A STUDY OF SELECTED VISUAL MATERIALS TO IMPROVE INSTRUCTION AT THE PRIMARY GRADE LEVEL

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THE PROBLEM AND DEFINITIONS OF TERMS USED

Visual materials have been one of the main ways of motivating and encouraging children at the primary grade level to become interested in ideas and topics in subject areas. These motivating devices are often neglected by teachers. Display areas have been overlooked or have been filled in with materials that have no real application to the units being studied. Some of the basic reasons for these oversights are:

- Teachers lack an understanding of how to set up effective and attractive displays.
- Teachers lack competency in the use of visual materials.
- Teachers are not aware of how valuable visual materials can be in helping achieve teaching goals.
- 4. Teachers are not always able to create new ideas that will interest children, and they are not familiar with publications which contain many such ideas.

THE PROBLEM

Statement of the problem. The purpose of this paper was to review the literature (1) to determine the principles involved in developing effective visual materials, (2) to suggest techniques which would enable the teacher to make more effective use of visual materials, (3) to determine the pupil-gained values, and (4) to suggest ideas and list sources of information designed to help the teacher accomplish teaching and learning goals.

<u>Importance of the study</u>. Children in the primary grades like bright colors and pictures. Young children today live in a colorful and attractive world. School should provide them with this type of environment in order that their

interest and enthusiasm will result in effective learning. Teachers have the opportunity and privilege to accept and meet this challenge. Visual materials can be a great asset in motivating children to produce their highest quality of work.

Visual materials aid in communication, and learning depends upon communication. People communicate by talking, by listening, by writing and by reading. They can also communicate by showing things to others, by looking at things others show them, and by looking at things together. The formation of personality, the building of character, and human nature itself, grows out of communication with fellow men. The use of visual materials, provides one more way to communicate with others.²

East and Dale stated that what a child gets out of any subject presented to him is simply the images which he himself forms with regard to it. It is very difficult to convey accurate images with words alone. Proper use of instructional materials, such as chalkboards, bulletin boards, and flannel boards, can facilitate understanding by means of the visualization process.³

RESEARCH PROCEDURE

The method of research used for this report was primarily library research. The library facilities of Kansas State University and Manhattan City Library were the cass used for the literature review.

¹M. C. Knight, "Bulletin Boards that Work," <u>Grade Teacher</u>, 81:27, April, 1964.

²Marjorie East, and Edgar Dale, <u>Display for Learning</u> (New York: The Dryden Press, 1952), pp. 11-12.

³Tbid., pp. 55-56.

LIMITS OF THE STUDY

The primary grade levels of kindergarten through third grade were used for the study. Many of the research findings would also apply to other levels. The visual materials studied were of the non-electrical type or more specifically; they included bulletin boards and displays, chalkboards, and flannel-boards.

DEFINITIONS OF TERMS USED

<u>Display</u>. Display was used in this study to refer to any area where articles, pictures, and other materials are placed for either group or individual instruction.¹

<u>Primary Grade Levels</u>. The term Primary Grade Levels refers to kindergarten through third grade.

<u>Chalkboard</u>. For the purpose of this report, the term chalkboard was defined as a board having the surface of slate, plastic, or treated wood upon which one may write or draw with chalk.²

Flammel Board. Flammel board was used to refer to a display board made of cardboard or thin wood and covered with flammel or a similar cloth. Pictured symbols to be displayed on it are backed with similar materials which adhere to the board.³

Carter V. Good, <u>Dictionary of Education</u> (New York: McGraw-Hill Book Company, Inc., 1959), p. 179.

²Donald P. Ely, "A definition and a Glossary of Related Terms," <u>Audic-Visual Communication</u> Paview, 11:39, January-February, 1963.

³Tbid. p. 49.

Bulletin Board. Bulletin board was used to refer to a board to which pictures or other materials that are intended for display are fastened.

 $^{^{1}\}text{Carter V. Good, } \underbrace{\text{Dictionary of Education}}_{\text{Company, Inc., 1959), p. 69.}}$ $\underbrace{\text{Education}}_{\text{Company, Inc., 1959), p. 69.}}$

REVIEW OF THE LITERATURE

Pictographs are cited among man's first attempts to utilize a phase of recorded visual information. The Egyptian development of clay baked picture inscriptions is one of the early uses of the picture technique.

Visual education, according to Freedman in 1924, was not new. Models, maps, diagrams, pictures, all had been used for generations. Yet, at this time, there was doubt as to how successful teaching would be through the more abundant use of visual materials. Some teachers felt that visual materials would make education interesting and permanent. Others feared that such materials would in whole or in part displace the teacher or the textbook.²

Since that time visual materials have been used more abundantly. They have not been used to displace teachers, but rather they have helped each teacher do a much more effective job. A basic principle that learning is stimulated by attractive and interesting surroundings, points out a need for use of effective visual aids to improve instruction.³

PRINCIPLES AND TECHNIQUES OF DEVELOPING VISUAL MATERIALS

Smith observed while visiting with classroom teachers, that one of the reasons teachers gave for not using their classrooms for display of learning materials is that they have no talent. Some art specialists have created an impression that only an artist can produce an effective display. Many teachers

James S. Kinder, The <u>Audic-Visual Reader</u> (Dubuque, Iowa: Wm. C. Brown Company, 1954), p. 23.

Frank N. Freedman, Visual Education (Chicago: The University of Chicago Press, 1924), pp. 4-5.

Roger L. Gordon, "Bulletin Boards, or Bulletin Boreds?" Pennsylvania School Journal, 113:100-1, November, 1964.

think of adult standards and forget that visual materials should be prepared in terms of student standards and experience levels. 1

With the understanding of the basic principles involved, teachers can develop effective visual materials. Smith listed the following procedures which he believed must be followed if the visual material is to be effective.

- 1. Establish the objective. What is the teacher trying to achieve?
- 2. Make a plan, a design, and a layout.
- Select and organize the materials. The materials must fit the objective.
- 4. Carry out the plan.
- 5. Use it.
- 6. Evaluate it. Did the visual materials achieve the objective?2

The following basic principles are discussed in great detail by several authors. They listed the steps used in developing visual materials and discussed the principles involved. The following are the steps they listed:

- 1. Select a theme. The relation of the bulletin board to what is being presented in the class at the time must be considered. The subject to be presented should contain one thought or idea, and everything should be used to emphasize this main thought. It is better to get one idea across well, than to have several which are confusing.³
- Work out a caption. A display without a title is like an advertisement without the name of the product. There is a variety of lettering aids

Hayden R. Smith, "Classroom Walls that Speak," Grade Teacher, 81:49 June, 1964.

²Tbid.

³Thomas A. Koskey, Baited Bulletin Boards, (Palo Alto, California, Fearon Publishers, 1954), p. 4.

available for the teacher to use. The standard rule to remember is to keep it simple. Appropriateness and legibility should be the goal.

- 3. Gather visual materials. The materials to be used should be concerned with illustrating the idea and with attracting attention. A variety of sizes, shapes, colors, and textures should be considered.²
- 4. Arrange the bulletin board. Two questions should concern the teacher when arranging her material. Will the message be successfully communicated? Will it have eye-appeal? Many teachers regard their pictures as individual units rather than all the units in their totality. The space of the bulletin board, itself, is of prime importance. It is within this space limit that the teacher must successfully arrange the individual units.

There are three types of arrangement; formal, informal and radial. Formal balance, also referred to as symmetrical, consists of similar shapes evenly placed on each side of the mid axis point of the display board. This arrangement lends a feeling of sevenity.

Informal balance utilizes a variety of sizes and shapes dissimila: Ly arranged on either side of the mid axis point, to give a visual state of equilibrium. This informal balance suggests spontaneity and movement.

Radial balance is achieved by organizing the illustrations around and radiating from a single point. It produces a strong feeling of circular movement.

Materials must also be arranged and organized so they have unity. There are several methods by which this may be achieved. A single line visually draws

James W. Brown, Richard B. Lewis, and Fred F. Harcleroad, <u>Audio-Visual Instruction Materials and Methods</u> (New York: McGraw-Hill Book Company, 1959), p. 4,

Thomas A. Koskey, <u>Baited</u> <u>Bulletin</u> <u>Boards</u>, (Pale Alto, California, Fearon Publishers, 1954), p. 4.

all the individual units together. The line has two functions. It conveys the viewer's eye from one shape to another, and it unifies large areas. Another method of achieving unity is by use of background shapes. Still another posibility for dividing the space of a large space area is by use of repetition.

- 5. Prepare decorative borders. Enclosing the display with a border may help unify the elements of the display as well as add eye-appeal. To insure the success of a border design, it is important to remember that the design should not overpower the effectiveness of the display. This may possibly be avoided by limiting the width of the border.
- 6. Plan and prepare the mountings for illustrations. The effectiveness of a display can be improved greatly by proper mounting of the pictures. Color and shape of the mountings should blend with the rest of the display. 2
- 7. Plan the color scheme. Color can play either a positive or negative role in exhibits. Many teachers have made the mistake of filling their display with too many colors. This detracts from the effectiveness of a bulletin board. A minimum of colors used in one display helps avoid confusion or the loss of harmony. Color should be used as a device for attracting attention, for emphasis or contrast, or for helping to create a mood.

¹Edward B. Epstein, "Tips for Tacks," Grade Teacher, 81:62-3, November, 1963. 2 Thid.

³ James W. Brown, Richard B. Lewis, and Fred F. Harcleroad, Audio-visual Instruction Materials and Methods (New York: McGraw-Hill Book Company, 1959).

BULLETIN BOARDS

Use of Bulletin Board Displays. Bulletin boards give a classroom warmth and color. They serve as a decorator's tool to change a bare, lifeless room into an inviting and pleasant place. But the teacher who uses the bulletin board only for decoration is missing a very effective teaching aid.

Wagner suggests bulletin boards be used for the purpose of arousing discussion, enriching vocabulary, stimulating creative expression, introducing new ideas, developing organizational ability, encouraging research, commemorating special occasions, introducing a new unit of instruction, reflecting the progress of a unit, and serving as a means for culminating a unit. McMahan and Dickerman suggested the same uses and also suggested the additional use of clarifying concepts. 3

Preparing Bulletin Board Displays. The pupils' school world is centered in the classroom. Every part of it can be used by an imaginative teacher as a means whereby learners achieve specific study goals. Wittich and Schuller suggest that the ceiling is not solely a ceiling; it is a place from which to hang object displays of the solar system, the latest paper models of aircraft, space platforms, and rockets, and mobiles of graphic materials. The floor is more than a floor; it can provide space for sitting up study situations for arithmetic and for measurement. The walls need not be merely a means of holding up

¹Mary Adkins, "Use Those Bulletin Boards," Texas Outlook, 48:28, January, 1964.

Guy Wagner, "What Schools Are Doing; Preparing Attractive Bulletin Boards," Education, 83:124, October, 1962.

³ Yarie McMahan, and Stella Dickerman, "Your Bulletin Board Can be Utilized to," <u>Instructor</u>, 70:23, January, 1961.

the roof; they can carry study displays, arrangements of pictures, graphics, and three-dimensional materials which relate to the study goals being sought by the class. 1

The bulletin board is one of the closet means of communication. A bulletin board is effective because people want to read it. They realize that it may contain ideas that effect them personally. The first time they notice it, nearly everyone will look at what is posted. But the teacher or pupil who finds the same old items on the board, day after day, will soon quit looking. Gordon is of the opinion that it is wiser to leave the bulletin board blank for an indefinite period, holding students in suspense as to the next display, rather than to leave up a display until its teaching value has lost its effectiveness. In order to win and keep attention, materials must be up to date, materials must be varied, and materials must be terse.

The bulletin board display can be an integral participant in the life of the classroom. Dale suggests two over-all functions of the device. It enables the teacher to introduce new facts and ideas to the class, and it enables students to work as a group and to share their learning experiences. The bulletin board is more than just a display medium, it is something that is owned by the group. That feeling of ownership comes from being an active participant in planning and preparing the display.

Walter A. Wittich, and Charles F. Schuller, Audio-Visual Materials: Their Nature and Use (New York: Harper and Brothers, 1962), pp. 149-50.

Willard Fox, "Care and Feeding of Bulletin Boards," Education, 83;362, February, 1963.

Roger L. Gordon, "Bulletin Boards, or Bulletin Boreds?" Pennsylvania School Journal, 113:101, November, 1964.

Edgar Dale, Audio-Visual Methods in Teaching (New York: The Dryden Press, 1954), p. 126.

Student Planned Bulletin Boards. Students want to be included in the preparation and planning of the room environment. One teacher decided that the reason her bulletin boards displays were ineffective was they were the teacher's rather than the whole class's. Another teacher came to the same conclusion when she realised one reason she disliked making bulletin boards was because her purpose and target audience were wrong. She made the bulletin boards in her room to please herself, other teachers, the administrators, and even passers-by. 2

It may be easier for the teacher to do the bulletin boards herself, but this leads to tasteless displays and re-use of the same identical materials and ideas year after year. In order to utilize all of the learning experiences possible, the students must be involved in the planning and construction of bulletin boards. In the preparation of student planned and constructed bulletin boards, the teacher's role is chiefly supportive. She is the chief counselor who has learned to take an unobtrusive position. She gives guidance when needed, allows changes in pupil plans, suggests help if pupil's experiences indicate a need. She prevents any problem from assuming frustrating proportions so the happy and successful working conditions are not destroyed. She has an opportunity to evaluate her own teaching by noting whether or not concepts she tried to convey have become a part of the pupils' understanding.

¹G. A. Gelman, "Bulletin Boards Can be Functional," <u>School</u> <u>Activities</u>, 29:38, September, 1957.

William C. Miller, "Bulletin Board Elues," Educational Screen, 38:135, March, 1959.

Russel F. Schleicher, "The Values of Science Bulletin Boards," <u>Grade</u> <u>Teacher</u>, 77:56, October, 1959.

The following steps provide the teacher and students a guide to aid them in organizing the class for planning and preparing student planned bulletin boards.

- Form bulletin board committees of three or four students who will work together on a display.
- Choose a topic for the display. Be sure the subject picked isn't being used by another committee.
- Think of a title for the bulletin board. A short title or a title in question form will usually be effective.
- 4. Draw a layout of how the display is to look. A good display is easy to read, attractive and colorful, uncluttered, and original.
- Collect all the materials such as paper, crayons, glue, pictures, and other things needed to make the display.
- 6. Put the display together, following the layout that has been made. Try to finish the bulletin board on time, and co-operate with members of the next committee by removing the display when they are ready to put up a new one.

It would be helpful to set up a calendar so each committee within the class will know when it is responsible for putting up the display. A committee can be selected to be in charge of taking care of the bulletin board. This committee should make sure the displays are up on time. Often times, parts of the displays may come untacked or even torn. This committee can also be in charge of the repair.²

<u>Pictures and Other Contents of Bulletin Boards</u>. There is a large selection of materials which can be used on bulletin boards. Such things as papers and cardboards; textured fabrics; strings, yarns, ropes; and wires; are used for bulletin boards to create the texture desired.³

¹M. O. Donley Jr, "Our Bulletin Board," NEA Journal, 48:40, March, 1959.

² Ibid. p. 41.

Thomas A. Koskey, <u>Baited Bulletin</u> <u>Boards</u> (Palo Alto, Califormia, Fearon Publishers, 1954), pp. 28-30.

Haas and Packer listed the following items which often are displayed on bulletin boards.1

- 1. Pictures 2. Personal news
- Booklets and brochures 3.
- Bulletins 5. Cartonna
- 6. Charts
- Diagrams 8. Poster
- 9. Maps
- 10. Newspaper clippings

- 11. Drawings 12. Graphs
- 13. Notices
- 14. Subject outlines
- 15. Pamphlets 16. Photographs
- 17. Post cards
- 18. Models and specimens Announcements
- 19. Trainer progress records 20.

Pictures appear to be the item most widely displayed on bulletin boards. Flat pictures are the oldest, the least expensive, and the most available of all materials used for instruction. Whether or not pictures used as teaching tools contribute to the learning process depends upon how the teacher structures the learning situation. 2

Teel discusses the use of pictures which are enlarged by using the opaque machine. The children play an active part in the preparation of these pictures. They are the ones who locate pictures from many sources, and they are the ones who choose the pictures which best represent the topic being studied. They also share in the preparation of pictures by tracing and outlining the picture and by painting or coloring the picture. The pictures are very effective since the children played an active part in choosing and preparing them.

Teachers can make effective use of pictures found in magazines. The collection of pictures should include brightly colored ones, and ones that would

¹ Kenneth B. Hass, and Harry Q. Packer, Preparation and Use of Audio Visual Aids (New York: Prentice-Hall, Inc. 1950), p. 169.

Catherine Williams, Learning from Pictures (National Education Association 1201 Sixteenth Street, N. W., Washington 6, D.C., 1963), p. 1.

K. W. Teel, "Lesson on the Wall," Texas Outlook, 46:12, July, 1962.

be interesting to children. Pictures of this type are often mounted. Mounting a picture sets it off well, provides ease in handling and filing, and prolongs its usefulness. Knowing the following principles of design will help simplify the task of mounting pictures.

If the picture is horisontal shaped, let the side margins be wider than the top margin, and let the bottom margin be widest of all. The eye moves from side to side, and therefore the side margins must be wider than the top in order to produce a harmonious feeling.

If the picture is vertical oblong, then the up and down movement calls for a slight change in the margins so the feeling is repeated. This up-anddown effect is gained by making the top margin wider than the side margins, and the bottom margin the widest of all.

If the picture is square, the top and side margins should have the same width, and the bottom margin should be the widest. The bottom margin should always be the widest to assure the proper feeling of stability. 1

Salen believes that once a teacher and children go to all the effort of finding, choosing, and preparing pictures, they should find a suitable way to fasten the pictures to the display area. There are a large number of materials available for the use of fastening pictures to display areas. Included in the ones discussed were thumb tacks, straight pins, plastic or rubber gums, staples, and tapes of various descriptions. One may be very suitable to certain display area and not at all suitable to another. The type best for use will depend on the picture and the display area. It will be important to the class and to the

¹K. W. Teel, "Lesson on the Wall," Texas Outlook, 46:12, July, 1962.

effectiveness of the display that the materials stay fastened where they put them for the length of time they want them up. 1

<u>Value of Bulletin Board</u> <u>Displays</u>. The bulletin board display is one way to communicate with others. It can be used to educate, to propagandize, and to sway thoughts and acts of people. The educational use of this medium of communication can help people to learn more effectively those things which they need to learn.²

In a recent study, Parker concluded that bulletin boards, if properly used, were valuable teaching aids in the areas of subject matter and social learning.

Displays are valuable to learning because they help: concentrate interest and attention; show the basic structure of an idea; explain abstract ideas by relating them to concrete things; bring scattered ideas together to form new concepts; turn ideas into words; encourage expression. 4

Many values can be gained by letting the children participate in the planning and construction of displays. The display is a symbol of success for the children who help in its construction. A completed bulletin board also indicates to the teacher what has been learned. She can evaluate her own

George P. Salen, "Stick 'Em Up!" Educational Screen, 37;76-7, February, 1958.

²Narjorie East, and Edgar Dale, <u>Display for Learning</u> (New York: The Dryden Press, 1952), p. 4.

³Elizabeth Parker, "Teachers Study Use of Bulletin Boards," <u>Educational</u> Leadership, 16:367, March, 1959.

East and Dale, op. cit., p. 12.

teaching by noting whether or not the concepts she tried to convey have in reality become a part of the students' understanding.

One educator very fittingly stated that no matter what the precise communication of the classmom bulletin board may be, universally it states that the class thinks, creates, and is alive to the joy of learning and living.²

CHALKBOARDS

Use of Chalkboards. One item which the teacher finds practically indispensable is the chalkboard. The chalkboard is perhaps the most widely used of all visual materials. Chalkboards have often been called blackboards. However, not all of the chalkboards today are black. Many of them are green, dark blue, and bluish green, but they may be obtained in almost any color desired. The name blackboard is gradually being replaced by the term chalkboard, which seems to be a more inclusive term.³

In developing a lesson to be presented on the chalkboard, the following suggestions should be helpful. First of all, the chalkboard work should develop one point at a time. Learning should proceed from the simple to the complex. The principle of building chalkboard work one point at a time, offers the following advantages:

Russell F. Schliecher, "The Values of Science Bulletin Boards," Grade Teacher, 77:56, October, 1959.

²Sister Christina Marie, "Let the Children Plan the Bulletin Boards," <u>Catholic School Journal</u>, 63:27, May, 1963.

³Felissa Santiago, <u>Audio-Visual Materials and Aids in Educations</u>, (Manila, Philippines: Bookman, Inc., 1955), p. 72.

- It enables the teacher to attract and to focus the attention of all students on the specific point under consideration.
- It allows the teacher to adjust the speed of her presentation to the rate of student comprehension.
- It makes it possible for the teacher to retain class contact while writing on the board, because it is only for a very short period of time that her back is turned.

Secondly, chalkboard work should develop logically. It is easier for the students to learn those things which are presented in logical sequence so the relationship of each new item to the items that preceded it is readily apparent.

Finally, chalkboard work should develop climatically. The work should be presented with proper timing so as to take full advantage of the dramatic element present in visual representation.

Ramshaw believes that in order for a lesson presentation on the board to be effective, the teacher's writing should be concise; it should be clear and legible; and it should be of the same form that was taught to the students.²

The drawings and illustrations teachers use on the chalkboard can also enhance the effectiveness of her lesson. Illustrations are not only effective for the artistically inclined; any teacher who is willing to try can use them effectively and efficiently.³

Wittich and Schuller recommend the following techniques: the pattern, the template, the projection, and the hidden drawing method,

The pattern method is valuable when a teacher needs to use the drawing

James W. Brown, Richard B. Lewis, and Fred F. Hareleroad, <u>Audio Visual</u> Instruction <u>Materials</u> and <u>Methods</u> (New York: McGraw-Hill Book Company, 1959), 284-285.

²H. A. Ramshaw, <u>Blackboard Work</u> (London: Oxford University Press, 1955), p. 37.

Sister Ann Marie, "Creative Chalk Talks," <u>Catholic School</u> <u>Journal</u>, 62:31, May, 1962.

many times. It is a prepared perforated pattern on paper. The pattern is transferred to the board by rubbing a dusty eraser over all the holes and then connecting the marks free-hand with a chalk.

The template method is useful for diagrams and illustrations which are used often and must be drawn accurate and exact. Templates may be made of any thin, stiff light-weight material such as masonite, plywood, heavy cardboard, and sheet metal. The design is drawn on the material and then cut out. They are put against the board and quickly traced.

For more complex diagrams, the projection method is used. Pictures from many sources can be put on the platform of an opaque projector. The teacher can project the picture the desired size then trace over it. This can be done before class to eliminate confusion of setting up the equipment during class time.

If the teacher feels the effectiveness of her illustration will be damaged if the students see it before she is ready to present the lesson, she can use the hidden drawing method. With this method the teacher can reveal those portions which are most useful to the discussion at the moment. 1

Grassell suggests another method which may be used by the teacher when she needs to use the same drawing many times. This method is the permanent chalkboard method. Chalkboard paint can be applied to plywood or hardboard. The outline of the picture or drawing needed can be drawn onto the prepared chalkboard free-hand or with the use of the opaque projector. The outline of

Walter A. Wittich, and Charles F. Schuller, Audio Visual Materials: Their Nature and Use (New York: Harper and Brothers, 1962), pp. 56-9.

the drawing should be painted on so it shows up well. Since the outline is permanent, the teacher can draw on it and then erase various details without removing the whole design.

Another form of the chalkboard is the magnetic chalkboard. This type of chalkboard has a metal base, and small magnets will cling to it. A variety of instructional materials equipped with magnetic holders is available to schools. The magnetic chalkboards combine the advantages of both the chalkboard and the flannelboard permitting teachers to use prepared objects which cling to its surface, along with more spontaneous use of chalk for drawings and letterings.

In order for the chalkboard to be an effective visual device, proper use and care must be executed. The following suggestions way be helpful in bringing about better use and care of the chalkboard.

- Oil is not good for chalkboards, and for many types of chalkboards, the use of water for cleaning the board should be discouraged.
- 2. White "ghost marks" are caused by poor grade chalks.
- The use of colored chalk is encouraged but only top quality chalk can be properly erased.
- 4. Erasers made of felt or chamois are usually the best for chalkboards.

<u>Student Use of Chalkboards</u>. Terrill is of the opinion that teachers aren't the only ones who can use the chalkboard to advantage. The exercises done by

¹E. Milton Grassell, "Permanent Chalkboard Aids." <u>Grade Teacher</u>, 78:65. September, 1960.

²H. E. Scuorzo, "Meet the Magnetic Chalkboard," <u>Grade Teacher</u>, 79:44-5.
September, 1961.

³E. Milton Grassell, "Bhalkboards in Action, " Educational Screen, 38:400-1, August, 1959.

the children before the class show their coordination, independence, specific interests, and real knowledge of the topic being studied. I

The student learns by doing, and children love to do work on the chalkboard. The teacher should capitalize on this tendency and put it to constructive use. It is easy to detect errors, and corrections can be made on the spot. The students waste no time in learning a faulty procedure which then must be "unlearned". Since the entire class can see the chalkboard, they can benefit by the corrections. The chalkboard also encourages rapidity in expression, and the child is usually encouraged to do his best since his work is on exhibit. Chalkboard work also gives the student a relief from the fatigue of desk routine.²

<u>Value of Chalkboards</u>. The chalkboard is valuable as a visual aid to learning, first of all, because it is convenient. Ideas can be visually presented even if they occur to the teacher in the middle of a lesson.

Secondly, the chalkboard is adaptable. The chalkboard can be varied and adapted to fit nearly any type of teaching problem.

Another reason the chalkboard is such an effective means of visual communication is that it is active. A student can have the feeling of participation by contributing ideas that go into the building of the chalkboard work,

The chalkboard also permits physical participation. Often, part or all of the class may go to the board and participate physically in the development of the lesson.

In addition to the advantages listed above, the chalkboard is valuable

¹J. C. Terrill, "Make Your Chalkboard Talk," Texas Outlook, 41:31, November, 1957.

ZJames W. Brown, Richard B. Lewis and Fred F. Harcleroad, Audio Visual Instruction Materials and Methods (New York: McGraw-Hill Book Company, 1959) p. 265.

because it is a developmental device. The teacher can and should build the lesson right before the eyes of the students. This should help the students more readily see the whole picture.

FLANNEL BOARDS

Use of Flammel Boards. According to Scuorso, flammel boards became popular in church Sunday Schools, where chalkboards were unavailable. The advantage of having materials prepared in advance soon led school teachers to adopt it.²

The use of the flammel board is one of the best ways of motivating students, especially those at the primary level. It is flexible enough to meet the individual teachers requirements.

For maximum effectiveness in the use of the flammel board, some skill is required in its manipulation. First of all, it is important that the flammel board be placed where it can be seen by all viewers. The surface should be adequately lighted and should also be at the eye level of the students. Objects used should be large enough to be seen easily by the child who sits farthest away. A presentation is most effective when it is kept simple. Too much detail can detract from the lesson. A few simple, strong symbols, which are well explained and properly discussed are most effective.

¹Edgar Dale, <u>Audio Visual Methods in Teaching</u> (New York: The Dryden Press, 1954), p. 149.

Herbert E. Scuorzo, "Fun With Flannel Boards," Grade Teacher, 83:91, April, 1966.

James W. Brown, Richard B. Lewis, and Fred F. Hareleroad, <u>Audio Visual</u> Instruction Materials. and Methods (New York: McGraw-Hill Book Company, 1959), pp. 290-29.

The following suggested techniques should aid the teacher in making the lesson more effective.

- The cutouts should be arranged in proper order for presentation in advance. They should be placed face down on the desk with the first cutout to be used on top.
- If this is the first time the flannel board was used in the room, a brief explanation of why the cutouts stick to the board will let the children concentrate on the story, not the mechanics.
- Work from one side of the board. The teacher should stand on the side of the board that is most comfortable for her. Working in front of the board should be avoided so the children will not be distracted.
- 4. Talk to the class as much as possible, not to the board,
- 5. The cutouts should be placed carefully and quickly on the board. 1

It is very distracting to the students if objects displayed on the flannel board drop off during the presentation. One technique used in overcoming this problem is to put them against the flannel and pull down slightly so the felt or flannel backing will mesh with the fibers of the felt or flannel on the board to insure maximum holding power. The flannel board should be fixed firmly on its base to prevent any distraction that may occur if it fell.²

Bulletin boards and chalkboards are fixed facilities; and consequently, their use in the classroom is decreased. One reason Ingham finds the flanmel board so handy is because it is portable. This enables a teacher to move it to any place in the room for convenience of instruction. If the board is not in use it can quickly be stored without requiring too much storage space.

L. M. Crocker, "Using the Flannel Board with Stories," Elementary English, 38:404-5, October, 1961.

Richard B. Lewis and Jerrold E. Kemp, "Simple Classroom Resources," Instructor, 73:43, June, 1964.

If a classroom is without a flannel board, one can be constructed with little effort. $^{\!\!\!1}$

Cutouts or pictures used on the board can either be bought ready-made or can be made by the teacher. Self-made cutouts are also very easy to construct, and quite often a teacher may find that they more specifically fit her lesson than do ready-made ones. Paper or nearly any other material used for art projects can also be used for cutouts. Self-adhering materials can be attached to the back of the cutout so the cutout will cling to the flannel board. The self-adhering materials which can be used include sandpaper, blotters, felt, velvet, woolen yarns, and many more. When selecting materials to be used on flannel, it is important that the adhesive quality of the material is great enough to support its own weight or the weight of the item to which it will be attached.²

Student Use of Flarmel Boards. Students can make effective use of the flannel board in a number of ways. Quinlan suggests it could be used for individualised or small group instruction in drilling on reading problems. For art, the flannel board could be used in discussing color, design, and arrangement. The flannel board could even be used for relaxation. Fun games such as Tic-Tac-Toe, Connect the Dots, and Hopscotch could be played during play time. Children can benefit from the flannel board by individual use. If a child was to give a short talk, the flannel board would be an ideal way to illustrate what he was saying. In some instances dual reports could be given. One child

George E. Ingham, "The Flannel Board, Portable Display Area," Grade Teacher, 77:98, December, 1959.

²Thomas Koskey, <u>How to Make and Use Flammel</u> <u>Boards</u> (Palo Alto, California, 2165 Park Elvd., Fearon Publishers, Inc., 1961), p. 10.

could place the object on the flammel board while the other one talked. An example of this use is further described by Pennington. The poem "Sea Song" was typed and placed by the flammel board. The children took turns reading the poem and acting it out. One child would read the poem while another manipulated the felt pieces. Soon everyone knew the poem by heart. 2

Another way the children felt involved in the direct use of the flannel board was by constructing a weather map. The map was arranged to correspond with the map in the daily newspaper. Each day it was the responsibility of two different students to consult the newspaper and move the cutouts to their new position.³

A recent and very clever way to encourage student use of the flamel board is with the miniature flamel board. This consists of a cigar box covered with contact paper except for the inside of the lid. That part is covered with flamel or felt. All the edges are securely bound with colorful binding tape. The materials used should be the appropriate size for the miniature flamel board. The child using the miniature flamel board has the special advantage of being able to hold things. Manual dexterity can be developed, and imagination can be expressed.

<u>Value of Flarmel Boards.</u> Grassell states the following reasons for the present day flarmel board popularity. Flexibility is the most important reason.

Susanne Quinlan, "Our Flannel Board Workshop," <u>Instructor</u>, 74:107, September, 1964.

²Lillian B. Pennington, "For Your Flamel Board,: <u>Instructor</u>, 68:45, June, 1959.

Melvin L. Alexenberg, "A Feltboard Weather Map," <u>Grade Teacher</u>, 79:34, May, 1962.

Robert H. Clson, "Feltboard in Miniature," <u>Grade Teacher</u>, 79:47, October, 1961.

Flexibility permits arrangement, rearrangement, and build-up, which makes it easy to introduce items in a systematic order.

Rearrangement suggests manipulation which is another reason for using the flammel board. For example, in telling time the hands of the clock may be moved. Motion creates interest and thus holds the attention of the students.

Animation is still another reason for using the flammel board. For example, plant growth can be shown by using cutouts to show the development of a plant from seed to full bloom.

Simplicity in construction and utilisation convinces teachers of the value in its use. Grassell believes flammel boards help students learn faster, and retain information longer. Many barriers to communication are removed by using a flammel board.

USES OF VISUAL MATERIALS IN SUBJECT AREAS

Social Studies. The more vivid and human the teacher can make history and geography, the more vital those areas become in the curriculum. Pictures displayed on bulletin boards, flannel boards, and even chalkboards, stimulate interest and make customs of other people seem real, human, and alive. 2

Current events can be most interesting to the class. Donley suggests the teacher encourage students to bring newspaper pictures and stories about recent happenings, especially those which take place in countries which the class is

¹E. Milton Grassell, "Effective Flammel Boards," <u>Educational Screen</u>, 37:130-1, March, 1958.

²A. C. Chandler, and Irene F. Cypher, <u>Audio-Visual Techniques</u> (New York: Noble and Noble, Publisher, Inc., 1948), p. 113.

studying. These pictures can be displayed either on bulletin boards or flannel boards. 1

Constructive attitudes and appreciations can be developed through special bulletin boards. One such type of bulletin board could include a picture of a globe with pictures of people from other countries surrounding it. An appropriate caption might read, "Adventure Around the World." The caption "Our Bountiful Land," would fittingly be on a bulletin board which included displays of raw materials, manufactured products, historical background, occupations, and folklore of an area to help summarize a unit of study.²

Map reading can be made more meaningful to children if they understand the symbols used on maps. Students can collect and bring pictures of various land and water forms. A string may be run from each picture to the map symbol it represents. An attention-getting caption for this bulletin board might be "Can You Read Maps?".

Kindergarten teachers find the flannel board appealing. At the beginning of the school year, it can be used to illustrate stories and motivate oral expression by utilizing familiar figures such as members of the family, pets, home situations, and to introduce well known community helpers.

Arithmetic. The bulletin board can help students improve their skills in

¹M. O. Donley Jr., "Our Bulletin Board," NEA Journal, 48:40, March, 1959.

²Marie McMahan, and Stella Diekerman, "Bulletin Boards Help Develop Skills," <u>Instructor</u>, 71:41, March, 1962.

³Marie McMahan, and Stella Dickerman, "Your Bulletin Board Can be Utilized to--," <u>Instructor</u>, 70:23, January, 1961.

George E. Ingham, "The Flannel Board, Portable Display Area," Grade Teacher, 77:98, December, 1959.

arithmetic. A display of this nature may include number combinations and answers, or numbers and pictures. In both cases the children are to match them. This bulletin board might include a basketball player, a basketball, and a basketball goal. An effective title for this display would read, "What is Your Score?". 1

Inight suggested the title "Are You on the Ball?" for a similar display.

This bulletin board included a baseball diamond with elephants serving as the batter and pitcher. Also included on the bulletin board were several baseballs; each representing a row of children. A chart was placed in the bottom corner of the board. This is where the score was kept. When a combination contest was held the winning row or rows would go to first base and on the following days they advanced around the bases until they reached home.²

The flammel board is an excellent device for teaching number readiness. Such terms, as how many, how many more, as many as, fewer, big, little, large and small, can be effectively taught on the flannel board. Magazine pictures or simple drawings made by the teacher and the children may be used in the demonstration.

The concept whole and parts of the whole can be demonstrated with objects on a flannel board. The complete circle or square can be shown and then cut into halves and quarters. They can be put together to again form a complete whole.

Ordinals can be taught by placing objects in a row and calling the one on the left first. Eventually the children can be asked to remove the second object, the fourth, and so on.

Marie McMahan, and Stella Dickerman, "Your Bulletin Board Can be Utilised to--," <u>Instructor</u>, 70:23, January, 1961.

²M. C. Knight, "Bulletin Boards that Work," <u>Grade Teacher</u>, 81:27, April, 1964.

The terms <u>before</u> and <u>after</u> sometimes confuse children. Pictures or objects could be used in playing the game of finding the one after and before. 1

Manning uses the flammel board to teach children the names of common shapes such as square, triangle, circle, and rectangle. The shapes were made in various sizes and colors, and label cards were printed to match each shape. Another way she used the flammel board was in telling number stories. She also had the children tell number stories. One child would use objects, and the other would use figures.²

The chalkboard lends itself to the teaching of numbers as much if not more than the bulletin board and flannel board. Most teachers are aware of the uses of the chalkboard in teaching arithmetic. The following suggestions may help the teacher make more effective use of the chalkboard in arithmetic.

- The figures should be clear, correctly made, and large enough to be easily read by all pupils in the class.
- 2. Figures should be correctly placed in the right columns.
- In problems where written work has to be used, the teacher's writing should be neat and legible.

Science. The bulletin board can be used in the area of science to introduce a new unit of study. Perhaps the students may be interested in spring birds and their winter habitats. A map of South America and North America could be placed on the bulletin board. As the class gathers information, a

Ester Farrow, "The Flannel Board in My First Grade," <u>Instructor</u>, 66:30, June, 1957.

²Doris S. Manning, "The Handy Flannelboard," <u>Grade</u> <u>Teacher</u>, 76:125, October, 1958.

³H. A. Ramshaw, <u>Klackboard Work</u> (London: Oxford University Press, 1959), p. 39.

string can connect the bird to its' winter home. "Where Have They Been?" would be an appropriate title for a display of this type.

Another example of a bulletin board to introduce a unit might include a display of many kinds of leaves. The question at the top could read, "Can You Identify These?" An appropriate illustration of a young scientist should be included in the display.

The student can also develop skills in science through the use of the bulletin board. The caption, "We Forecast the Weather by Studying—Clouds, Winds, Air Pressure," may be enough to motivate the children to work in this area. They could check their predictions against the Weather Bureau forecasts and, of course, against the weather that actually does develop. The bulletin board may be set up so each day's predictions and outcome are recorded on it.

The summarisation of a science topic can be well done with a bulletin board display. For example, in summarising the units on simple machines, the pupils could collect pictures, or make pictures and models of simple machines. Those included on the display might be the pulley, wheel, screw, wedge, lever, and inclined plane.

With interest focused on man's effort to explore outer space, the relationship of the earth to the moon and other planets, can be well taught on the flannel board. Cutouts of felt can represent each planet, and strings can be used to show the relative distance from one to the other.²

Discussion on the human body could be supplemented with a drawing of it on a permanent chalkboard. The teacher could draw in parts to represent one

Marie McMahan, and Stella Dickerman, "Science Bulletin Boards," Instructor, 70:29, March, 1961.

²George E. Ingham, "The Flannel Board, Portable Display Area," <u>Grade Teacher</u>, 77:98, December, 1959.

phase of study and then erase them to make room to illustrate another idea.

Health and Safety. Bulletin boards based on a class discussion of home hazards might include pictures collected or drawn by the children which illustrate their suggestions for reducing home accidents. During Fire Prevention Week a display of pictures could be placed on the bulletin board, and the children could be asked to identify the ones that represent actual fire hazards.²

McMahan and Dickerman suggest the caption, "Clowning is Not for You!" for a bulletin board display which has a clown holding belicons. Each belicon has a safety tip such as walk up and down stairs, swim with a buddy, ride one on a bike. They also suggest an idea for a health display. The illustration shows a child sleeping in bed with his pets sleeping around him. The title, "Who Needs Sleep?" might encourage a pupil discussion on why sleep is so important.

Teaching safety is a responsibility of teacher when school begins in the fall. An excellent way of doing this would be through the use of the flannel board. The stop, caution, and go cutouts can be manipulated by the children. The signs will have more meaning to them after they work with them and find out what they mean.

In health class examples of nutritious foods may be cut from magazines and advertisements, backed by felt, and used on the flannel board as an

lE. Milton Grassell, "Permanent Chalkboard Aids," <u>Grade</u> <u>Teacher</u>, 78:65, September, 1960.

 $^{^2}$ Wayne B. Brumbach, "Bright Ideas for Bulletin Boards," Safety Education, 43:8-9, January, 1964.

³Marie McMahan, and Stella Dickerman, "Health, Safety, and Recreation Bulletin Boards," <u>Instructor</u>, 70:40, May, 1961.

[&]quot;Esther Farrow, "The Flannel Board in My First Grade," <u>Instructor</u>, 66:29-30, June, 1957.

appealing display of what is good for growing children to eat. The lesson being taught can be emphasized by short, punchy phrases pointing out the value of these foods.

Language Arts and Reading. "Ride Along the Good Reader's Train," could be the caption placed on a bulletin board that displays a brightly colored train. Signs containing the following words, attention, loudness, smoothness, and expression can be placed along the track to remind children of the qualities of a good reader. As the children grow more proficient in these qualities, they can ride along the train by putting their pictures on one of the cars.²

One good technique for fostering the creative view is the use of pictures or photographs. A picture can be selected and the teacher could ask the children to list every item in it. Then they might discuss what it means. Activities of this nature can develop skills such as keen observations, attention to detail, and interpretation.

Wolfe suggests that pictures can be used to teach the initial consonants.

For example, the teacher can hold up a picture and have the children find everything in the picture that starts with the same sound as boy.

The flannel board can be a helpful aid in teaching reading readiness.

Cutouts can be placed in a row, and the children can name the objects beginning at the left and progressing to right. Likeness and differences can be taught

George E. Ingham, "The Flannel Board, Portable Display Area," Grade Teacher, 77:98, December, 1959.

²M. C. Knight, "Bulletin Boards that Work," <u>Grade Teacher</u>, 81:27, April, 1964.

Margaret Bierbaum, "How to Make a Picture Really Worth a Thousand Words," Grade Teacher, 83:70, April, 1966.

Helen Wolfe, "Get the Most From Pictures," Grade Teacher, 77:146, September, 1959.

by placing identical objects in rows and with one different one in each row.

The children can take turns removing the one that is different.

One of the most difficult problems primary children meet in reading is recalling the sequence of events in stories. Old picture stories can be cut apart and prepared for the flannel board. The children can arrange them in order and label them first, next, then, and last.²

The flannel board can be useful for the identification of words with familiar objects. The names of common pieces of furniture could be placed on the flannel board, and individual students can place the pictures of these under the proper name. The flannel board is also good for developing visual discrimination, learning size relationships, and pointing out the letters of the alphabet.³

SUMMARY AND CONCLUSION

The literature was reviewed to determine the principles involved in preparing effective visual materials, to present techniques which would enable the teacher to make more effective use of visual materials, to determine the pupil-gained values, and to suggest ideas and list sources of information designed to help the teacher accomplish her goals in teaching. Three pieces of visual equipment were studied. They were the bulletin board, the chalkboard, and the flannel board.

Esther Farrow, "The Flannel Board in My First Grade," <u>Instructor</u>, 66:30, June, 1957.

²Doris S. Manning, "The Handy Flannelboard," <u>Grade Teacher</u>, 76:126, October, 1958.

³George E. Ingham, "The Flannel Board, Portable Display Area," <u>Grade Teacher</u>, 77:98, December, 1959.

The assumption, that more effective use of visual materials can bring about better learning, was based on the fact that all learning depends upon communication, and visual materials provide the teacher and pupils with another means of communication. Opinions expressed by educators were that children were accustomed to the picturesque and colorful environment. In order for the pupils to be interested and enthulastic, in school, the teacher should initiate the creation of an attractive surrounding.

SUMMARY

The review of the literature showed that there were several basic principles which a teacher needed to know in order to set up and effectively use displays. The following fundamental characteristics should contribute to the effectiveness of classroom displays.

- Harmony. The display should be planned in such a way that all its elements, which include lettering, color, and material. go together.
- Contrast. In order that the main parts of the display may be understood, they must be seen. A skillfully arranged exhibit will be seen by the viewer because light will be contrasted with dark and dark will be contrasted with light.
- Balance. There are two main types of balance, formal and informal. Informal is usually much more interesting to the viewer.
- 4. Emphasis. The central idea to be stressed; can be emphasized by the proper use of lettering, a dominant color, and directionals.
- Shape. A configuration pattern is usually found in effective displays. This may be established by the directionals that are developed to guide the viewer to see the details in proper sequence.

Bulletin boards are used for the purpose of arousing discussion, enriching vocabulary, stimulating creative expression, introducing new ideas, developing

organizational ability, encouraging research, commemorating special occasions, introducing a new unit of instruction, reflecting the progress of a unit, and serving as a means for culminating a unit.

The teacher can encourage the students to work as a group and to share their learning experiences. Several educators suggest that this be done through the use of student planned and student constructed bulletin boards. Students gain much through this experience and the end result, the bulletin board display, will mean much more to them since they shared in its construction.

The content of the bulletin board varies from drawings to announcements. One item which appears more than others is pictures. These are most effective when they are properly prepared for display. In mounting each picture, the basic rules of design should be followed.

The chalkboard is a valuable visual device because it is available and convenient for each teacher to use. Other advantages are: (1) It enables the teacher to attract and to focus the attention of all students on the specific points under consideration; (2) It allows the teacher to adjust the speed of her presentation to the rate of student comprehension; (3) It makes it possible for the teacher to retain class contact while writing on the board for a short period of time.

Teachers' chalkboard drawings and illustrations can be improved through the use of the pattern, the template, the projector, the permanent chalkboard, and the hidden drawing method. Much can be gained by letting each pupil make direct use of the chalkboard. The exercises children do at the chalkboard, show their coordination, independence, specific interests, and real knowledge of the topic being studied.

The flannel board, too, has unique advantages as a visual device. One distinct advantage is that it is not fixed to the wall as is the chalkboard and the bulletin board. Since it is portable, a teacher can move it to any place in the room for convenience of instruction. Children benefit from the flannel board through individual use, also. They can express their thoughts and feelings and develop manual dexterity through the manipulation of the cutouts.

Most educators seem to agree that the bulletin board, chalkboard, and flannel board serve a very important function in our elementary schools. However, nearly all of them also agreed that more effective use could be gotten from them if each teacher had a better understanding of how to plan, construct, and use these visual materials.

CONCLUSION

As a result of the review of the literature concerning the use of visual materials at the primary grade level, it seemed that most educators stressed that proper use of them could improve instruction. Though there is no single method that all teachers should adopt for the use of visual materials, there are basic principles that would apply to all three visual devices studied.

Several educators stated the most obvious use of the bulletin board was to give the classroom warmth and color. They felt this was important, but they also felt a teacher who used them only for decoration was missing a very effective means of classroom communication.

Since bulletin boards also make an effective teaching aid, most educators suggested the involvement of students in the planning and construction of displays.

Most of the values students gained from teacher planned displays could have been

gained if they too played a part in the construction of them. With student planned and constructed displays, students have the chance to benefit from applying the skills that are necessary in construction.

The chalkboard is one of the oldest visual devices available in schools for instructional purposes. Educators felt it has not been used efficiently or effectively. A small amount of practice and the knowledge of the available methods and materials which could be used for illustrating concepts, would make the chalkboard a much more effective teaching device.

Other educators found that student use of the chalkboards is an excellent way to give a student relief from the fatigue of desk routine. Also errors in students, work can quickly be detected and corrected. The entire class can usually benefit from this since they can see the chalkboard. Each child is usually encouraged to do his best since his work is on display.

The flammel board has been an effective visual device as a result of its portability. This device has often been used in parts of the room where the bulletin board and chalkboard could not be seen by all viewers. Most children, especially those at the primary level, are highly motivated by its use. The animation of ideas, such as that showing the development of the growth of a plant, appeals to children and makes learning much more enjoyable.

Students have gained much from student use of the flannel board. Many ideas and feelings can be expressed through the manipulation of the cut-outs on the flannel board.

Every primary teacher has the bulletin board and chalkboard available in her room. If a flannel board is not available, one can be made with little effort and at a low cost. The effect these visual materials have on her teaching depends upon how she uses them. All learning depends upon communication. A teacher must communicate with her students if she is to teach them. The old saying, a picture is worth a thousand words, illustrates the importance of visual materials in education. A picture can never be this valuable unless the teacher uses it efficiently and effectively.



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A STUDY OF SELECTED VISUAL MATERIALS TO IMPROVE INSTRUCTION AT THE PRIMARY GRADE LEVEL

by

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The purpose of this study was to determine the importance of selected visual materials to instruction at the primary grade level.

A review of the literature was made (1) to determine the principles involved in preparing effective visual materials, (2) to present techniques which would enable the teacher to make more effective use of visual materials, (3) to determine the pupil-gained values, and (4) to suggest ideas and list sources of information which would aid the teacher in preparing visual materials.

The three visual devices included in this study were the bulletin board, the chalkboard, and the flannel board. These three are available in nearly every classroom or can be made available at relatively little expense. An investigation was made of the use, preparation, and value of each device.

The review indicated that classroom communication was improved through the effective use of these visual materials. There was no single method that all teachers needed to adopt for the use of visual materials, however, there were basic principles of harmony, contrast, balance, emphasis, and shape involved in the use of visual materials of which each teacher needed to be aware.

Many writers suggested that the effectiveness of visual materials could be increased by involving the students in the planning, preparation, and use of them. Visual displays should communicate effectively to each student in order to facilitate learning. Since increased pupil understanding is the goal of each teacher, educators concluded that this goal of understanding is best reached through student participation in the construction and use of visual materials.

As a result of the study, it is suggested that more effective use could be made of bulletin board displays, chalkboards, and flannel boards if each teacher had a better understanding of how to plan, construct, and use these

visual materials. Through such media the colorful and attractive environment that nearly every child is accustomed to in his daily surroundings can also be present in school to help each child retain his present interest and to motivate and create new interests in learning.