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The use and evaluation of audio-visual aids within the Edgerton Grade School in Kalispell Montana

Robert H. Racicot

The University of Montana

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THE USE AND EVALUATION OF AUDIO-VISUAL AIDS WITHIN THE
EDGERTON GRADE SCHOOL IN KALISPELL, MONTANA

by

ROBERT H. RACICOT

B. S. Western Montana College of Education, 1950

Presented in partial fulfillment of the requirements for the
degree of

Masters in Education

MONTANA STATE UNIVERSITY

1953

Approved by:

[Signatures]

Chairman, Board of Examiners

Dean, Graduate School

Date

Aug. 4, 1953

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CHAPTER I

I. INTRODUCTION

This has been an attempt to measure the value of audio-visual aids as used in the social studies classes of the Edgerton Public School, Kalispell, Montana by comparing the results obtained by an experimental group which used visual aids against the results obtained by a control group which used only a minimum of visual aids.

II. PURPOSE OF STUDY

"Audio-visual aids to learning are nothing new; they have modern forms and innovations. That is all. Teachers have been using them for years and not thinking much about it! Not consciously trying to incorporate the most meaningful materials into the curriculum has led to relying on the methods of almost completely verbal instruction. What we see today is not the rise of something new in education. Rather, it is the renaissance of bringing reality into the curriculum."\(^1\)

Audio-visual aids have been used in the Edgerton Grade School for some time as a stimulus to both pupil and teacher interest. The visual aids the teachers have used most extensively are: blackboards, pictures in the rooms, text books pictures, bulletin boards, maps, and dramatization. During the recent years, movies, film strips, a tape recorder, stereoscope, slide projector, field trips and magazines have been very prominent.

"Teachers waste much time, effort, and money because they try to communicate ideas through the use of words which have little if any meaning to their pupils."²

The teachers have used part of the newer trends in audio-visual aids but not all. The community resources of Kalispell available for use in schools exist in abundance but had limited use.

The purpose of this study is to show how the uses of audio-visual aids may improve interest in instruction and stimulate growth in the children. The development of community understanding and interest among the students was one of the prime objectives of this study. In addition the hope was that individual initiative would progress.

III. PLAN OF STUDY

The instructor in the sixth grade had an experimental group in sixth grade geography on a unit of British Isles. This group was not a selected group, but was selected at random by the City Superintendent of Schools using as a guide the California Tests of Mental Maturity³ which was administered to the children during their fifth grade year.

The experimental group was given audio-visual aids correlated with the subjects. The control group was

²Ibid., p. 5.

³California Tests of Mental Maturity, California Test Bureau, Los Angeles, California.
taught from the text and without any visual aids other than those found in the text book.

The instructors at the Edgerton Grade School were given a questionnaire to evaluate the visual aids used during the year. When a field trip is taken, a written report is submitted to the principal giving the place, amount of time and a statement of subjects with which the field trip might be correlated. The children are given a questionnaire following each excursion asking for an evaluation of audio-visual aids and how the aids have helped them in solving their problems.

IV. MATERIALS AND PERSONNEL USED IN STUDY

The materials used in the study consisted of the text book, Nations Overseas, film strips from the state library in Helena, film strips from the Central School Office, blackboards, field trips to many of the city resources, maps, magazines, and advertisements. The entire staff of eight teachers and 170 students made up the personnel involved in part of the study.

V. DELIMITATIONS OF PROBLEM OF STUDY

Grades. The study will be limited to the Edgerton Grade School which has six elementary grades, ranging from grade one through grade six. The Edgerton Grade School


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does not have any double grades within its jurisdiction.

**Enrollment.** One hundred and seventy pupils constitute the enrollment of the Edgerton Grade School. There are twenty-eight in the first grade, twenty-one in the second grade, thirty-three in the third grade, twenty-nine in the fourth grade, thirty-four in the fifth grade, and twenty-five in the sixth grade.

**Teachers.** The teaching staff of the Edgerton Grade School consists of eight teachers, a music teacher, six classroom teachers and the principal. The principal is the supervisor of audio-visual aids and coordinator for all field trips.
CHAPTER II

I. TEACHERS AND METHODS USED IN STUDY

FIELD TRIPS

"A field trip is a planned visit to a point outside the regular classroom. It may be to a place inside or outside the school building. Within the school itself, it may be an organized group to see and study the heating system, the school kitchen, the cafeteria, or the school store."^5

All grades within the Edgerton Grade School jurisdiction have been participating in field trips.

"A field trip may be made to places within walking distance of the school. The class may study the trees in the school yard, note the soil erosion on a near by slope, visit a neighborhood grocery store. Such field trips may be completed in a single class period."^6

Planning in advance is of extreme importance in field trips. The field trips at Edgerton Grade School were planned by the teachers and pupils. The principal acted as coordinator and supervisor. As the field trips were completed the children wrote of their experiences. The teachers in turn wrote a summary of the field trip and presented the summary to the principal.

The following are some of the typical reports and summaries handed to the principal by the teachers and stu-

^6Ibid., p. 134.
TRIP TO CARNEGIE PUBLIC LIBRARY ON SEPTEMBER 18, 1952

Purpose: to familiarize children with the library and create an interest in the use of available books.
Result: those eligible for library cards took blanks home to obtain parents' signatures. Many children whose cards were at the library, checked out books during our visit. All youngsters seemed to have renewed enthusiasm for reading.

Signed: Helen Collins
Room 4 D

LIBRARY FIELD TRIP

In September the Third Grade class took a period from 1:00 to 2:15 to go to the Public Library to learn about book arrangement; about getting a card; about proper conduct in a library and about the location of juvenile books.
We spent a half hour in the juvenile section quietly reading or browsing.
We walked both ways and established a routine for future field trips.

Signed: Mabel Chester
Room 3 C

FIELD TRIP TO MISS TUBBS HOME

At the point in our social science work on clothing where we learned that nearly all cloth is woven we visited the home of Miss Lilian Tubbs.
Miss Tubbs has a large loom on which she weaves dress materials, rugs, and large pieces of coarser material.
She demonstrated the use of the shuttle, the packer, the feet strands of her rug which happened to be the thing she was working.
The children began to understand the idea of warp and woof and the over-under movement of the shuttle.
We traveled in cars and the mothers who accompanied us were as interested as the children.
When we returned to our class, we wrote up the chapter on weaving and made a sheet of one-half inch paper weaving and a sheet of one inch paper weaving to go into that section of our clothing book.
We all wrote thank-you letters to Miss Tubbs to
tell her what we most enjoyed.

The letters gave me an estimate of the value of the trip to each child and gave them a chance to use the newly learned letters form.

Signed: Mabel Chester
Room 3 C

MR. YEAW FIELD TRIP

This time the field trip came to us. We invited Mr. Yeaw to tell us about his fur trapping in the Peace River country of the north. We used "Furs" as the last chapter in our clothing book and had a great number of questions about furs as clothing.

Mr. Yeaw had spent five years up north as a trapper and hunter and had a great many interesting things to tell. He gave the children a little about different kinds of animals, their homes, their habits, their food, their young and the method of catching them.

The letters of thanks this time were to include only mention of the most interesting part to each child.

Signed: Mabel Chester
Room 3 C

FIELD TRIP TO THE FISH HATCHERY

Friday our class went to the fish hatchery. The first thing we saw was the display pond. In it were twelve large fish. There were five different kinds of fish in the pond. Four of the fish were bull trout, rainbow trout, yellowstone blackspotted trout, and dolly varden. The largest fish were the rainbows. The fish weighed from four pounds to nine pounds. The largest fish was a rainbow weighing nine pounds. All the rainbow males had a snub nose. The females had round smooth noses.

The temperature of the water is at forty-four degrees the year around. Fish seem to grow faster in a warmer water.

The big fish in the display pond are fed only three times a week, Monday, Wednesday and Friday. The fish are fed horsemeat, tripe, and lungs. The fish that are about five inches long are fed twice a day, 8:00 A. M. and 4:00 P. M. The very very small fish are fed liver.

In the building there were two tanks with representatives of all the fish raised at the hatchery. In one tank there were large ones and other tanks smaller fish. One tank held two albino eastern brook trout which were about four years old. These fish were supposed to be good to eat.
The guide showed the class fish from one hour old to the grown fish.

The guide displayed one bottle with a two-headed fish that was about one year old.

Signed: Lynell Lewis
Student
Room 6 F

CITY RESEVOIR

As an outgrowth of discussion in health class, regarding pure drinking water, and a social studies discussion of pioneer towns and their water problems we became curious about Kalispell's water supply. Arrangements were made for a field trip to be taken November 25, 1952.

Ronald Koppang, one of our fourth grade students obtained permission from Mr. Oscar Tetrault for us to visit the Lawerence Park Pumping Station. Mayor McBride was contracted and kindly agreed to take us to see the new city reservoir and to accompany us on the entire tour.

Mayor McBride led a four-car procession of us first to Buffalo Hill to see the new reservoir. He unlocked the west gate and we climbed the hill to the reservoir. There he answered numerous questions asked by the children. We returned to our cars and motored to Lawerence Park where we were welcomed by Mr. Tetrault, engineer at the pumping plant. He took us through the plant at the spring house which he unlocked and told us about, while we took turns looking into it. From there we returned to the pumping station where he answered questions about guages etc. Since it was nearing time to start the pumps, he asked us to stay and watch him start the pumps. He explained each step as he primed the large two hundred horse power pumps. We stayed until he had pressure up and was pumping 3500 gallons per minute. The children expressed a "Thank you" to Mr. Tetrault and Mayor McBride, and we returned to Edgerton. We felt we had spent a very profitable time and that the trip was well worth while.

As a language correlation we have written letters of thank you to each of the cars and Mr. Tetrault and the mayor.

Signed: Helen Collins
Room 4 D
RAILROAD FIELD TRIP

As a final chapter in the study of "Transportation," the entire class went to Whitefish to go through the train and visit the round house.

We left school at 1:45 P. M. We arrived in Whitefish at 2:30 P. M. in time to see the eastbound train arrive and watch the semaphores go down and up.

Our guide took us through the train beginning at the observation car. We stopped to look into the roomettes, drawing rooms, pullmans, kitchens, pantry bar and day coach. We watched the little electric cart carry mail sacks to the mail coach.

When we had waved to the departing train we got into our cars to go to the round house. Our guide had disappeared, so the Division Superintendent conducted us himself. He took us through each part of the round house and ended up giving us a ride on the turntable.

We now will write up the trip and send a letter to each of the drivers as well as the Division Superintendent.

Signed: Mabel Chester
Room 3 C

MOTION PICTURES

"The motion picture should be treated with the same respect as a laboratory experiment.

The motion picture to be used should be built into the curriculum as an integral part of class work. It should not be considered a supplementary device as it was by an acquaintance of ours who once remarked to the class, 'We will now interrupt the class period to show a movie.'"

The teachers of each grade select the films best suited for their grade as to week, month and content.

Representatives from each of the Grade Schools in Kalispell meet as a body and select the most desired films for the time specified. This list or order of films is compiled and forwarded to the State Library at Helena.

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7Schreiber, op. cit., p. 17.
A catalogue of all films to be shown during the entire year is compiled at the office of the Superintendent of Schools in Kalispell. Each teacher was presented with a catalogue. The catalogue gave the state film number, a description of the film and number of feet per reel.

Should the occasion arise, when a special film could be used during a follow-up or introduction, the teacher requests the film and every effort is made to secure the extra film. The films were available to all the grades of Edgerton for two days a week. The teachers on Monday would list the films and time during the school day when the class would be available for the film.

The operating of the film projector was done by the teacher and one student in grades four, five, and six. In grades one, two, and three the principal operates the projector with the teacher assisting. During the coming year the teachers will be expected to operate the film projector. The janitors have also been considered for the operating of these machines. The previewing of the films was done by the principal. The teachers did not preview any of the pictures or movies. During the selection of films by committees attention was given to correlation and integration with curriculum materials.

Typical units in geography are Italy, British Isles and Africa. The film "Mount Vesuvius," "The Italian Peninsula," "City of Rome" all gave a preview of what the unit
of study in Italy would bring forth.

Through the presentation of these films the children saw the ways of life, climatic conditions, physical features of the land, and could compare and correlate their learning with other countries that had preceded that particular unit and with others to follow. Should a film that would correlate with a subject arrive before a unit was presented, this film then served as a preview of what was to be presented. Numerous times a film would arrive after a unit was completed. This in turn would serve as a review for the class.

Films from the State Library in Helena were not used specifically for geography but for all subjects taught in the Montana Elementary Schools. Films were included on safety in both the home and out of doors, science, both natural and physical, language, arithmetic, community living, history, health, and physical education, lives of great men and women, music, wildlife, conservation both physical and soil.

STILL PICTURES

"Still pictures can translate word pictures into visual pictures, thus making concrete what might otherwise remain verbal abstraction. Take the subject-matter of prehistoric animal life, for example. A child knows what a dinosaur is a big animal, a very big animal—but how big? A picture of a dinosaur along side an elephant will make the size clear, and, at the same time, permit the child to see the very strange animal that no zoo in the world can show him. An atom is something that students are asked to imagine, for it cannot be seen except through some illustration. For such a subject, a picture is indispensable. What of such matters as underwater life, or birds eye view
of a town, or knights-in-armor? None of these can be seen ordinarily except by means of a picture. In sum, we count on pictures to show us what we otherwise might only imagine or not see at all."

Strip films are ordered from the Central Junior High School library. Central School serves as a despository for the strip films, which are catalogued according to the Dewey Decimal System. These films were used in much the same way as the motion picture films in correlation and integration of subject matter. The Edgerton Grade School was presented with a combination strip film and slide projector by the Edgerton Grade School Parent-Teachers Association. A slide and strip catalogue is in the possession of each teacher. Teachers may order or request as many films or slides from the Central School Library as they need.

When requesting a film or slide, the teachers put into writing the number and name of the film. The principal in turn presents the list to the Secretary and films are secured. There is no time limit specified when the films must be returned.

BULLETIN BOARDS

Bulletin boards are in all rooms on at least three walls. These boards portray still life visual-aids which are selected by the students and teachers. These visual aids are changed on the average of once a week depending

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8Dale, op. cit., p. 224.
on the need. Art work done by the students is also displayed from the bulletin boards. Different seasons of the year are portrayed and exhibited on the bulletin boards. Halls in both buildings of Edgerton Grade School also have bulletin boards on which safety posters and announcements both for the teachers and students are displayed. Through the bulletin boards children are given reminders of their subject matter and citizenship. Children are constantly reminded of subject matter and better living through the medium of the bulletin boards.

DRAMATIZATION

The medium of dramatization has been purely on the original basis. Social studies was the main field of interest. The students in the fifth and sixth grades did most of the dramatization given at the Edgerton Grade School. American history scenes have been dramatized by the fifth grade in portraying "Life on the Frontier," "Lewis and Clark," "An Evening Around a Camp Fire," and "The Covered Wagon."

During the study of Greek and Roman myths the sixth grade organized dramas relating to the many myths the Greeks and Romans believed. Among these myths were Achilles, Pluto, parts of the Iliad, and the Odyssey. Leaders were selected by the teacher, and the leaders assisted the teacher in the selection of actors for the parts in the dramas. These leaders then wrote the dialogue for the different scenes the actors were to portray.
Original drama helped correlate music, art, language, penmanship, community living or citizenship, imagination, health and discipline for all the children who displayed their acting ability and those who were the audience. As the children practiced and presented these dramas, their knowledge of responsibility became enlarged to the point of self discipline.

ART

Through art the skill of coloring with crayon, chalk, and water colors, art appreciation, lettering, designing, creative and free hand drawing have been stressed. Murals have been drawn to correlate with social studies, nature study, wild life, safety education both in the home and out of doors. Teachers have motivated the children through reading stories, personal experiences, and study. Through the use of creative arts and crafts an attempt was made to crystallize the learning of each unit.
"Research shows clearly that children learn best when they receive a double exposure of instructional materials and technics. For example much more is learned in a particular subject when both films and books are used as tools for teaching than when only one type of teaching material is used. The teacher must know the advantages and disadvantages of each kind of instructional material so the right tool can be used at the right time."9

As previously stated in this paper two groups were used to determine the effectiveness of visual education in teaching a unit in geography.

The experimental group wrote letters to the British Information Services10 regarding information pertaining to the British Isles. The instructor, having spent three years in the British Isles during World War II, used a family collection of visual aids in conjunction with the materials secured by the children. The experiment with the two groups continued for six weeks. At the end of the period a test was prepared and administered by the Superintendent of Public Schools in Kalispell, Montana.

The two groups were administered the test at one sitting, and completed the test in the allotted time of


10British Information Services, 30 Rockefeller Plaza, New York 20, New York.
forty minutes. The test consisted of three parts: eight completion questions, eight multiple choice questions and nine true and false questions.

"Without some form of evaluation every thing about education becomes a matter of blindly hoping all is well."
TABLE I
TABULATION OF ERRORS FOR GROUPS A AND B

Completion Questions

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True and False

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### TABLE II
TABULATION OF ERRORS FOR GROUP A

#### Completion Questions

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</table>
TABLE III
TABULATION OF ERRORS FOR GROUP B

Completion Question

<table>
<thead>
<tr>
<th>Question</th>
<th>Number wrong</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
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<td>8</td>
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Multiple Choice

<table>
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<th>Number wrong</th>
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</thead>
<tbody>
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<td>2</td>
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<tr>
<td>6</td>
<td>1</td>
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<td>7</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
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</table>

True and False

<table>
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<th>Number wrong</th>
</tr>
</thead>
<tbody>
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<td>1</td>
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<td>8</td>
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</tr>
<tr>
<td>9</td>
<td>1</td>
</tr>
</tbody>
</table>
The following are errors and number of questions right of each student in the given group, along with the score percentage. Group A's average score in percentage was eighty-three; the average number right was twenty-one; the average number wrong was four. Group B's average score in percentage was eighty-one; the average number right was twenty-one; the average number wrong was four.
### TABLE IV
PER CENT OF GRADE, NUMBER RIGHT, NUMBER WRONG
FOR GROUPS A AND B

**Group A**

<table>
<thead>
<tr>
<th>Student</th>
<th>Per cent of grade</th>
<th>Number right</th>
<th>Number wrong</th>
</tr>
</thead>
<tbody>
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<td>1</td>
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<tr>
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<td>88</td>
<td>50</td>
<td>3</td>
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<td>3</td>
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<td>4</td>
<td>84</td>
<td>21</td>
<td>4</td>
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<td>10</td>
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</table>

**Group B**

<table>
<thead>
<tr>
<th>Student</th>
<th>Per cent of grade</th>
<th>Number right</th>
<th>Number wrong</th>
</tr>
</thead>
<tbody>
<tr>
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<td>12</td>
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<tr>
<td>13</td>
<td>48</td>
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</tbody>
</table>
The following were the questions the children of the sixth grade answered in the allotted time of forty minutes.

England and It's Possessions

Part I

Fill in the blanks in the sentences below by choosing one of the words. Use each word only once.

2. Africa 7. linen 12. wet
3. Scotland 8. channel 13. dry
5. Australia 10. minerals

1. The Union of South Africa is rich because it has many ____________.
2. One manufactured article for which Scotland has become world famous is ____________.
3. The largest continent under British influence is ____________.
4. ____________ is a country which was under British rule, but is no longer.
5. England is separated from Europe by the ____________.
6. The interior of Australia has a ____________ climate.
7. England is a country which has few crops and lives by importing ____________ material and exporting ____________ goods.
8. _________ is a city in Scotland famous for ship-building.

Part II

Underline the word or words which correctly complete each sentence.

1. Lancashire is important for its manufacture of:
   A. woolen goods
   B. boats
   C. cotton goods
   D. steel

2. In the manufacture of cotton the climate need must be:
   A. hot
   B. moist
   C. dry
   D. windy

3. The present ruler of England is:
   A. King George
   B. Princess Margaret
   C. Queen Elizabeth
   D. Queen Ann

4. The uplands of Scotland and Wales have many:
   A. goats
   B. tractors
   C. horses
   D. sheep

5. Africa is separated from Asia by a waterway built by the British called:
   A. Suez canal
   B. Red Sea
   C. Mediterranean Sea
   D. Strait of Gibraltar

6. Johannesburg and Kimberly are famous:
   A. Englishmen
   B. Cities of South Africa
   C. Men of the English Parliament
   D. Kinds of pottery
7. London is important because:
   A. It is the capital of England and is on the Clyde River.
   B. It is a great ship building center on the Thames River.
   C. It is the greatest railroad center of England even though it is on the Thames River.
   D. It is the largest city of England and on the Northern coast.

8. The Himalaya Mountains have the highest peak in the world called:
   A. Ranier C. Calcutta
   B. Everest D. McKinley

Part III
Write true or false on line before each question.

___1. Most of Africa is North of the equator.
___2. The Victoria Falls are found in Australia.
___3. Melbourne is the capital of Australia.
___4. The Hindus are the largest religious group in India.
___5. Liverpool is an important city on the west coast of England.
___6. New Zealand have valuable forest products.
___7. Malaya, Borneo and Burma are in the Far East.
___8. Crude rubber and oil are important manufactured products of the Far East possessions.
India is a rich country with nearly all the people having good living conditions.
THE TEACHERS OF THE EDDERTON GRADE SCHOOL WERE ASKED TO EVALUATE THE USE OF VISUAL AIDS WITHIN THE EDDERTON GRADE SCHOOL. A PRINTED QUESTIONNAIRE, SECURED FROM "EVALUATIVE CRITERIA FOR AN AUDIO-VISUAL INSTRUCTIONAL PROGRAM," BY JOHN CHARLES SCHWARTZ, JR. 12, WAS USED AS A GUIDING PRINCIPLE. TEACHERS WERE INSTRUCTED NOT TO SIGN THE QUESTIONNAIRE TO ENCOURAGE FREE EXPRESSION. THE FOLLOWING ARE QUESTIONS ASKED WITH TYPICAL ANSWERS GIVEN BY THE TEACHERS.

---

QUESTIONNAIRE FOR TEACHERS

1. How have audio-visual aids helped you in:
   a. Motivating a class
      Arouse interest
      Focus attention
      All children like a change of classroom procedure and a well chosen movie leads to class discussion.
   b. Giving common background
      Through use of films, pictures, view masters etc., we travel to places we can't view in person
   c. Teaching skills
      Flash cards, arithmetic, blackboards, word recognition and analysis
   d. Summarizing
      Creation of social studies tables scenes as culmination of a unit.

2. How have films or other aids helped you in teaching your present level or subject? Can you name specific films or aids which have been most valuable?
   Pygmies of Africa----Social Studies
   Healthy Lungs--------Health
   The Common Cold------Health
   Grey Owl's Little Brother--Science
   Adventuring 'Pups------Reading Readiness
   Baby Animals--------Reading Readiness
   Mr. and Mrs. Canary--Science
   Sleeping Beauty------Reading
   The Forest Ranger----Conservation

3. Do you feel that any of the following have special effectiveness in your work? Why?
   a. Blackboard presentations and drills
      Yes---especially in arithmetic and spelling, due to audio-visual perception.
      Drill work done in unison has a special place in ear training and group thinking.
      Some children can follow problems solving processes more easily visually and orally, than orally alone.
   b. Demonstrations
      Especially in science
      Children like to give demonstrations and will spend extra time preparing, i. e. a problem in arithmetic or a picture suggested by a story.
c. Field Trips
Library—encouraged recreational reading
The trip to Whitefish at the end of the transportation unit was very good—interest, enjoyment, experience and a widening of vocabulary.

d. Bulletin boards
Current news
Social studies projects
Display of accomplishments
Children like to see their work on the bulletin board and learn from each other's work.
Permit children to help gather material pertinent to topic and thus stimulate their interest.

4. What other techniques of an audio-visual nature add to the effectiveness of your teaching?
   Social studies table scenes
   Collective displays
   Dramatizations
   Booklets and pictures
   Nature study—real objects

5. Do you feel that the use of audio-visual aids increases class participation and discussion?
   Yes
   a. Can you give examples
      Wiring a bell—science
      Current new pictures—history
      Reading of large numbers—arithmetic
      Today we talked about "homes—peoples homes, animal homes, the children recalled seeing movies of mud houses, stick houses, etc.

6. Do you feel that the use of audio-visual aids contribute to the students appreciations of other peoples problems of music, art, or literature?
   Yes, for example "Watussi of Africa"

7. Do you feel that the use of audio-visual aids made definite contributions to the students understanding of your subject?
   Yes

8. Do you feel that the use of audio-visual aids helps in developing attitudes and in building character?
   Yes
   a. How?
      Other people in poorer environments help children appreciate their own.
      Tolerance of people who are different from ourselves. Appreciation of the superior qualities in others.
      Audio—by tone and expression given to speech
      Visual—by facial and body expression.
9. Do you feel that the use of audio-visual aids interests more students and thus stimulate the development of individual abilities?
   Yes, establishes concepts, creates interest and desire for research.

10. What do you feel are some of the strengths of the audio-visual instructional program in your school system?
   - Bulletins boards
   - Films
   - Art
   - Spacious blackboards

   a. The weaknesses
   - Preview of films--none
   - Distributions of films--not available for current project.

11. Other remarks
The students of the sixth grade at Edgerton Grade School were asked to evaluate the program of visual aid by a questionnaire adapted from the pamphlet, "Evaluation Criteria for Audio-Visual Instructional Program," by John Charles Schwartz, Jr.\textsuperscript{13}

Students were asked not to sign questionnaires to secure their unbiased opinions.

The following are questions asked with typical answers given by the students.

\textsuperscript{13}Schwartz, \textit{op. cit.}, p. 24.
QUESTIONNAIRE FOR STUDENTS

1. Have audio-visual aids which have been used in your classes helped clarify ideas or problems for you?
   Yes
   a. Can you give definite examples.
      Field trips, strip films, blackboards, pictures in books, pictures on the bulletin boards

2. Which of the following methods do your teachers use in showing films?
   a. The teacher says, "We are having a film on ____," and the showing begins. (Mere presentation)\footnote{\textsuperscript{14}}
   b. There is talk about points to look for in the film, vocabulary explanation, showing. (Preparation and presentation)
   c. There is talk about points to look for in the film, vocabulary explanation, showing, discussion and follow up. (Preparation, presentation, and follow-up)
      Twenty-five students marked item "c," ten students marked both item "b" and "c."

3. I shall name some other teaching aids. Which of these have made your work more interesting or the learning more permanent?
   Type:
   - Filmstrip
   - Slides
   - Radio
   - Recordings
   - Transcriptions
   - Maps and charts
   - Study prints and flat materials
   - Demonstrations
      Students marked film strips, slides, recordings maps and charts, study prints and flat materials, models and specimens and demonstrations.

How have they made it more interesting?
   - Gave a clearer picture
   - Made a lasting impression of object
   - Makes studying more fun
   - When we see the subject first hand it does not become so boring

\footnote{\textsuperscript{14}Walter Arno Wittich and John Gy Fowlkes, \textit{Audio-Visual Paths To Learning} (New York: Harper and Brothers, 1946), pp. 29-30. This study shows that the first method increases learning 29 per cent, the second forty-eight per cent and the third fifty-eight per cent.}
If not, why?

There were no comments from the students

4. What instances of the use of audio-visual materials do you remember most? Why?
   Airplanes
   Trip to fish hatchery
   Films showing life in many countries

   The pictures make the subject more interesting and easier to understand.

5. Do you have field trips at your school?
   Yes
   a. How do you think that they could be more valuable?
      Have more of them.

6. Can you give examples of how audio-visual aids have been used to
   a. Train in a skill (As clay modeling or typing)
      Making of a key stone for history
      Helped me to use the dictionary
      Clay modeling in art

7. Do you think the use of films, recording, charts and such materials help stimulate class thinking and activities?
   Yes

8. Do you think films, recordings, and such materials develop your appreciation of other people's problems, or art, music, etc.?
   Yes

9. What are some of the strengths or weaknesses of the use of audio-visual materials as you have seen them presented in your classes?
   The easy way of learning
   A few more field trips
CHAPTER V

SUMMARY AND RECOMMENDATIONS

The purpose of the study was to show how the uses of audio-visual aids improved interest in instruction and stimulated growth in the children. The development of community understanding and interest among the students was one of the prime objectives. In addition the hope was that individual initiative would progress.

The instructor in the sixth grade had an experimental group of twelve students and a control group of thirteen students in sixth grade geography on a unit of British Isles. The two groups were matched by using the California Test of Mental Maturity as a guide. The experiment with the two groups continued for six weeks. The experimental group was given audio-visual aids correlated with the subject. The control group was taught from the text and without any visual aids other than those found in the textbook. At the end of the period a test was prepared and administered by the Superintendent of Public Schools in Kalispell, Montana. The two groups were administered the test at one sitting and completed the test in the allotted time of forty minutes. The test consisted of three parts: eight completion questions, eight multiple choice questions, and nine true and false questions.

The experimental group which had visual aids received
higher average grades from the evaluation device, but both
groups received the same number of questions right as an
average.

The teaching staff of the Edgerton Grade School in
the years past did not take full advantage of the visual aids
within the community. Teachers were encouraged to plan
field trips, present films, make use of the black boards
and bulletin boards, use creative drama, enlarge upon the
art program and extend the use of film strips and slides.

A program was instituted to study the community re­
sources and correlate them with the subject matter. A
total of twenty-five field trips were taken by the teachers
and students. When field trips were taken, a written report
was submitted to the principal giving the place, amount of
time and a statement of subjects with which the field trip
might be correlated.

The results of the study are inconclusive because
the two groups are of small population and complete isola­
tion of either is impossible. It is doubtful that teachers
or students answered the questionnaire to their best ability.
The test which was administered apparently was too short
and lacked the power to discriminate between individuals.

The teachers and students were given a questionnaire
to help evaluate the program. Results of the questionnaire
revealed that the teachers were using visual aids in all
classes with values resulting in motivation, correlation,
and integration of subject matter. The students' question­
naire showed that a great amount of interest and learning was derived from use of visual aids.

The teachers expressed the opinion that the strong points were best illustrated by spacious blackboards, bulletin boards, large number of films, and the arrangement of the art program. Weaknesses of the program were the lack of time to preview the films, and the poor timing of film distribution for current projects.

Students stated that gains derived from the visual-aid program were easier learning and more enjoyable learning.

The most common suggestion offered by the children indicated a desire for more field trips.

Recommendations for the program at Edgerton Grade School are:

1. Preview of each film by teachers
2. Distributions of films for current projects
3. Field trips within jurisdiction of school

All recommendations will be dealt with according to supervisory, financial, and general school policy.

Recommendations for further study under a similar plan:

1. A longer period of time should be devoted to the presentation of material to the experimental and controlled group.
2. The presentation of more study units of work in geography.
BIBLIOGRAPHY
BIBLIOGRAPHY

A. BOOKS


B. PERIODICAL ARTICLES


C. ADDRESSES


California Test of Mental Maturity, California Test Bureau, Los Angeles, California.

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