. Life</td>
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<td>39. Locked up</td>
<td>40. Mayo Clinic</td>
</tr>
<tr>
<td>41. Medication</td>
<td>42. Medicine</td>
</tr>
<tr>
<td>43. Mental health</td>
<td>44. Millions</td>
</tr>
<tr>
<td>45. Money</td>
<td>46. Mood</td>
</tr>
<tr>
<td>47. One hundred</td>
<td>48. Patient</td>
</tr>
<tr>
<td>49. People</td>
<td>50. Personality</td>
</tr>
<tr>
<td>51. Rupert Murdock</td>
<td>52. Sadness</td>
</tr>
<tr>
<td>53. Self esteem</td>
<td>54. Sick</td>
</tr>
<tr>
<td>55. Silence</td>
<td>56. Stages</td>
</tr>
<tr>
<td>57. Stay awake</td>
<td>58. Streaks</td>
</tr>
<tr>
<td>59. Stress</td>
<td>60. Surveys</td>
</tr>
<tr>
<td>61. Tell someone about your problem</td>
<td>62. Ten</td>
</tr>
<tr>
<td>63. Thousands</td>
<td>64. Three months</td>
</tr>
<tr>
<td>65. Treatments</td>
<td>66. Walter Reed</td>
</tr>
<tr>
<td>67. William Bennet</td>
<td>68. William Del Monte</td>
</tr>
<tr>
<td>69. Writing</td>
<td>70. Yawning</td>
</tr>
</tbody>
</table>
Channel One Test

Name___________________________ Teacher__________________

Please check any days that you did not see Channel One in this room:

__Tuesday May 3, ___Wednesday May 4, ___Thursday May 5

DIRECTIONS: The following questions are based on the Channel One series presented 2 weeks ago. The test is similar to the one you took earlier. Choose the most appropriate response (A through D) to answer each question, and put the letter in the space to the left of the question number. It is IMPORTANT that you do not consult with others when answering the questions.

__ 1. The two groups fighting in Rwanda are the Hutus and the...
   (A) Masai (C) Tutsies
   (B) South Africans (D) Zulus

__ 2. The war in Rwanda began when the president of the country was killed by what means:
   (A) An assassin (C) Hanged by an angry mob
   (B) Died in a hunger strike (D) Plane crash

__ 3. American officials said that the United States would take what action in Rwanda?
   (A) Impose sanctions on the country
   (B) Perhaps organize an African peace keeping force
   (C) Send American troops
   (D) Send United Nations troops

__ 4. President Clinton will impose sanctions on Haiti unless they do what?
   (A) Return their elected president to power
   (B) End their civil war
   (C) Stop killing their citizens
   (D) Allow free elections

__ 5. Haiti is considered to be...
   (A) The most violent nation in the Caribbean
   (B) The most beautiful nation in the Caribbean
   (C) The poorest nation in the Caribbean
   (D) The richest nation in the Caribbean

__ 6. Israeli troops withdrawing from Jericho and the Gaza Strip were replaced by what troops?
   (A) Egyptians (C) Palestinians
   (B) Jordaneans (D) United Nations
7. The leaders of Israel and what other Middle East country signed the Camp David Peace Accord with President Jimmy Carter?
(A) Egypt (C) Palestine
(B) Iraq (D) Syria

8. Lt. General Raoul Cedras is the military leader of what country?
(A) Bosnia (C) Israel
(B) Haiti (D) Rwanda

9. The recent peace treaty between Israel and the PLO was signed in what City?
(A) Cairo (C) Jerusalem
(B) Geneva (D) Washington D.C.

10. Drug use for high school seniors peaked in what decade?
(A) 1960s (C) 1980s
(B) 1970s (D) 1990s

11. The most recent statistics show that drug use among high school students is...
(A) increasing (C) remaining about the same
(B) decreasing (D) nearly non-existent

12. During the past year, the level of cocaine and crack use among high school students...
(A) increased (C) remained about the same
(B) decreased (D) was nearly non-existent

13. What percentage of all seniors smoke cigarettes on a regular basis?
(A) 19%  (B) 24%  (C) 29%  (D) 34%

14. What percentage of all seniors claim to have had 5 or more drinks in a row within the last 2 weeks?
(A) 18%  (B) 28%  (C) 38%  (D) 48%

15. What percentage of all seniors reported to have used cocaine at least once?
(A) 6.1%  (B) 9.1%  (C) 12.1%  (D) 15.1%

16. Which of the following is not considered an inhalent?
(A) aerosols  (C) glue
(B) cocaine   (D) solvents

17. How many 8th graders claim to have used an inhalent at least once?
(A) Nearly 1 in 3  (C) Nearly 1 in 10
(B) Nearly 1 in 5  (D) Nearly 1 in 15
18. How many seniors claim to have used LSD?
(A) About 1 out of 5   (C) About 1 out of 15
(B) About 1 out of 10  (D) About 1 out of 20

19. The effects of LSD can last up to how many hours?
(A) 3   (B) 6   (C) 9   (D) 12

20. What percentage of seniors claimed that they had used marijuana in the past year?
(A) 16%   (B) 21%   (C) 26%   (D) 31%

21. What drug is often taken by licking or chewing a blotter that has been soaked in it?
(A) Amphetamines   (C) Heroin
(B) Cocaine   (D) LSD

22. What percentage of the people in federal prisons are serving time for drug convictions?
(A) 31%   (B) 41%   (C) 51%   (D) 61%

23. What percentage of the people in federal prisons were serving time for drug convictions in 1980?
(A) 15%   (B) 20%   (C) 25%   (D) 30%

24. What is one reason for the increase in the number of people serving time for drug convictions?
(A) New emphasis on drug rehabilitation treatment
(B) overcrowding in prisons.
(C) Increase in violent crime
(D) strict mandatory minimum sentencing laws for drug offenses.

25. How long does recovery for drug addicts usually take?
(A) 1 to 4 weeks   (C) 1 to 4 years
(B) 1 to 4 months   (D) recovery is a life-long process?

26. Which of the following is the MOST addictive substance?
(A) caffeine   (C) marijuana
(B) LSD   (D) nicotine

27. The string of residential drug treatment centers featured in the series is known by what name?
(A) The Betty Ford Clinics   (C) The Drug Rehabilitation Center
(B) Hope House   (D) Phoenix House

28. According to the series, the casual use of drugs...
(A) Should not be a cause for concern
(B) Is usually safe
(C) Is not true drug use because true drug use is unsafe
(D) Is a bad term because it implies that some drug use is OK
29. According to the series, using drugs on weekends is like...
   (A) Playing Russian Roulette
   (B) Riding on a roller coaster
   (C) Taking a vacation to relax
   (D) Walking into a mysterious woods

30. According to the series, what did all of the recovering drug users miss the most as a result of becoming involved with drugs?
   (A) Being with their friends
   (B) The continuing use of drugs
   (C) Loss of the trust and closeness of their parents and loved ones
   (D) Being able to complete their education

31. According to recovering drug users in the series, when they got into drug related trouble, their friends...
   (A) Disappeared
   (B) Stood by them
   (C) Gave them good advice
   (D) Turned against them

32. According to the recovering drug users in the series, did they feel that things would be back to normal when they were released from the treatment center?
   (A) Yes, their parents want to start over
   (B) Yes, but it will take several weeks
   (C) Yes, but it will take several years
   (D) Things will never be the same

According to the series, why do kids begin taking drugs, and why do they continue? (You may use other paper if you need more space.)

   (Space for writing was provided.)

What did you learn about substance abuse this week in relation to yourself and other people? (You may use other paper if you need more space.)

   (Space for writing was provided.)