The Pittsburgh Public Schools' television news program, "News 67-68," aimed at the fifth and sixth grade levels is conceived as a means of instructing students about the significance of national and local news events using television as an instructional device. An evaluation of the program was carried out by means of a questionnaire administered to 50 teachers and through some informal staff interviews. Twenty-nine teachers returned the questionnaire (58%), and of these teachers, 21 reported viewing one or more programs per month. Those who use the program are largely satisfied with it, though room for improvement is cited in the area of program dynamics. The most common impediments to program use are increasing scheduling difficulties, inadequate viewing facilities, and inadequate teacher information on the value and use of television teaching. An outline of the program format and the teacher questionnaire are appended. (MT)
TELEVISION NEWS PROGRAM
1968 REPORT

Office of Research

Pittsburgh Public Schools
Bernard J. McCormick, Superintendent
8. TELEVISION NEWS PROGRAM
8. TELEVISION NEWS PROGRAM

Summary

The Television News Program was first offered in the Pittsburgh Public Schools in 1966. The format of the 1967-1968 television presentation, News 67-68, is almost identical to that of the 1966 programs. The program was conceived as a widespread means of instructing students about the significance of local and national news events through the use of television as an instructional device.

The findings of the 1968 evaluation show that, although teacher usage is limited because of increasing scheduling problems and professional preference, those teachers who use the program are largely satisfied with its success in terms of their students' reactions. There is, however, room for improvement in making the programs more dynamic, vivid, and visual. The greatest complaint of teachers is that speech still constitutes an overwhelming percentage of program content.

In many cases proper facilities for optimum television usage are lacking. Scheduling problems and teachers' understanding of the potential of television as an instructional device often prevent them from utilizing the facilities that are available. These are probably the greatest impediments to the widespread success of the program.
Introduction

History of the Program

The use of television as an educational rather than a purely recreational instrument has been receiving increasing attention from educators throughout the United States for the last ten years. Reactions run from skepticism and fear of overuse to the now famous dictum of communications theorist Marshall McLuhan that "typography is out and television is quickly replacing the book." One thing is certain: use of television in the schools is increasing, usually with the blessing of school boards who have to bear the cost of programming and equipment. ¹

In 1964, the Ford Foundation conceived and financed the first series of news programs produced for educational television in the Pittsburgh area. These programs were intended for selected team teaching groups in underprivileged areas. As use and need became more widespread, ESEA, through the Division of Compensatory Education, assumed the responsibility for financing.

The Pittsburgh Public Schools now have 850 television sets, an average of one set for every three and a half classrooms. Programs

¹See report, School Television, the Great Cities, Research Council of the Great Cities, the Fund for Media Research, 1967.
are made available to Pittsburgh and surrounding areas through educational channel WQED's Department of School Services. This department is part of the Metropolitan Pittsburgh Educational Television stations (WQED and WQEX).

The institution of a new television course to be produced by WQED is a long and complex task. A team of experts makes recommendations on the feasibility and desirability of a certain program to the School Curriculum Advisory Committee (SCAC), a group of educators and administrators from Pittsburgh and surrounding districts. The final decision as to whether a course shall be used, and in what form, is made by this committee. It must accept the program idea completely before the series can be shown over WQED. Approximately half of the programs selected have already been used in other parts of the country, the remaining programs are locally conceived and locally produced.

WQED provides 23 regularly scheduled programs during the school week. Content is varied to accommodate students from different grades. Programs are repeated often to allow teachers on different schedules to use them. This report contains an evaluation of one of these 23 programs, News 67-68. This program in its present form was first shown in the 1966-1967 school year as News 66-67. The Office of Research also published an evaluation of the 1966-1967 program.
Description of the Program

The content of News 67-68 is geared to fifth- and sixth-grade students. However, since the selection of television programs as curriculum aids is at the discretion of individual teachers, there is no assurance that these guidelines are followed. In fact, divergence from the guidelines is often encouraged, since mature classes can follow programs designed for higher levels, and a class of slow learners may benefit from seeing a program designed for a lower level.

Three members of the program staff of News 67-68 are: the television teacher, the Associate Director of Television and Radio Education, and the producer-director affiliated with WQE!. The Associate Director and the producer-director have previous experience in television production and have academic backgrounds in education. The television teacher, a former teacher in the Pittsburgh Public Schools, was selected in 1966 and has remained with the program since that time. All three are actively interested in promoting education through visual means. They attempt to present information in a way most easily understood by children and to make the program as attractive as possible to maintain constant interest.

The television teacher's primary task is to select topics for the program and write out an entire sequence for the show, which she then tapes. She also visits several classrooms a week to observe how children are reacting to the program and its contents.
The Associate Director of Television and Radio Education is responsible for approving the plan prepared by the television teacher. He maintains an up-to-date picture of the program's reception and utilization in the classrooms.

The producer-director is responsible for the production of the program utilizing the various visual techniques available at a television studio.

In addition to the members of the staff, the teachers who use the television program in the schools are instrumental in its success or failure. One of the criteria for the program's success is that children discuss the news program with their teachers. Another criterion is that children be able to apply the ideas presented in the program to other subjects and that they show interest in the events presented. The teachers in the classrooms report back to the staff on how the children are reacting to the program.

Every attempt is made to show topical news programs on the local, national, and international levels although, because of money and time considerations, this is not always possible. Program variety is also sought. The following list of topics presented in News 67-68 will give some idea of the subjects covered:

- Air Pollution
- Apollo/Saturn V
- Changing Cabinet
- George Washington Carver
- Gold
The television teacher describes either an event or a person, isolates this in a historical perspective, gives sources in which the event or person can be found, and explains, visually when possible, the importance of this subject in the students' lives. Some programs are not news oriented, but rather historically oriented, as the program on George Washington Carver. Generally, however, as the sample of programs above shows, most were quite topical.

For more descriptive information on the program, see the program definition included in Appendix A.

**Evaluation of the Program**

**Method**

The evaluation of television as a teaching tool presents methodological problems. No adequate control group can be devised because many children have televisions available to them in their homes. Nighttime television news and other special news programs often overlap what is shown at school. Because students' television viewing cannot be monitored, the evaluator cannot meaningfully compare data.
In view of these limitations, the evaluation method judged most feasible was a teacher questionnaire to determine the effectiveness of the program in terms of student participation and learning. The questionnaire developed contained both multiple choice and open-end questions. A copy of the instrument is included in Appendix B.

Eleven compensatory schools were chosen for the questionnaire administration since the program is designed to have its greatest impact in schools of this type. The Associate Director of Television and Radio Education selected 50 teachers in the 11 schools to receive the questionnaire. Distribution was handled by the principals in the individual schools. Twenty-nine of the 50 teachers returned a completed questionnaire (a 58 percent rate of return). Responses were anonymous, and teachers were not informed as to which of their colleagues received copies. In addition to the teacher questionnaire, informal interviews of staff members were conducted.

Findings

Although some teachers who returned a completed questionnaire indicated that they did not use News 67-68 in their classrooms, those who used the program appeared generally satisfied with it. They indicated a high degree of student responsiveness and interest. The most often reported reason for not using the program or for infrequent use
was a scheduling problem. A more detailed presentation of the findings is given below.

Table 1 presents the number of teachers using News 67-68 by number of programs viewed per month.

**TABLE 1**

Teacher Utilization of News 67-68

<table>
<thead>
<tr>
<th>Number of Programs Viewed per Month</th>
<th>Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four</td>
<td>15</td>
</tr>
<tr>
<td>Three</td>
<td>1</td>
</tr>
<tr>
<td>Two</td>
<td>3</td>
</tr>
<tr>
<td>One</td>
<td>2</td>
</tr>
<tr>
<td>None</td>
<td>8</td>
</tr>
</tbody>
</table>

As the table indicates, half of the teachers use News 67-68 four times a month, although eight of the teachers do not use it at all. These eight gave the following reasons for not using the program:

1. 
   ...could not fit it into schedule
2. 
   ...use T.V. twice a week with English. Have no time to fit it into other programs
3. 
   ...have never seen this program and know nothing about it
4. 
   ...program is too advanced for my class in special education
5. 
   ...am in a nongraded school and scheduling does not permit use of this program
6. 
   ...comes at an inconvenient time. Used it last year and like it very much
7. 
   ...conflicted with reading time. Was impossible to use series on a consistent basis
8. 
   ...scheduling did not permit it

The most persistent problem indicated by these responses is that
of scheduling. Even though News 67-68 was shown twice each week (on different days at different times), some teachers found it impossible to fit it into their schedules.

The interviews of staff members conducted by the evaluator provide information on other variables which influence the utilization of television presentations. Some comments reflected dissatisfaction with the conditions surrounding the viewing. These included bad reception, classes too large for one television set, and facilities lacking the proper lighting and acoustics for all students to be able to benefit. Other comments concerned teachers' and students' attitudes toward the medium. Many teachers apparently feel that teaching on television is the same as teaching in the classroom except that television is mechanized. Others, however, criticized the programs because they did not utilize the medium's potential for visual imagery. Some teachers disliked the television teacher, as evidenced by both personal and professional criticisms. Many teachers feel that television loses its effectiveness as a teaching tool because students identify it with entertainment. Others felt that students were bored by television presentations because they could not interact with the television teacher as they can do with the classroom teacher.

Of those teachers who do use News 67-68, questionnaire responses indicate that they perceive a high degree of student responsiveness and interest. Ninety-four percent of the respondents rated student
interest in the program as excellent or good. In regard to student dis-
cussion subsequent to the programs, 76 percent stated that the amount
was very high or high and 81 percent that the quality was excellent or
good. In addition, 90 percent of the respondents indicated that the pro-
gram had accomplished its goal of expanding student awareness of news.

Teachers' responses to the open-end questions are given in
Appendix C. When asked to elaborate on how News 67-68 had expanded
student awareness of the news, teachers listed many different items.
These explanations must be interpreted with caution since it is possible
that teachers read too much into their students' behavior. Many of the
activities cited could be attributed to things other than the news program.

When asked to identify the worst aspect of the program, teachers' com-
ments ran the gamut from criticisms of content to reception. In
response to the question, "What aspects of the Television News Program
would you change if you were program director?" the most frequently
mentioned change was to employ the full potential of the medium. A
lecture on television can often become drab and dull. Therefore, it
was suggested that more emphasis be placed on visual communication.

Discussion and Conclusions

Although it is impossible to rigorously evaluate the Television
News Program, the sample of teachers interviewed believes that the
program has been effective and that the goal of expanding student awareness of the news has been achieved. For the most part, the criticisms of the program by teachers were constructive. Their comments point to the following program improvements:

1. The goals of the program should be clarified so that students, teachers, and the television staff know exactly what is and is not effective and what content materials are most appropriate.

2. Attempts should be made to reduce lecturing on the programs and to increase the use of visual materials. (Most communications theorists and teachers agree that television's potential for teaching lies in this area, but the principle is often not applied to educational programs because it increases expenses.)

3. Teachers should be given optimal equipment and facilities so that students receive maximum benefit from the programs.

4. To deal with the persistent problem of scheduling conflicts, it might be possible to have extra broadcasting time, or, where practical, fifth and sixth grade social studies classes might be rescheduled to the time of the broadcast.

5. Finally, to dispel the misunderstanding of some teachers about the value and use of television teaching, information should be distributed to all teachers outlining the aims of television instruction and the theory behind its application. Until this is done, the program will continue to be underutilized, and students will be denied the benefit of viewing. The expense and man hours involved in production can only be justified if the program is viewed by a large number of classes.
Television News Program Definition

GENERAL

I. Overall Statement of Objectives and Rationale for the Program

The purpose of the Television News Program is to present current events to students in such a way as to make them more meaningful and to create a greater interest in and awareness of what is going on in the community, in the nation, and in the world.

II. Description of Scope

A. Number of Schools Involved

The number of schools using the program is difficult to determine because it is available throughout the Pittsburgh Public Schools and in 17 surrounding counties. The choice to utilize the program is made by individual classroom teachers on the basis of their scheduling and their professional preference.

B. Age of Participants

The program is designed for fifth- and sixth-grade students, but it is also sometimes viewed by students in the fourth, seventh, and eighth grades.

C. General Description of Staff

1. The television teacher

2. The Associate Director of Television and Radio Education

3. The television producer-director
OUTCOMES

I. Major Objectives--changes expected to occur in program participants as a result of the program. There are two types of major objectives.

A. Terminal Objectives--behaviors exhibited by participants at the end of the program which demonstrate successful completion of the program.

The student develops an expanded awareness of, and an interest in, current events.

B. Ultimate Objectives--the long-range goals of the program. These are objectives to which the program hopefully contributes, but for which it does not have sole responsibility.

1. The student will have an improved understanding of social studies events.

2. The student will make more discriminating selections in television programs.

3. The student will sustain an interest in current events into adulthood.

4. The student will form a greater identification with the American culture.

II. Enabling Objectives--the skills, attitudes, and information which students must acquire during the program to ensure the accomplishment of the major objectives.

The student develops a skill in note taking.

III. Other Benefits--benefits expected to accrue to other than program participants as a result of the program.

Families of program participants develop an increased interest in the news.

IV. Criteria for Successful Completion of or Removal from the Program

No formal criteria were identified for successful completion of the program. However, individual teachers indicated that students
doing a number of the following would indicate a sufficient degree of participation and interest to constitute successful completion:

A. The student makes references to Television News Program ideas in other subjects.

B. The student creates notebooks on news subjects.

C. The student makes collections of news clippings.

D. The student reads News Time and other pupil-oriented publications on current events.

E. The student participates in oral discussions and asks questions on subjects related to the news program.

F. The student evidences an increase in vocabulary related to the program.

G. The student volunteers to go to Carnegie Library to read on news-related topics.

ANTECEDENTS

I. Participants

A. Selection Characteristics--the criteria that are used to determine who shall participate in the program

The individual teacher usually decides, on the basis of his own schedule and professional preference, whether the program will be used. In some cases a supervisor suggests use of the program. In a team teaching situation this decision is usually made by the team leader.

The Television News Program is open to students from all socioeconomic backgrounds throughout the city of Pittsburgh and in 17 surrounding counties. It is commonly used in the fifth and sixth grades and occasionally in the fourth, seventh, and eighth grades.

B. Entering Behaviors--characteristics of participants (other than selection characteristics) which are related to performance in the program
Since the Television News Program is offered to students of all socioeconomic backgrounds throughout the Pittsburgh Public Schools and in surrounding areas, no entering behaviors could be identified.

II. Staff--qualifications with respect to specific positions

<table>
<thead>
<tr>
<th>Staff Member</th>
<th>Professional Qualifications</th>
<th>Personal Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television Teacher</td>
<td>1. A teaching certificate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Three years of teaching experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Membership in the school system or educational community</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. The possession of, and the ability to use, dramatic skills and to communicate on television</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. A knowledge of learning theory</td>
<td></td>
</tr>
<tr>
<td>Associate Director of Radio</td>
<td>1. A teaching certificate</td>
<td></td>
</tr>
<tr>
<td>and Television Education</td>
<td>2. Teaching experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. A knowledge of television techniques</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. The ability to help with the construction of television presentations and scripts</td>
<td></td>
</tr>
<tr>
<td>Television Producer-Director</td>
<td>1. Experience in educational television and its use in the schools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Professional training in television production and direction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. The ability to coordinate the various activities that make up television broadcasting</td>
<td></td>
</tr>
</tbody>
</table>

III. Support

A. Administrative Support--administrative personnel who cooperate in carrying out the program
The individual principals are vital to the success of the Television News Program. The principal schedules classes and may make suggestions to teachers regarding implementation of the program.

B. Human Resources--non-administrative and non-staff personnel whose contributions and cooperation are necessary to the operation of the program

1. The support of individual classroom teachers is essential to the success of the program for the following reasons:
   a. The teacher makes the critical decision as to whether her class receives the television broadcast.
   b. The teacher's attitude toward the program is the most important determinant of the students' attitudes toward the program.
   c. If the program is to be successful, the teacher must prepare the students for the television presentations by providing background material and must reinforce them by leading discussions after they are over.
   d. The teacher provides important information to the program staff on student reactions to the program.

2. In schools using the Team Teaching Program, the team mother may set up the television set or help with the classroom activities related to the program.

3. The program may require cooperation from the school librarian.

4. The services of a television repairman may be needed.

C. Media--the materials, supplies, and equipment required for program activities

The following materials and equipment are used in producing the television presentations:

1. Overhead and opaque film projectors
2. Film strips

8-21
3. Slides
4. Film projectors
5. Transparencies
6. Maps and globes
7. Picture files
8. Pamphlets
9. Reference materials such as books and magazines

The classroom teacher may also make use of the last four items.

D. Facilities
1. A viewing room of adequate size equipped with blackboards and providing ventilation
2. Desks that students can write on in the viewing room
3. A seating arrangement and volume control that allow all students to see and hear the program
4. Antennas and extension cords

IV. Time Constraints

Each television presentation is shown twice a week for a 20-minute period so that teachers can utilize the presentation which fits most readily into their schedules. Some teachers use time after the presentation for discussion while others have intermittent discussions on related topics during the week. The extent to which the program is used and discussed depends on scheduling and the professional preference of individual classroom teachers.

PROCESS.

I. Participant Activities--the day-to-day program activities that will ultimately lead to the achievement of objectives
Students participate in the following activities in the Television News Program:

A. A preparatory session before the television program to arouse interest in the topic to be presented

B. Previewing the television program (not all students do this)

C. Viewing the television program (main student activity)

D. Vocabulary development during the program as the teacher writes and explains key words

E. Discussion on the specific topic after the television program

F. Researching specific news topics

G. Keeping notebooks on program topics

H. Maintaining a bulletin board on news clippings

I. Using the interview techniques utilized on the television programs to interview persons visiting the school (activity at one school only)

II. Staff Functions and Activities

A. Staff Functions and Duties with Respect to Specific Positions

<table>
<thead>
<tr>
<th>Staff Member</th>
<th>Functions</th>
<th>Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television Teacher</td>
<td>1. Planning</td>
<td>a. Conducts research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Writes the television scripts</td>
</tr>
<tr>
<td></td>
<td>2. Instruction</td>
<td>a. Makes the formal presentation of the television news topic</td>
</tr>
<tr>
<td>Staff Member</td>
<td>Functions</td>
<td>Duties</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Television Teacher (contd.)</td>
<td></td>
<td>b. Personalizes television performance by visiting classrooms</td>
</tr>
<tr>
<td>Associate Director of Television and Radio Education</td>
<td>Administration of overall program</td>
<td>a. Discusses and approves scripts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Visits classrooms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Is responsible for distribution and maintenance of television sets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Meets with the School Curriculum Advisory Committee (SCAC)</td>
</tr>
<tr>
<td>Television Producer-Director</td>
<td>Production of television programs</td>
<td>a. Initiates all visual designs, stage sets, props, and lighting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Obtains necessary copyrights</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Coordinates all camera shots, art, audio tape, video controls, and instantaneous editing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Writes program reports</td>
</tr>
</tbody>
</table>
B. Intra-staff Communication and Coordination

The three members of the staff work closely on every aspect of planning and producing the program.

C. Communication between Program Staff and Others

1. The television teacher and the Associate Director of Television and Radio Education visit classrooms utilizing the program.

2. The Associate Director of Television and Radio Education speaks to faculty groups.

3. The staff sends written communications to classroom teachers.

4. Team leaders utilizing the program meet with program staff.

5. Occasional demonstrations and training sessions are held.

6. The professional staff at WQED visit classrooms to determine the effectiveness of school oriented educational telecasting.
APPENDIX B
QUESTIONNAIRE
TELEVISION NEWS PROGRAM

The following questionnaire has been designed by the Office of Research to ascertain the success and quality of the WQED program NEWS 67-68. Your responses to the items are completely anonymous, so please feel free to be entirely frank. It is only through your cooperation that we can improve the quality of these television programs.

A stamped envelope is provided to facilitate returning the questionnaire.

--------------------------------------------------------------------------

PLEASE CHECK THE APPROPRIATE ANSWERS TO THE FOLLOWING QUESTIONS:

1. I use News 67-68 approximately:
   四 times a month _____ Three times a month _____
   Twice a month _____ Once a month _____ Never _____
   IF "NEVER," PLEASE STATE BRIEFLY WHY YOU DO NOT USE THE PROGRAM AND THEN RETURN THE QUESTIONNAIRE.

2. Student interest in the program seems:
   Excellent _____ Good _____ Fair _____ Poor _____

3. The amount of student discussion after the program is:
   Very high _____ High _____ Satisfactory _____ Poor _____

4. The quality of student discussion after the program is:
   Excellent _____ Good _____ Fair _____ Poor _____

8-29
5. How topical do you think News 67-68 is?
   Very topical_____ Topicl.l_____ Not very topical_____

6. The goal of the Television News Program is to extend student awareness of news events.
   a. This goal has been met:
      Excellently_____ Well_____ Barely_____ Not at all_____
   b. Briefly explain above response with special reference to increased student awareness of a specific news event, if possible:

7. How often do you use the preview programs presented?
   Four times a month_____ Three times a month_____
   Twice a month_____ Once a month_____ Never_____

8. What do you feel are the best aspects of the Television News Program?

9. a. Do you think there should be more news sessions per week?
   Yes_____ No_____

   b. If "Yes," how many extra twenty-minute sessions per week should there be? ____________

8-30
10. What do you feel are the worst aspects of the Television News Program?

11. What aspects of the Television News Program would you change if you were program director?

12. What effects would the discontinuation of this program have on your instructional program?
APPENDIX C
TEACHERS' RESPONSES TO OPEN-END QUESTIONS

Question: Briefly explain above response [as to how well the goal of extending student awareness of news events has been met] with special reference to increased student awareness of a specific news event.

1. program motivated students to have ideas for reports, booklets, graphs, and discussions
2. pupils are quicker to point out news items, bring in news clips
3. more reading of daily paper and constructed a bulletin board for news items
4. increased the awareness that there were political conventions in the near future
5. program should be more detailed and slightly simplified
6. topics should be ones that can be found readily in newspapers and magazines
7. feel that the program has stimulated interest in those previously uninterested in state of the world (since they were rarely interested in themselves)
8. crisis in Africa good, made student aware that the globe is shrinking

Question: What do you feel are the worst aspects of the Television News Program?

1. a marked degree of monotone in the television teacher (on occasion)
2. the time schedule; it sometimes comes at the end of a period
3. scheduling
4. sometimes I feel the subject under consideration could be developed more fully

8-35
5. the information could be in greater depth
6. the presentation is very dull
7. program should not be eliminated for other special broadcasts
8. visual effects are not always good
9. maps and charts do not come over clearly
10. sometimes the topics are not of great interest
11. too short in time, thus interest is threatened
12. not very topical
13. some of the film clips do not come in clearly

Question: What aspects of the Television News Program would you change if you were program director?

1. have more visual aids and more words for children to copy down and more time allowed to let them do this
2. extend topics during one program, giving more than one area of discussion
3. no changes
4. stimulate varied techniques in presenting materials
5. pictures whenever possible
6. projects should be assigned to pupils after the end of the programs
7. include as many visual elements to present the news as possible
8. discuss the highlights of the past week's news rather than go into one topic
9. make programs slightly more detailed
10. try to select more current topics
11. use more pictures for more vivid image
The enclosed material is presented with the compliments of Dr. Malcolm M. Provus, Director of Research, Pittsburgh Board of Public Education, Pittsburgh, Pennsylvania.

We appreciate your interest in our research and evaluation activities.