1959

Photography for the class room teacher

Grant, Dorothy M.

Boston University

http://hdl.handle.net/2144/18592

Boston University
Boston University
School of Education

A Project
Photography for the Class Room Teacher

Submitted by
Dorothy M. Grant
B.S. in Education
Boston University

In partial fulfillment of the requirements
for the degree of
Master of Education
1959
Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Introduction</td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td>1</td>
</tr>
<tr>
<td>Justification</td>
<td></td>
</tr>
<tr>
<td>Scope</td>
<td>2</td>
</tr>
<tr>
<td>Limitations</td>
<td></td>
</tr>
<tr>
<td>II Review of Research</td>
<td></td>
</tr>
<tr>
<td>Value of Visual Aids</td>
<td>3</td>
</tr>
<tr>
<td>Status of Photography in Visual Aids</td>
<td>8</td>
</tr>
<tr>
<td>Photography in Teaching</td>
<td>14</td>
</tr>
<tr>
<td>Why Photography?</td>
<td>25</td>
</tr>
<tr>
<td>Types of Visual Aids. Their Characteristics and Values</td>
<td>26</td>
</tr>
<tr>
<td>The Flat Picture</td>
<td>26</td>
</tr>
<tr>
<td>The 2 x 2 Slide</td>
<td>31</td>
</tr>
<tr>
<td>The Film Strip</td>
<td>39</td>
</tr>
<tr>
<td>III Use of Photography in the Classroom</td>
<td></td>
</tr>
<tr>
<td>Amateur Photography and its Use in the Classroom</td>
<td>44</td>
</tr>
<tr>
<td>Suggestions for Amateur Photography</td>
<td>45</td>
</tr>
<tr>
<td>Types of Cameras</td>
<td>47</td>
</tr>
<tr>
<td>Lenses</td>
<td>48</td>
</tr>
<tr>
<td>Shutter</td>
<td>49</td>
</tr>
<tr>
<td>Filters</td>
<td>51</td>
</tr>
<tr>
<td>Kodak Film Recommendations</td>
<td>55</td>
</tr>
</tbody>
</table>
Use of Amateur Photography in the Classroom.....

Posters ........................................ 60
Fireside Adventure - Reading ................. 64
Public Relations - Advertising ............... 65
Teachers on a Field Trip ...................... 67
Summer School .................................. 68
Travelogue or Unit .............................. 69
Unit on Safety .................................. 75
Students at Work ............................... 76

Photography
Classroom

Geography .................................... 78

Maine Countryside
Winter

Occupational Information .................... 81

Baker
Meat Cutter

Bibliography .................................. 83
CHAPTER I
INTRODUCTION

Purpose.-- The primary purpose of this study is to explain the use of photography in the classroom.

1. Describe briefly the types of still pictures; their characteristics, and values.
2. Explain how to take and use pictures in the classroom.

Justification.-- The following reasons are given to justify the writing of this paper:

1. As nearly as this writer can tell there is no other study of its kind.
2. The writer has enjoyed using teacher-made photographs in her classroom for many years to arouse interest and record events. Children especially enjoy pictures with familiar scenes and faces. This was illustrated as far back as 1924, by Florence Williams, who studied preferences of 939 fifth grade children for a collection of portraits on exhibit. She concluded that: (a) "there is a marked tendency for the majority of children to like the same pictures; (b) children like pictures of people, places, or incidents with which they are familiar."

In summary, the awareness of the lack of a similar paper, and a strong conviction of the educational possibilities of using photography in the classroom provided the stimulus for this study.

Scope.-- The scope of this study is limited primarily to the teacher-made photograph. However, characteristics and values of the flat picture, the 2x2 slide, and the filmstrip are included briefly.

Limitations.-- This paper is limited by the lack of experimental research concerning the value of photography in the classroom.
CHAPTER II
REVIEW OF RESEARCH

Value of Audio-Visual Aids: For years teachers have recognized the value of audio-visual aids and at least some teachers have used the available materials.\(^1\) Research indicated many of the educational values as early as 1917, but it was 1950 before teachers and educators were fully aware of its importance. As early as 1922 a few scattered courses were offered to prepare teachers to use this new type of tool or aid more effectively, but today courses are offered in nearly every college and university in the country. The proper use of audio-visual aids requires skill and many teachers are taking advantage of these courses, because they realize that:\(^2\)

"The task before the schools today is so broad in scope and so complicated in character that education must utilize every tested and approved method known. Only in this way can the schools hope to equip each child with habits, skills, concepts, attitudes, and critical thought processes."

In the past the curriculum was narrow, reality was lacking and many students accepted the written or spoken word with little question. Today the purpose of teaching is basically to arouse the pupil and to direct his behavior into channels which are desirable. Teachers consider the development of proper skills, useful habits, understanding of concepts, acceptable attitudes, and critical thinking, the way to equip each child for living.

\(^1\) James S. Kinder, Audio-Visual Materials and Techniques, American Book Company, New York, 1950, p. 9-12
\(^2\) Op. cit., p.9
"Since audio-visual materials motivate, they cannot be overlooked in any scheme of education." Yet some materials have more value than others and then it is the business of the teacher to direct and guide the learning activities.

Research indicates that educators are becoming more aware of the values of audio-visual aids in teaching. They are finding these aids a means of enriching instruction, developing concepts, getting facts, developing attitudes and interests. Dr. Haas and Packer have this to say about audio-visual aids:

"It is natural that in education we should appeal to the mind chiefly through the visual and auditory senses since it is possible that 85% of our learning begins at those terminal points."

People learn by engaging in various activities but these activities must have the attention of the individual. Attention is secured by getting the student ready to learn. In the opinion of Haas and Packer, the best attention devices are audio-visual aids. They motivate, and add interest to any learning situation, and as a result they enable a student to learn faster, remember longer, and gain more accurate information. They are most effective when they are used to supplement the teaching skill of the instructor.

"Instructional skill that combines good audio-visuals, good text books, and tested teaching techniques creates an ideal learning situation."


5/ Ibid. p. XI
By 1935 the audio-visual movement had long since passed the initial stages and had become an important factor in all training situations, however, there were limitations as Dent said,

"The extent to which these valuable training materials are used and the degree of effectiveness with which they may be employed in any teaching situation will depend almost entirely upon the quality and amount of training the teacher has received. There is a place for each type of audio-visual material, however, none of the commonly used material is instructional in itself. Properly used by trained teachers make it possible to teach more in a given time and teach more thoroughly so that the pupil will remember the useful information much longer."

He also says that it has been demonstrated that large numbers of pupils can be taught more effectively with carefully selected audio-visual materials than by using traditional teaching methods.

Dent reports that by 1949 audio-visual materials were in general use. Experimental evidence had favored the use of audio-visual materials. By that time most of the schools were making regular use of them.

When we were thrown into war it was necessary to select men and women from farms, factories, offices, and all walks of life and train them in the important art of preserving their own lives while meeting and defeating the enemy. To do this


all types of audio-visual materials were used. The highly
effective results was attested to by the success of our armed
forces.

The majority of the more common audio-visual training aids
now in regular use among schools was first applied to the
training problems of industry. Industrial groups were composed
of mixtures of American and foreign-born workers, many of whom
could not understand the printed word. Pictures were found to
be of great value in teaching safety, cleanliness, cooperative
activity, and various duties, as everyone could understand
the international language of pictures.

The use of audio-visual aids has been steadily increasing
and as Sands comments in 1956:

"The importance of audio-visual education is today recog­
nized by an ever increasing number of teachers who find
that audio-visual procedures are in accordance with the
natural learning activities of human beings. They provide
learners with realistic experiences which capture their atten­
ton and promote progress in every educational area."

There is still a challenge to this type of education.

Sands asks the following questions:

"1. Does the audio-visual technique give a pupil the
reassurance of satisfaction, the feeling of accomplish­
ment in his learning?
2. Does it broaden his interests?
3. Is he richer in self knowledge?
4. Do audio-visual procedures stir him to self expression?
5. Do they add to learning a happy element of adventure?
6. Do they enhance his power to think critically?"

1/ Lester B. Sands, Audio-Visual Procedures in Teaching. The

Finally, the following claims for properly used audio-visual materials in teaching situations are supported by re-
search evidence:

1. They supply a concrete basis for conceptual think-
ing and hence reduce meaningless word responses of students.
2. They have a high degree of interest for students.
3. They supply the necessary basis for developmental 
   learning and hence make learning more permanent.
4. They offer a reality of experience which stimu-
lates self activity on the part of the pupil.
5. They develop a continuity of thought; this is 
especially true of motion pictures.
6. They contribute to growth of meaning and hence to 
   vocabulary development.
7. They provide experiences not easily secured by 
   other materials and contribute to the efficiency, depth, 
   and variety of learning.
2/

Research in the field indicates that audio-visual 
materials have genuine value in teaching and that their 
effectiveness depends on the clarity of purpose for which 
they are used.

The basic function of audio-visual materials is given in 
the following paragraph by Wittich and Schuller:

"Regardless of the number and nature of mechanical 
devices for facilitating effective learning and teaching, 
the major ways in which human beings learn still seems to 
be seeing and hearing, looking and listening. It must 
eternally be realized by all those responsible for educa-
tion that the basic function of audio-visual materials is 
to enable learners to see and hear, look and listen more 
fully and discriminately and with greater comprehension."

The Macmillan Company, New York, 1950, p. 84.
2/ Ibid. p. 84.
3/ Walter Arno Wittich, Ph.D. and Charles Francis Schuller, Ph.D.
Status of photography in visual-aids. -

Kinder reports that:

"Each year more and more public schools are expecting the teachers to provide additional teaching materials at the schools, - materials that are audio-visual. During 1947, at least three attempts were made to outline "Standards of Teacher Competency in Audio-visual Education. The ability to use the camera and simple photographic techniques appeared in every one of them."

Everybody likes to look at pictures. It has been said that a thousand words could not speak as eloquently or tell as much as one picture. "Photography is a means of recording forever the things one sees for a moment." It is better than memory because it not only recalls things to our mind but it enables us to show to others, with absolute realism, what we have done, what we have seen, where we have been, even what we have thought.

Pictures are a universal language, people everywhere are exposed to pictures, pictures in the newspaper, books, magazines, billboards, and other places. Wittich and Schuller agree that "Pictures capture slices of reality and tell a story all their own."


Pictures help in creating the proper mental images and this Gilbert Weaver feels is the true basis of learning. He says, "The image is the great instrument of instruction. What a child gets out of any subject presented to him is simply the images which he himself forms with regard to it."

Weaver also suggests the following ways in which visual teaching aids influence the learner:

"1. They attract and hold attention, because there is always a tendency for the mind to concentrate on the thing which the eye sees.

2. They aid retention of information and visual images because the mental images created are easy to recall because of the intense interest at the time it was given.

3. They assist in forming correct images. People interpret things in terms of their own background of experiences, therefore it is possible to form different ideas about the same thing unless it is actually seen."

There is hardly any sort of picture that will not usefully fit into one educational context or another. Sands says that to realize the important place pictures are taking in education we should compare the text-book printed after 1950 with one printed before 1930. He adds:

"In the modern text-book the pictures do far more than illustrate. They aim at a high level of interest at a real contribution to the learning process."


2/ op. cit. p. 6.


4/ op. cit. p. 240.
Pictures are usually far more meaningful and concrete than words. James S. Kinder says "Pictures have an assured place in the teacher-learning process."

Kinder believes:

"The curriculum of today is looked upon as an experience. An atmosphere of reality has come into the classroom with an insistence that the work be functional."

Therefore the work of the schools must be related to the activities outside the classroom. He says that audio-visual materials overcome the limitations of restricted personal experiences of pupils. They also overcome the limitations of the classroom.

Sands agrees that "Properly encouraged they can vitalize the whole learning process."

Charles F. Hoban says that a well-chosen picture may stimulate a whole series of spontaneous discussions and compositions or develop an equally valuable series of preparations.


2/ op. cit. p. 57


Our earliest language was that of pictures and Elsworth Dent says:

"As the printed letter or word has become further removed from its ancestor the picture, it has become more and more abstract and more difficult to understand. A technical discussion on a subject is understood only by those trained in the field, whereas the same discussion presented in our usual language with illustrations would be understandable."

Therefore we must include in our educational procedure the maximum number of those things or representations of things which aid in clarifying thought - in making objective the abstract.

It is possible that some teachers feel that because they got their training without benefit of these aids and have been teaching for years without using them, visual aids are not necessary. Some may also resist using them either because they are too easy or too hard. Edgar Dale says:

"A picture is not a luxury, a frill, something to sugar coat learning. It is an integral part of the learning process. We talk of writers whose books are recommended because their words are so vivid. But no writer can hope to compete with a photograph. Teachers praise authors for their excellent "word-pictures" yet fail to use materials that appeal directly to the eye, and not indirectly through the printed word."

Lester B. Sands agrees with this as he states, "Teachers who use this aid have a special power to bring reality into the school-room."


Ellsworth Dent points out that photographs, prints, filmstrip and slides could be classified under one general term - "visual communication". He feels that certain types of training materials properly used will increase the speed of learning and the span of retention. The most important of these materials is the visual because, "It may be sufficient to state that the eye is considered to be of primary importance thus giving us the right to place it ahead of the other senses."

Kenneth B. Haas and Harry Q. Packer also point out that pictures crystalize ideas and form much of the basis for thinking. Without pictures the world today would not be as meaningful as it is now to most of us.

Again, Harry C. McKeown,

"Pictures provide opportunities for the obtaining of the basic visual imagery essential to thinking and living. They help to provide in a vicarious way concrete experiences with the individuals, events, activities, and things of the local community, as well as those of other peoples, other sections of the world and other times."

He suggests that verbal descriptions are often cumbersome, sometimes inadequate and even impossible. Through pictures, the individual can see clearly and accurately and also file them away in the mind for later use.


Weaver and Bollinger sum up the status of visual aids in this way:

"Research in visual aids will no longer be devoted to determining the effectiveness of visual materials since the experiences of World War II have confirmed without question their value as tools of education. It is more probable that considerable time and effort will be directed to developing more effective ways of seeing and hearing."

He believes that

"It is safe to assume that visual teaching materials should be used because they aid teachers to present their subject matter with greater ease and appeal and therefore attract and hold the attention and interest of the learners."

2/ op. cit. p. 383.
Photography in Teaching.

"Teachers all over America use photography as a help to their work."¹ Powerful flash bulbs, sensitive film, efficient cameras, and all sorts of ready-made charts and scales have taken most of the guess work out of picture taking. These improvements mean the release of a versatile educational tool for those persons who do not have the time or disposition to make themselves specialists in its use.

² Sands suggests some type of pictures that teachers and students are taking:

1. Pictures of instructional proceedings in the classroom, taken to record group planning, individual reports, constructional work and so on. These documentary photographs provide material for analysis of the various activities and for exhibits of what goes on in the classroom.

2. Pictures of instructional proceedings outside the school. This class includes photographs taken on excursions - photographs of museums, exhibits, buildings, industrial plants, government establishments, examples of art, and community


² Ibid. p. 255.
resources generally; also pictures showing economical facts or social conditions.

3. Pictures of non-instructional proceedings.
This class either in or out of the school - photographs of recreational and social programs, picnics, parties, parades, assemblies, entertainment, and athletic, musical, and dramatic events.

4. Pictures of the school to be used for news or publicity. Students take pictures for their own year books and newspapers; teachers and administrators take them for record and public relations.

"There is no visual recording tool more expressive of our world today than the camera. It registers action that will never be duplicated, fixes patterns that will never be repeated, captures sensations that will never occur again."

According to Hoban, of all the arts the photograph is the most familiar to the person of today. Constantly present in the newspaper, in the magazine, in advertising, and display, it plays an important part in our daily living. He believes that this, plus the fact that visual images are basal to ideas and thinking, "makes it the most vital method of communication. It has become a necessary part of the language of education."


2/op. cit.
Hoban gives two approaches in the use of the photograph: (1) the direct experience of making the photograph by teacher and pupil. This includes first-hand experience in observing and making the shot. Making photographs can be part of a school journey to intensify observation and to record the experiences of the trip, for reference and study. Also "Camera work by the teacher is most important." Those teachers who travel can record their experiences of people, places and things to serve as material aid in the classroom. The second approach suggested by Hoban is to use the observations of others.

Dent suggests another interesting use of photography in the classroom which is to combine the two by taking or using a picture of a pineapple field, for example, and a picture of some member of the class, then by photographic procedure combining the two to make a picture of that pupil in a pineapple field.

The pupil is instructed in advance that he or she will be expected to tell just how it seems to be in a pineapple field. This sort of photographic trickery proves to be a great motivating influence and increases the interest of the entire group.


Collections of pictures can include materials for almost all purposes and can illustrate what is far away as well as what is near. They may be obtained from newspapers, magazines, industries, travel agencies, governmental offices, photographic services, museums, libraries and individuals. 

Dean F. McClusky suggests that pictures be used for visual testing. For example -

1. Cross out picture tests: Pupils are asked to cross out pictures which do not apply in a given situation or to underscore the picture which does not apply.

2. Selections of pictures: Pupils are asked to select those pictures which do apply in a given situation.

3. Rearrangement of pictures: A series of pictures which tell a story are presented to the pupil in incorrect order. The pupil is asked to arrange them in correct order.

4. Relocation of pictures: Pupils are asked to correctly locate pictures with respect to a situation.

5. Multiple choice of pictures: A statement or question is followed by several pictures, one of which completes the statement or answers the question. The pupil indicates the picture which applies.

6. Completion: The pupil is asked to place correctly, pictures in a series in which there are gaps or omissions.

1/ Dean F. McClusky, Audio Visual Teaching Techniques. Wm. C. Brown Company, Dubuque, Iowa
Edgar Dale \footnote{Edgar Dale, Audio Visual Methods in Teaching. The Dryden Press, New York, 1946, p. 228.} feels that in view of the following qualities in a still picture, they should be included when teaching a unit.

1. A picture provides a recognizable counterpart of the thing itself. It is a frozen slice of life, an unmistakable substitute for the original.

2. It can be understood by everyone, it is a unifying human medium.

3. It can create a mood or an emotion; it compels feeling. For instance a Thanksgiving scene can induce thoughtfulness and thanksgiving. "It is literally true that we cannot have a better world than we can picture." We can improve our schools, our homes, the work of our churches only as we can develop certain images in the minds of people and pictures can create such images.

4. It translates word pictures into visual pictures thus making concrete what might otherwise remain verbal abstractions.

5. For research: photographs of steppes are instantly vivid.

6. As an aid to motivating and introducing, pictures arouse curiosity, excite interest and prepare a class for new subject matter.

7. They make reports more interesting.

8. Pictures enrich reading. A student can understand subjects better if he can see supplementary pictures. Illustrations make them clear and credible.

9. A picture may correct a mistaken impression.
Anna Verona Dorris gives these qualities of a picture.

1. They give correct impressions of abstract phenomena of nature or give a concrete knowledge of life and the world we live in, in a realistic way.

2. They bring vividness when before was only vagueness.

To these qualities Harry C. McKeown adds:

1. Pictures are real, vivid, and bring clarity, enriched meaning, and emotional response.

2. They provide motivation because of their immediate appeal.

3. Pictures are inexpensive because they can be used repeatedly and are easily available.

A picture should be used whenever it is needed to clear up something not easily explainable in words. A teacher in any field may introduce a picture when it adds clarity or enriched meaning.

Photographs, prints, charts and projected pictures are especially suitable for use in the primary grades. Number combinations and material for elementary reading are available on slides and film strip.

There are unlimited quantities of prepared sets of pictures, slides and film strip especially for use in the intermediate

---

1/ Anna Verona Dorris, Visual Instruction in the Public Schools. Ginn and Company, Boston, New York, etc. 1928.


grades. These include materials for language arts, basic study skills, mathematics guidance, the social studies, health, safety, music, physical education and other subjects. The problem is one of selection and not scarcity.

Applying Visual Materials to Special Fields

1. Social Sciences
   a. No more effective way to give a correct impression of life in another part of the country or world than to bring into the classroom photographs, slides, film strips, etc. of places and peoples of that area.

2. Linguistic studies
   a. Many teachers are finding it much easier to teach fundamental vocabularies by using both individual and projected pictures which are identified by the use of appropriate words. Furthermore some teachers use this same material as a testing device.

3. Science
   a. Unlimited possibilities.

4. Field of Fine Arts
   a. Collections of slides, showing different techniques for drawing and painting are used extensively.

5. English and Literature
   The teaching of English and literature may be increased in effectiveness by using pictorial materials of various types. The pupil who is learning to speak with conviction will be much better able to
develop enthusiasm over his subject if he is illustrating his talk with photographs and slides. A series of slides will provide ample material for many interesting oral or written discussions.

6. Field of Athletics

A series of pictures will be most effective to illustrate errors in performance and to achieve correct form. There are many professional film and film strip on baseball, basketball, archery, etc.

7. Health and Safety

These programs can be made more effective by use of film strip, pictures, etc. produced especially to meet the needs of such programs.
Dean F. McClusky feels that the individual picture is superior for individual study and analysis.

**Limitations of a still picture**

Limitations seem to be only that their universality causes us to value them lightly.

**Standards for judging** as given by Edgar Dale are as follows:

Ask yourself the following questions for every picture you plan to use.

1. **Will it help me achieve my purpose?** He suggests that it is essential to consider your primary purpose. "You cannot know what tools to use until you know what you are going to build."

2. **Does the picture give a generally true impression?** Is it typical? If not, will it lead to wrong inferences?

3. **Is this a good picture technically and artistically?** For teaching purposes fidelity and richness of detail are important for we want to show people what things look like.

4. **Will the picture stimulate the imagination?** Pictures of the Grand Canyon have sent people across the continent.

5. **Will the picture add to the pupil's fund of knowledge?**

---


Do not use a picture to show what children already know unless you can use the picture to create a new attitude or concept.

6. Does the picture give an accurate impression of the relative size of the object?

7. Does the picture have the proper amount of detail? A picture can have so many details that the central idea is obscured and can have so few details that it shows too little to be worth using.

8. Does the picture focus attention upon one main idea?

---

Edgar Dale says a picture can be read on any or all of these three levels: "(1) enumeration, (2) description, (3) interpretation." He suggests that we should develop "thoughtful seeing" not only with respect to pictures but with real-life situations.

The habit of reading pictures would probably carry over to other experiences. A picture encourages discussion and even when it seems to be going far afield a good teacher knows that it may yield unforeseen profits in the form of new interests. "Properly encouraged they can vitalize the whole learning process."

---


Ellsworth Dent says that experience has developed the following general notions:

1. Visual materials are most effective when closely correlated to the course of study or curriculum.

2. That visual materials will not supplant the text book or teacher, but will supplement and increase the effectiveness of the teacher and text.

3. That the most effective visual lesson is one that is treated as any good lesson should be handled.
   a. Teachers should be familiar with the visual materials before presenting them.
   b. Pupils must be held responsible for material presented.

4. That the organization and administration of visual materials must be such that they are available at the precise moment when the teacher wants them.

5. That the inherent nature of visual aids - their concreteness - is such that they should be excellent in quality and accurate in detail.

6. That a few pertinent illustrations are better than a score or more of less related ones.

7. Visual materials should make accessible in the classroom that which is otherwise inaccessible. Visual aids are valuable also in recreating in the classroom familiar subject matter.

---

8. No one type or class of visual materials should be used to the exclusion of others."

Why Photography?

There are many reasons for using photography, first of all it can produce pictures of benefit to those who study them. Sands gives these reasons for photography in teaching.

"The taking and study of pictures make the young really see what is around them. They become more aware of beauty and ugliness, more observant of acts, moods, patterns, history-of life. Photography, like art and music - which the schools also encourage - is a medium of communicating appreciation of nature, culture, and society. It gives reins to imagination; it promotes intent thought; it is a language that with equal readiness can speak realistically, suggestively, or abstractly. It provides the means for communication among groups and is a tool for aesthetic and interpretive self expression of individuals."

Value to the teacher.

The value to the teacher lies in what the teacher can do with it herself. Now that photography is so much simplified, more and more teachers should realize the importance of pictorial records made by themselves.

Value to the student.

As for the student, the process of photography - Selecting a subject, recognizing good composition, analyzing the light and taking the picture - educate not only the eye, but also the whole person. When people have taken pictures for a while they will instinctively "make" pictures out of every thing that catches their interest.

Various supplementary activities will grow out of student's picture taking. For some of them photography itself may become a hobby, a vocation or even an art. "Their pictures may well become a nucleus for analysis and review by the whole class. And the incentive to learn something will be redoubled when pupils' own photographs are going to provide the subject or the medium of instruction."

The teacher must know which teaching tools can best achieve the desired results in a specific learning situation. In the case of visual aids, this includes knowledge of the characteristics, advantages, and limitations of each type of visual-aid. Each type has its advantages and limitations which the writer will discuss briefly.

**Types of Visual-Aids, Their Characteristics and Values.**

**The Flat Picture:** The first to consider is the flat picture, a highly important type of audio-visual material. They are inexpensive, readily available to all teachers and as research suggests, "highly effective as a means of communicating ideas." They are a flexible aid and can be used at every stage of the learning process.


1/

Wesley and Adams give these uses for flat pictures:

"They serve well for motivation purposes; they present a background for understanding and appreciation; they act as a basis for comparison. They may be used as a source for class discussion; they are effective when utilized as reference material. They serve as an approach for many activities."

The effective use of flat pictures requires teacher direction. Wittich and Schuller say that they should be used for a specific purpose in a lesson and then placed on the bulletin board. The teacher who recognizes individual differences in ability to interpret pictures will secure the most satisfactory results from its use.

Still pictures must meet certain standards of truthfulness. Nothing will be gained if the picture fails to give a correct impression. Use pictures that are selected with care and accurately printed. Pictures selected and used with care offer the following contributions to teaching.

"Still pictures can translate word pictures into visual pictures."

For research, the still picture serves widely; and not only for younger children whose reading ability is limited, but for every student in the school.

Still pictures can serve well in introducing and motivating.

1/ Edgar B. Wesley and Mary A. Adams, Teaching Social Studies In the Elementary Schools. D.C. Heath Company, Boston, 1946, p. 239.


Children can use still pictures in preparing reports.

Still pictures, of course, enrich reading as nothing else can. It is true that direct experiences are far more vivid than a pictorial substitute, but the opportunities for applying such direct experiences to reading are sometimes limited.

Pictures serve to correct mistaken impressions.

Still pictures can help in recapitulating a unit."

Edgar Dale sums up these seven points with the question,

"Would you think of teaching a unit without assigned reading? Then how can you think of teaching certain units without assigned pictures also? For words and pictures are two media for communicating the same substance."

A picture is only valuable when it is used effectively and to put across a certain point. Usually the smallest number of pictures pertinent to the subject should be used. To obtain the best results these steps should be observed:

"Prepare the student. Interest may be aroused by telling the student what to observe.

Present the pictures. Place emphasis on the important facts and allow sufficient time.

Apply information. The student should be able to apply the information obtained from the picture as soon as possible.

Check student understanding.

Review.


There are three ways of using still pictures (1) individual inspection, (2) the bulletin board, (3) the opaque projector. Many small pictures may be placed on a reference table for individual inspection. This writer has used an 8x10 photograph for a group of three or four. After using in a group the picture should be exhibited on a bulletin board where a student may re-examine it. The opaque projector is necessary if the picture is to be projected. However, as this needs a thoroughly dark room and the machine is cumbersome it would seem advisable to use photographs individually and project the slide and the filmstrip.

Pictures cannot be thrown at the pupils and be expected to accomplish very much. Teachers must plan for the use of pictures, and they must be used with a definite purpose in mind. Children must be taught

"How to study them, what to look for, how to compare and criticize, how to evaluate, and how to relate the pictures to other curriculum materials."

Pictures should be suitable to the grade level and carefully labeled, catalogued, and filed.

The still picture is invaluable in our modern classroom. Research by Alexander, Brown, Fogelson, Gregory, Syer, Mendenhall, and Buswell, leave little doubt as to the interest, stimulation and teaching efficiency of the still picture.


5/ Henry W. Syer, "A Classification of Mathematical Instruments and Sources of Their Pictures." National Council of Teachers of Mathematics. Eighteenth Yearbook, p. 194. Suggests that pictures should always be considered a method to increase the number of concrete experiences and objects with which the class can become familiar.


7/ G.T. Buswell, How People Look at Pictures. University of Chicago Press, Chicago, Illinois, 1945, p. 192. Tested the nature of the movement of the eyes of two hundred individuals as they looked at pictures of different types. He stated that the "directions given prior to looking at a picture have a marked influence upon the character of perception."
As a summary Haas and Packer suggest a list of "do's" for the use of the still picture.

"Do utilize the countless numbers of excellent pictures and photographs available for teaching.

Do collect pictures from all available sources.

Do mount pictures on suitable backgrounds.

Do prepare your photographs to illustrate specific teaching problems.

Do prepare the student before presenting the picture.

Do show only large pictures in front of the classroom.

Do point out the important points in the picture.

Do discuss or apply the information in the picture.

Do test the students understanding of the picture.

Do review the problem by reshowing all pertinent pictures.

Do follow up the problem by showing the pictures on the bulletin board.

Do photograph field trips to facilitate follow up study.

Do photograph student progress and special events.

Do use home-made pictures for publicity work.

Do catalogue and file all pictures and photographs for easy reference."

The 2 x 2 Slide.

The 2 x 2 slide has commended itself to a great many teachers for two reasons (1) they can turn out their own pictures in color and (2) the slide projector is so easy to run.  


Both teachers and pupils have discovered that they can make a slide out of practically anything in their own community. Some of the advantages are that they are small and will go into a small container. If mounted in glass they are well protected from damage and weather. In short the slide is an extremely convenient and flexible aid. One other advantage is that slides can be arranged in whatever order will best suit a particular class or context.

Showing of slides like other visual devices should be planned to ensure their fitness to both the subject and the pupils. Standards for the use of slides are much the same as those given for the use of other visual aids. Dent,1 and McClusky2 suggest standards, advantages, and limitations of the slide.

Dent gives these standards for slides:

"1. The slide should be absolutely accurate in portraying that which is to be projected on the screen.

2. The photographic quality of the slide should be of the very best.

3. The attractiveness of the slide will have much to do with its teaching value.

4. There should be a concentration of attention on the essential elements to be noted or illustrated with the slide.

5. The slides in any group should be of the same size or picture area."


Teachers have found that a few slides, carefully selected and properly used to illustrate specific points or to become the basis for classroom discussion, will serve much better than a large set of slides containing some which do not contribute to the presentation. 1/

Some advantages are:

1. They constitute the best visual aid for group instruction. They are particularly valuable in developmental lesson.

2. They profit by projection which compels attention by semi-darkness, and by an enlarged picture which produces an illusion of reality. An illuminated picture becomes impressive by the mere fact of illumination.

3. It makes possible a detailed study by all pupils of the material reproduced.

4. It stimulates reflective thinking." 2/

Other advantages are:

1. They offer a maximum of brilliance in the projected image.

2. The image remains steady and may be left on the screen for any desired length of time.

3. It is not necessary to have too dark a room.


2/ Dean F. McClusky, Audio-Visual Techniques. Wm. C. Brown, Dubuque, Iowa

3/ Ellsworth Dent, op. cit.
4. They serve the following purposes:

a. To stimulate interest.
b. To introduce new subject matter.
c. To develop background.
d. To clinch facts during discussion periods.
e. To present vocabulary in the teaching of reading.
f. To help timid children recall facts.
g. To use as a review at the close of discussion.
h. To provide opportunities for training in self expression.

As a child looks at a picture he may recognize other things about which he may like to know more. These should become subjects for further investigation. McClusky says "Children should be taught to expect a slide repeatedly - studying only the part of the picture that has significance for the problem at hand." Most writers agree that one of the limitations is that its use could develop into a mere picture show. One way to avoid this is to know in advance the spot where use of a slide would help in the improvement of a lesson. Haas and Packer suggest using a 3x5 card to summarize each slide to make the teaching more effective and save time. Slides should be arranged in proper order and presented in orderly fashion. As there is a limit to the amount of knowledge a person can retain they feel that it is wise to limit the number of slides.


to no more than a person can master at one time. If the information is applied and the student's understanding of the lesson tested the danger of a mere picture show is lessened. A quiz card is suggested or objective examinations of the true-false, multiple choice, matching or completion type of examination.

There are many commercial slides available to meet a great many educational needs. However, one great advantage of the 2x2 slide is the ease with which both teacher and pupil can make their own slides.

"Projection of the resultant slides means more than merely showing the pictures to look at; it means reliving the whole experience. And that is education in one of its deeper, more durable meanings."

Slides are not difficult to make and as this paper is about photography the writer will discuss briefly the making of a 2x2 slide.

How to Make Slides

Slides can be made with (1) cellophane, (2) etched glass, (3) plain glass, (4) silhouettes, and (5) photographic prints. The 2x2 slide is being used in teaching more and more because they can be made to pertain to specific things. Slides can be either black and white or color. They are not expensive and are returned to you in a card-board mount, ready to show.

This writer feels that it is best to mount these slides in glass before they are spoiled by heat or careless handling. Glass mounts and binding material together with directions for using may be purchased in any photographic store, and the time spent is well worth while.

**Black and White Slides.**

1/ For black and white slides select a rather fast film and follow the directions which accompany the film for best results. If you are using ordinary black and white film, select the negatives you want and have them converted to positives for slide use. Kodak Direct Positive Panchromatic Film, when exposed in a camera will yield a direct positive for a slide instead of the usual negative.

**Color Slides.**

Kodachrome slides are made with 35mm. Kodachrome film. As color film requires more time and better light conditions than black and white, directions which accompany the film should be followed carefully.

Willard D. Morgan 2/ gives these important points to observe in order to make the final projected slide more effective.


1. Be selective in subject matter. Concentrate upon the essential part of the subject and fill the view finder with what you see to be important.

2. A neutral background helps to give greater interest to the main foreground subject.

3. Try to get the foreground sharp right down to the bottom of the picture.

4. Catch the natural positions of people, and avoid the deadpan stare.

5. It is taken for granted that careful focusing, exposure, all add up to the making of fine transparencies.

6. Strive for picture variety, as well as change in camera position.

7. Use a few orientation pictures in every group of subjects. Such pictures help to change the pace from general to selected scenes and give unity to the slide set.

8. Actually, the essentials for making good pictures for projection are the same as making good photographs for any other purpose.

In discussing visual communication of ideas, Robert De Keiffer says,

"The projected transparency, if effectively utilized, is one of the most useful visual materials at our disposal. There are no areas in the school curriculum that cannot be interestingly complemented with slide material. Many schools have authorized the science class or the photography class to make slides for teaching purposes."

---

A teacher must know how to use a slide projector. \(^{1/}\) The principles of operation of each machine are much the same; however, he should follow the directions which accompany the machine.

**Slide Projectors:**

Illustrated catalogues may be obtained for

the S.V.E. Tri-purpose Projector write to

the Bausch and Lomb Combined Balopticon write to
Bausch and Lomb Optical Company, Rochester, New York

the Spencer Combination Delineascope write to

The Film Strip

Some teachers prefer the filmstrip because it is so easy and simple to use, light in weight, and efficient enough to produce bright pictures in a room partially lighted. It tells a complete story, however, it is not as flexible as the slide or the separate picture. In the past it has not always been expertly organized, however today it has come to be regarded as one of the most reliable and important of the teaching aids. Sands says

"Properly gaged to fit the needs of the pupils, it will help build vocabulary as well as to propose new ideas and expound principles."

There are certain practices regarded as standard in the use of filmstrip such as:

1. Prepare the class by an introductory discussion.
2. Show the filmstrip first as a whole without interruption.
3. There should be enough repetition to make sure no important fact is left obscure.
4. The verbal matter should be read aloud.
5. Supplement the filmstrip with other aids.
6. The filmstrip should serve a definite educational purpose.

There are certain advantages in the use of the filmstrip as there are in each of the visual aids. It is exclusively a teaching medium because the distracting entertainment factor in motion pictures is not present. Robert De Keiffer defines the filmstrip as a "logical sequence of individual pictures printed on 35mm. film." He believes that its major contributions to education are that it is relatively inexpensive and is easily produced, projected, stored, and shipped. It has been found valuable in the training programs of business and industry, because "of the pre-designed pattern of presentations that standardizes instruction and points up specific training problems."

Sands gives these uses for filmstrip, "(1) they help pupils acquire a background of variety, taste and visual resources, (2) they include matter that will lead to a reading recognition of words and phrases. Supplementary reading and research are encouraged. (5) School classes for remedial reading are well served by filmstrip."

Filmstrip not only teaches new facts, it may be used to review or summarize material already taught. It will stimulate discussion and increase interest in a subject. "Filmstrips


2/ Ibid, p. 285


bring reality and meaning to teaching as well as a considerable saving of time."

Another advantage of the filmstrip lies in the fact that each picture can be projected on the screen for any length of time. This gives the slow learner a chance to read titles or ask questions. It is also possible to turn back if the need arises. A filmstrip may be shown in a partially lighted room which provides enough light for note-taking. This Cass 1/ feels is more conducive to a relaxed atmosphere than the completely darkened room, which in turn, "helps stimulate discussion and participation by the class."

The teacher should always preview a filmstrip before using it as an instructional aid. It must be suitable for the needs and reading abilities of the group to which it is to be presented. She feels that when these suggestions are followed "filmstrip becomes one of the most powerful audio-visual aids to instructional effectiveness."

2/ Ibid. p. 61.
How to Make a Filmstrip

Filmstrip can be made with a standard 35mm. camera which will also make the 2x2 slide. The only difference is that every exposure must be perfect. For that reason slides are easier to produce and safer until the teacher perfects his technique. If, however, you do want to make a filmstrip, Robert De Keiffer, \(1/\) gives these steps to follow in developing this effective teaching tool.

"1. Consider the problem. In considering the educational problem you wish to complement with the use of a filmstrip, ask yourself the following questions:
   a. What is the purpose of the filmstrip?
   b. What objectives will it achieve?
   c. Who is the intended audience?
   d. How is the production to be financed?
   e. Would other institutions be interested in using it?

2. Outline the content.

3. Develop the script. The outline should be of assistance in developing the script. Ask yourself these questions:
   a. What type of pictures will tell the story best?
   b. What should each picture show?
   c. What sequence of pictures will best present a well rounded story?

4. Photograph the material.

The Stereograph

As the stereograph has been found to be valuable by many teachers as a reference material, to be used individually, it

should not be overlooked. This arrangement encourages a leisurely study of details and the taking of notes, it tends to promote library work by pupils and to draw written and oral expression from them. The same principles govern the use of the stereograph that apply to other visual aids.

Sands sums up the value of pictures in this way:

"It should not be overlooked that pictures can help teach the amenities of life and even accomplish something toward the appreciation of beauty. They enrich the home environment, they raise the standard of living, and what is more important of conduct. They make no contemptible contribution to an intelligently democratic social spirit, if only by serving as nuclei of discussion. And they are self-contained and self-explanatory: they carry their own cargo of information and perhaps of drama, without the aid of words."

Although pictures can do much for themselves it remains for the teacher to give certain kinds of help. Most pictures need to be taught as well as looked at. Sands suggests that pupils point out what they think are the important aspects of a picture and have the teacher supplement the pupil's comments. In other words teacher and pupils should discuss together what they find in pictures, drawing on their own experience and memory.


CHAPTER III

USE OF PHOTOGRAPHY IN THE CLASSROOM

Amateur Photography and its Use in the Classroom.

Edgar Dale says this about photography: "By the least expensive and most accurate form of portraiture possible, the camera has indeed brought to the whole world a means for capturing the fleeting present and for recapturing the past. If we take photography for granted today it is because pictures are inseparably woven into the fabric of every day existence. But teachers cannot make the mistake of ignoring photographs, merely because they are universally used. For education, like other institutions of communications simply cannot get along without them. Indeed teachers might well equip themselves to use the camera, for personal pleasure as well as professional value."

Charles F. Hoban feels that camera work by the teacher carries the use of the photograph into an extremely important function. Those teachers who travel can record their experiences and the pictures used as an aid in the classroom. He also suggests the making of a photograph by teacher and pupil.


participation a step in training the pupil how to see - to give him his first tool in observation.

Harry C. McKeown also adds: "A setting which pupil photographer searches for and decides upon his subject, studies the relative importance of its elements and then photographs it to bring out what he wants to emphasize, promotes discriminative observation."

Suggestions for Amateur Photography

1. Select area in which you feel a series of pictures would do the most good.

2. Jot down the names of objects or situations that pictures will help you explain to your class.

3. Limit your list to pictures you can take easily.

4. Select those items which offer the most contribution to the lesson.

5. Write out the explanation you want to place on back of each picture.

6. Divide list into two parts, one to contain all indoor scenes, the other outdoor, to avoid changing film.

7. After taking and developing retake any of poor composition.


8. Enlarge to 8 x 10 size.
9. Mount all pictures.
10. Correlate pictures taken with a definite past.
11. Set up a filing system.

Edgar Dale explains it simply that "By allowing the light rays of a subject to fall upon the film, the camera produces a photograph." Cameras are equipped with lenses which concentrate the light rays from the subject to be pictured on the film. The inexpensive box camera has a fixed focus, whereas other cameras must be focused. This means that we consider the distance of the subject from the camera.

Eastman Kodak Company believes you will get more enjoyment from your picture taking if you understand how the camera works.

Elements of a Practical Camera

1. Camera like the eye.
2. Film coating known as emulsion forms an image and is brought out by placing film in a solution known as developer.
3. When film is developed and fixed it is called a negative.
4. The final picture is made by placing sensitive paper


in contact with the negative and by exposing it to light for a certain period of time. The paper goes through solution and the final result is a permanent picture.

**Types of Cameras**

1. Box cameras - modest in price, thoroughly dependable picture makers in their intended sphere.

2. Folding cameras offer greater compactness and carrying ease. The more pretentious ones successfully cope with rapidly moving subjects under adverse lighting conditions.

3. Miniature cameras are convenient and are designed to make pictures under a great variety of conditions.

4. Reflex cameras use a special twin lens principle and have big view finders which show details the actual size they will appear on the film.

---

1/ Ansco adds that "All cameras are basically similar differing primarily in the quality of their lens, shutters and other refinements. One of the most dependable ways to determine the quality of a camera is by examining the lens and shutter. The lens and shutter are the eye of your camera, they make the exposure - the remainder of the camera merely shuts out light and holds the film in the correct position.

---

Lenses - Usually designated by "F" numbers which indicate their maximum apertures. For example an "f 8" lens has a maximum aperture the diameter of which will go into its focal length (distance from lens to film) eight times - its diameter is 1/8 the focal length. Box cameras are usually equipped with "f 16" lenses and will go into the focal length sixteen times - therefore the higher the number f number the slower the lens. Color films are slower than black and white and require a lens having a maximum aperture of at least f /6.3. thus the better lenses would be desirable.

Lenses - As explained by Eastman Kodak Company - The ability of a camera depends upon these two elements:

1. In general the bigger a lens is in relation to its focal length the more light it will admit in a given interval and the greater the scope it will give your camera.

2. The speed of a lens is generally determined by comparing its diameter to its focal length and is expressed by a symbol "f".

The best type of lens is anistigmatic - which means photographically that the lens will show details sharply over the entire area.

Lens has total influence over the image forming light which strikes the film. Lenses take many forms from the simple single element lens usually found in most economical box cameras to the most highly corrected anistigmat (free from distortion) lens which may be composed of six, eight or more elements. The more complex the lens is, the greater its photographic capacity.

Shutter

Only with the exact control of a good shutter can you get the good out of a fine lens. It should have sufficient variety of exposure to suit your need.

1/ Ansco explains the following types of shutters.

1. Single blade shutter.
   a. Equips box cameras, gives exposure of about $1/35$ or $1/50$ of a second. It may also be adjusted to give time exposures.
   b. There is little choice in exposure speed.
   c. Economical, simple to operate.

2. Between the lens shutter
   a. Located between the lens.
   b. Offers a variety of shutter speeds - time - bulb $1/25 - 1/50 - 1/100 - 1/400$ of a second.
   c. Easily adapted for synchronized flash.

a. Some have built in synchronization, permitting use of any simple flash unit.

3. Focal plane shutter.
   a. Curtain type of shutter.
   b. Offers greater range of speed.

**Lens and Shutter Combinations**

1. For general use - pictures of moderately fast moving objects.
   a. f 6.3 lens and shutter speeds up to 1/100

2. Athletic events - involving very fast action or varied indoor shots.
   a. f 4.5 lens and shutter speeds up to 1/200 - 1/400

To "stop down" means to reduce the size of the aperture and thus to admit less light. "Stopping down" results in sharper detail, but it must coordinate with the duration of the exposure.
**Filters**

After you have enjoyed taking pictures of children in the classroom, you will begin to see pictures everywhere. You will also notice other pictures and find that the experts have beautiful cloud effects which you have not been able to get. Do not be discouraged for you can get the same effect with a filter as the experts do. To use filters effectively it is not necessary to dive into a lot of technical charts. It is better to leave that to the experts and to find out only what they do, the kinds to use, and how to use them.

What Filters Do

Photographers use filters for two reasons; (1) to register the tones of gray more nearly as the eye sees them, (2) to increase the contrast between them.

Kinds of Filters

Of the four types of filters, the Wratten filters in B glass are recommended by most authorities for amateur use. Actually, the amateur photographer needs only three filters, the yellow green, an orange and a red, and could do without the orange or red. However, it is well to know that there are other filters which you may want to try later. As these three filters for use by the amateur we will discuss these three only.

---

How To Use Filters

1. Yellow-green (Wratten K2) This can be used for both ortho chromatic and panchromatic film. It corrects type B pan in daylight. It is used to darken skies, emphasize clouds, reduce haze, and increase contrast. It is good for outdoor portraits, landscapes, distant views, water scenes, snow scenes, mountain scenes and sunsets. It adds brilliance to a scene of normal color distribution.

2. Orange (Wratten G) This filter can be used for both ortho and pan films. It is excellent for increasing contrast between colors. It makes blue sky quite dark and improves rendition of texture under a blue sky, of stones, sand and fabrics. It is also good for mountain and airplane photography.

3. Red (Wratten A) This is used for pan film. It darkens blue sky almost to black, producing spectacular cloud effects. It is ideal for photographing light colored buildings, statues, shiny metallic structures, faces against a dark sky and creates exquisite landscapes and airplane studies. It is not good for shots of green vegetation, dark buildings, or portraits.

Slight under exposure with this filter produces night effects.

The use of the filter then is to correct, distort, emphasize, or change the contrast between colors. The following table taken from Sussman* should be helpful in the use of filters.

---

A TABLE OF FILTER FACTS

<table>
<thead>
<tr>
<th>COLOR OF SUBJECT</th>
<th>TO LIGHTEN, USE</th>
<th>TO DARKEN, USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violet</td>
<td>Blue</td>
<td>Red or orange</td>
</tr>
<tr>
<td>Indigo</td>
<td>Blue or green</td>
<td>Orange, yellow</td>
</tr>
<tr>
<td>Blue</td>
<td>Blue or green</td>
<td>Red or orange</td>
</tr>
<tr>
<td>Blue-green</td>
<td>Blue or green</td>
<td>Red</td>
</tr>
<tr>
<td>Green</td>
<td>Green or yellow-green</td>
<td>Red or blue</td>
</tr>
<tr>
<td>Yellow</td>
<td>Yellow orange or red</td>
<td>Blue</td>
</tr>
<tr>
<td>Orange</td>
<td>Orange or red</td>
<td>Blue or green</td>
</tr>
<tr>
<td>Red</td>
<td>Deep red or red</td>
<td>Blue or green</td>
</tr>
<tr>
<td>Purple</td>
<td>Blue</td>
<td>Green</td>
</tr>
<tr>
<td>Magenta</td>
<td>Red</td>
<td>Green</td>
</tr>
</tbody>
</table>

There are some general hints on the use of filters which may be helpful.

A filter will not darken a sky that is misty, overcast, grayish or whitish.

Overexposure will cancel out the effect of a filter; underexposure will often take the place of one.

If the sky is clear and blue, and you are photographing very light objects against it on panchromatic film, you won't need a filter to darken the sky. Be sure to turn away from the sun, however, and don't overexpose.

A scene without contrast needs filters like red or orange, while a scene of great contrast needs the softening effect of the green or blue filters.
Early in the morning and late in the afternoon, filters are needed only for color correction since lighting contrast is adequate; around noon however, they are needed for color contrast as well.

It is important to remember that every filter cuts out part of the available light, therefore, it is necessary to increase the exposure to compensate for the loss.
Kodak Film Recommendations

Verichrome Pan: all-round black-and-white film for daylight and flash picture taking in box and adjustable cameras.

Plus-X: all-round black-and-white film for 35mm cameras.

Tri-X: for black-and-white pictures under dim lighting; should not be used with box cameras in sunlight.

Panchromatic-X: for black-and-white negatives of maximum enlargeability; requires greater exposure than Verichrome Pan.

Kodachrome, Daylight Type, and Kodak Ektachrome, Daylight Type: for color slides in sunlight with cameras taking 135 or 828 films.

Kodachrome, Type F, and Kodak Ektachrome, Type F: for color slides by flash with cameras taking 135 or 828 films.

Kodacolor: for color negatives and prints by daylight and flash with all roll-film cameras.

Film

Roll film consists of a length of opaque colored paper with a shorter length of film fastened inside it. The paper not only protects the film but provides the picture numbers. On Kodak roll film, each number is preceded and followed by the name of the film as a reminder against using camera settings or flash distances for a different kind of film than you actually have.

Film for 35mm cameras has no backing paper, its protection comes from the metal magazine in which it is packed. Because there is no protective magazine into which 35mm winds as you snap your pictures, it's essential to wind the entire roll back into its original canister after your last shot.

Suggestions for Judging Results with Kodachrome Film

1. Dense dark transparencies
   Cause: Underexposure
   To Avoid: Observe exposure instructions enclosed with the film

2. Thin, light transparencies
   Cause: Overexposure
   To Avoid: Observe exposure instructions enclosed with the film

3. Heavy, foggy shadows
   Cause: Failure to make allowance in exposure for side or back lighting.
   To Avoid: If possible have light behind the camera. Consult exposure table if back lighting is desired.

4. Blurred picture (all over)
   Cause: Camera was moved during the exposure
   To Avoid: Hold the camera steady and hold your breath, or use a more rapid shutter speed and a corresponding larger lens stop opening.

5. Blurred pictures (subject only)
   Cause: Subject moved too rapidly for shutter speed used.
   To Avoid: When taking fast moving objects use fast shutter speed and correct lens stop opening.

6. Poor definition
   Cause: Focusing operation was neglected
To Avoid: Judge or measure the distance accurately and focus carefully.

7. Picture misty
   Cause: Dirt or moisture on lens or filter
   To Avoid: Keep lens and filter clean.

8. Light streaks in pictures.
   Cause: Back of camera not properly attached or a leak in case or bellows.
   To Avoid: Return camera to manufacturer for repair.

   Cause: Sun or lamp shining on lens.
   To Avoid: Shield the lens from sun.

10. Yellow pictures.
    Cause: Too long a time elapsing between exposure and processing.
    To Avoid: Do not leave partially exposed film in camera any longer than is absolutely necessary.

11. Excessive Redness.
    Cause: 1. Pictures taken in early morning or late afternoon sun.
    2. Daylight Kodachrome Film was exposed without Kodachrome Filter for Photoflood or Photoflash.
    3. Daylight Kodachrome Film with Kodachrome Filter for Photoflood or Type A Film was exposed by ordinary Mazda illumination.
    To Avoid: 1. Unless photographing the sunrise, sunset, or
other pictorial effects do not take pictures just after sunrise or just before sunset.

2. Use the Kodachrome Filter for Photoflood or Daylight Kodachrome Film with regular Photoflood or Photoflash illumination.

3. Do not use ordinary artificial illumination for either Daylight Kodachrome or Type A Film.

12. Excessive blueness.

Cause: 1. Kodachrome Film Type A used in daylight or with Daylight "blue bulb" photofloods, without the Type A Kodachrome Filter for Day light.

2. Type A Film used in artificial light with Kodachrome Filter for Photoflood.

To Avoid: 1. Use the Type A Kodachrome Filter for Daylight with Kodachrome Film Type A when subject is in daylight or under artificial light of daylight quality.

2. Use no filter and exclude all daylight when Type A Film is exposed by regular Photoflood or Photoflash Lamps.

13. Scratches, finger marks.

Cause: Rough handling

To Avoid: Handle film by the ends or edges.
Photography demands the sensitivity and imagination of the painter or sculptor. It also needs the exacting judgment of what is worth perpetuating and what is not. The writer agrees with Sands when he says "The art of photography is primarily the ability to see the drama of our surroundings and secondly to capture it in pictures." In the opinion of this writer Sands sums up the value of photography not only in visual-aids but in every day living when he writes:

"Photography meets our need to see the shifting colors, the loveliness of line, the power of mass, the grace of form in the things we look at. It makes us perceptive of movement, of the character and spirit of persons, of the wonderful designs of nature and of the inexhaustible variety of mankind".

The number of picture is infinite if we keep our eyes open to see them.


Suggestions for Use of Amateur Photography

Posters

1/ Charles F. Hoban says "a poster is a geometric abstract of scene, action or idea creating strong and lasting impressions."

2/ Margaret Puffer in her theses on Art gives these "Basic Principles of Poster Making":

1. A good poster should carry well.
2. It should be simple.
3. It should be interesting and attractive.
4. It should be convincing.
5. It should leave a definite message.

She gives this lesson plan on "Reading for Pleasure".

Objectives: 1. To encourage reading outside the classroom assignments.
2. To make good use of school and public library.
3. To produce an attractive poster that will set forth the idea in a forceful direct manner.

Preparation: 1. Class discussion on reading for fun and profit.


2/ Margaret Puffer
2. What types of books pupils like to read.
3. Discuss topics and suggestions that could be used to encourage children to read more.
4. Ask children to give possible slogans.

Topic -
1. "Reading is Fun" or
2. Adventure by the Fireside

would be a splendid topic for our photographic poster.

Materials: 1. Photographic
2. Materials for mounting

Suggestions for further activity in poster making might be:

Health
Street Safety
Signs of Spring
Consideration for household pets
Community helpers - firemen, police, etc.
Activities
Rules of conduct in the library
Correct Posture
Vacation Safety
Patriotism
Safety Warning Signals - red lanterns, flashing red lights, flags, railroad crossing, etc.

Advertising display for rest of the school.
Plan for A Poster

Title - Fireside Adventure

Use-Sixth Grade-age 10-11 years of age.

Objectives:

1. To encourage reading outside of the classroom.
2. To encourage use of the library.
3. To produce a photographic poster that will be attractive, well executed, and will convey the message intended.

Materials:

1. 22-23" poster display board. Yellow
2. Poster paint for lettering.
3. An 11-14" black and white print.
4. Rubber cement.

Procedure:

1. Sketch layout.
2. Check points of good poster making.
   a. A good poster should carry well.
   b. It should be simple.
   c. It should be interesting and attractive.
   d. It should be convincing.
   e. It should leave a definite message.
3. Block out the letters.
4. Mount the print.
5. Draw the necessary lines for balance.
Adventure by Fireside

Photograph of a boy reading
Pictures - Teachers doing Outside Study

Public Relations

Value of Publicity Photography

Victor H. Seales writing for Graphic Graflex Photography says that photography is important in public relations. It is increasingly used to attract the attention of a busy world and to win the favor of its preoccupied people. Based upon the premise that "seeing is believing", publicity photographs speak a universal language. Effectively they convey messages, teach lessons, point morals which the world otherwise might be unwilling to read or hear.

Applications of Publicity Photography

To succeed in today's busy world individual and organizations alike first must win attention and public approval. Life's complications have become so confusing that people do not know what to believe. They need to be told and publicity serves this need.

Technique

Publicity presents ideas:

1. strikingly, to command attention
2. interestingly, to invite understanding
3. concisely, to assure remembrance

Requirements for Successful Publicity Photographs -

1. impact, to catch the eye

2. human interest, to hold attention
3. good action, to communicate an idea
4. picture quality, to clinch the conviction

Viewers must be able at a glance to see, to understand, and above all to remember the story told, the lesson taught by that photograph.

The teacher should ask herself before taking the picture:

What story must be told?
What objectives must be achieved?
What people must be convinced?
How can the idea best be presented photographically?
Teachers on a Field Trip

A picture to be used for Public Relations

Showing teachers listening to a Nature lecture
CHURCH VACATION SCHOOL!
MONDAY thru FRIDAY 9 to 12
for BOYS and GIRLS 3 to 15 YEARS Visitors WELCOME!
Summer School

Photograph of a late comer
Alvin B. Roberts, Audio Visual Director of Western Illinois University, Macomb, Illinois has conducted field tours for high school students or teacher groups for thirty years. He has had the opportunity of observing hundreds of people attempting to make picture records of their trip. This work with many different teacher groups showed that help was needed in learning to operate a camera, reading a light meter, selecting appropriate subjects and in composing and organizing a narration. Five years ago for the first time, Western Illinois University offered a course in Field Photography in an effort to assist tour members in getting a better set of pictures, either for use with groups in their own communities or with students in their classrooms.

The first part of the course centers on the operation of the camera, then the individual learns to load and unload the camera. He is also given pointers on how to hold the camera, how to release the shutter, how to use the range finder, how to set the stop, and shutter speed. Practice is also given in the use of the light meter and in transferring the readings to the camera. For those who do not have light meters, instruction is given in the use of light charts.

Considerable help is needed in the composing of the pic-

1/ Alvin B. Roberts, Field Tours For High School Students or Teacher Groups. Audio Visual Guide.
ture and it is necessary to become familiar with the basic principles of composition.

Many feel that all one needs to do in making a picture record of a tour is just to shoot whatever is handy and then organize the pictures taken into a Travelogue or teaching unit. When a person working on such a basis returns home he will find he has many scenic shots but few of the people, their homes, the industries, agriculture, products, methods of transportation, public buildings and other subjects that may be needed to give a well rounded view of the region covered.

Most teachers are interested mainly in a series of pictures that can be used as a Travelogue which they may share with other people or they may want to produce a teaching unit. In this latter area individual work is required because of the various subject areas. At first it seems quite difficult for a person to think of specific pictures to take in an area that is entirely new to him; however, Mr. Roberts has found that by the use of travel folders, booklets, postcards, and pictures selected from magazines in advance - the prospective photographer may get a general idea of the type of subjects that will be found in the countries visited.

Basic categories in which pictures are to be taken are then listed. These will include such scenes as:

1/Alvin B. Roberts, Field Tours for High School Students or Teacher Groups. Audio Visual Guide.
1. topography
2. people
3. points of historical interest
4. cities
5. industries
6. arts and crafts
7. recreation
8. plant and animal life
9. agricultural products
10. places of scenic beauty

At the end of the day the tour member should check off on a chart the pictures taken and the areas needed to be covered.

The next step is the selecting and eliminating; most people feel that because the picture has been taken it must be used. This is not so, the slides should be selected on the basis of composition, exposure, trueness to color and other requirements. They must then be organized for presentation.

Many teachers want to present a travelogue to various groups in the community or their own students. The organization of the travelogue then becomes a major part of the photographic project. The common procedure is to organize the travelogue so as to follow the itinerary. Regardless of the plan a travelogue needs an introduction, therefore eight or ten pictures of the most beautiful and artistic scenes should be included to attract the attention of the audience. Following the introduction will be the main body of the travelogue. Then
just as a book needs a conclusion, the travelogue should have six to ten beautiful shots for the conclusion of the travelogue. These will serve as a summary of the trip and will go a long way in determining the success of the presentation.

Once the slides have been selected and organized the next problem is developing the narration for the travelogue. The common errors which the author noted were:

1. Do not quote statistics because they are boring and of little interest.

2. Do not start too many descriptions with the statement, "This is a picture of."

Some of the suggestions were as follows:

1. Use a transition sentence to carry the audience from one setting to another.

2. Memorizing the opening sentence for each scene or the transition sentences will make the travelogue go more smoothly. The concluding slides should summarize the outstanding highlights of the tour and the narration should be brief.

Some suggestions for instructional units are: in visiting Hawaii; a teaching unit on the pineapple and sugar industry. It would include:

1. tilling the soil
2. planting of the pineapples
3. irrigation
4. cultivation
5. fertilization
6. the harvesting
7. transportation to the canning plant
8. loading of the canned pineapple into ships to be sent all over the world.

A similar set of pictures could be made on the sugar and coffee industries. A photographic unit on children of the different lands and on education as observed by those on tours round the world, would be of interest to students.

The author feels that this course is valuable for, through the preparation, selection, and narration of a good set of slides every tour member is able to share his experiences with many, many others.
Travelogue
Unit on Safety

A picture story of children on the way to school using the cross lights and waiting for the police officer.

1. Leaving home
2. Looking at the lights
3. Pressing the pedestrian button
4. Crossing on red and yellow lights
5. At the school waiting to cross
6. Crossing under direction of officer
7. Safe in the school yard.
Kenneth B. Haas says:

"Taking a picture of a student at work gives him pride in his work".

Objectives: a. To interest an indifferent student.

b. To help him recall facts in connection with class work.

c. To provide opportunities for training in self expression.

Materials:

1. Material to work with.

2. Photographic materials.

Student at Work

1. Photography Club - enlarging a print
2. Photography Club - developing a film
3. Classroom
4. Panel discussion
Edgar Dale suggests the use of the photograph in Geography - "Pictures enable us to conquer obstacles of space and time." Pictorial materials on Egypt, etc. bring these places into the classroom.

He feels that skill is necessary in using Geography pictures. If children are to understand the full meaning of a picture, the parts of the picture must be related to one another and to the pupils' previous experience. As an example a child should not report just what he sees as "I see a thatched roof which is built on a very sharp angle," but understand that, if the roof is steep, it is likely that the rainfall is heavy. The amount and kind of clothing may indicate whether the people live in the tropics, temperate zone, etc.

"To study pictures scientifically, you must do more than describe what you see. Merely description does not usually require much geographic thinking. But to interpret what you see, you must bring to bear all the related information previously learned."

Edith Parker remarks that from a group of landscape pictures a sixth grade class should be able to report accurately the following:

1. The major physical characteristics and outstanding...
ing features of the region.

2. Evidences, in the form of man made features in the landscape, that the region is settled densely, sparsely or moderately, and evidences of differences in the density of population in different parts of the region.

3. Evidences, in the form of specific landscape features that activities a (farming for example, b, c, d, etc. seem to be major ways of making a living in the region.

4. Indications, such as specific types of natural vegetation, crops, clothing, houses, etc. seen, of climatic conditions that prevail in the region.

5. Characteristics of the climate that seem thus to be indicated.

6. Evidences, such as roads, vehicles, tools, types of houses of the level of living that seems to prevail.

7. Clean-cut questions which arise from the facts observed - questions which obviously must be answered by further study of the region in order to gain real insight into the lives and problems of the people in this part of our world.
Maine Countryside

1. Field in winter

2. Maine countryside
Occupational Guidance

1/ Honnock, says that some of the best visual aids are home-made such as:

1. Pictures of former students engaged in their present activities at college or at work.

2. Children at work in school.

3. One worker performing all duties of his job.
   a. Work of a barber from honing a razor to sweeping the floor.
   b. Work of a medical laboratory technologist.

Honnock feels that this picture story is far superior to most of the textbook explanations of occupations. He also suggests that the teacher who wishes to do a superior job will find helpful suggestions in "The Technique of the Picture Story" by Mich and Eberman.


Picture Story of an Occupation

Picture Story of a Baker

1. Measuring the flour
2. Rolling the dough
3. Frosting the cake
4. Taking pies out of the oven
5. Putting rolls in the freezer
6. Results of his work

Picture Story of a Meat Cutter Who Owns His Own Store

1. The store
2. Cutting the meat
3. Dressing the show case
4. Waiting on a customer
5. Putting groceries on the shelf
6. Sweeping the floor
BIBLIOGRAPHY


Roberts, Alvin B., Field Tours for High School Students or Teacher Groups. Audio Visual Guide.


Puffer, Margaret


"Pictures as Laboratory Materials in Geography" Education, March 1944.