THE DEVELOPMENT OF A PROGRAM OF VISUAL AIDS
IN AN ELEMENTARY SCHOOL (GRADES 1-8)

A Thesis Presented for the
Degree of Master of Arts

by

Carroll Karl Gustely, B. S. in Education

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Approved:

[Signature]
ACKNOWLEDGMENTS

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Deep gratitude is also expressed to his wife, Gladys Irene Gustely, whose encouragement and sacrifices have helped greatly in his accomplishments.
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CHAPTER I

INTRODUCTION

"Visual aids" is a comprehensive term which includes all concrete materials used to further the learning process through the medium of sight. In recent years this term has been narrowed down in far too many schools to mean moving pictures. Concern for a broader interpretation of the term was a challenge at the very beginning of this program.

Statement of the problem.

It is the purpose of this thesis to evaluate what has been and what is being done, in the light of current educational practice, to promote an increased and effective use of visual aids in Fraunfelter Elementary School, Akron, Ohio.

The information presented in this thesis is offered to all those who are seeking the results of a definite attempt to improve learning situations through the effective use of a diversity of suitable visual aids. Findings in this particular program are not necessarily applicable to all elementary situations, but it is hoped that a familiarity with the trials and errors made in this study will
greatly aid others in search of better programs in their schools.

The need for this study.

For many years educators have been stressing the need for employing the projected picture as a new means of learning. Manufacturing concerns have used high pressure tactics and many other forms of sales promotion in order to sell machines to schools for no other reason (in many cases) than that they were the latest device on the market and that the learning process of all who came in contact with them was accelerated.

Schools through the help of boards of education, parent groups, and school organizations have purchased many of these machines without a thorough understanding on the part of teachers as to their potential use in education. Consequently many of these machines have been discarded to make room for the newer. Today the projected sound machines are being advertised as the latest word in aids to learning. It might well seem that the pressure to replace visual equipment by newer devices is a sales promotion device which should challenge educational evaluation. Since the disposition to yield to such pressure prevails in so many school systems, a program that will
encompass all visual aids and base their use on educational consideration seems to be desirable.

The broader concept of visual aids includes all forms of teaching that make use of learning through seeing. Many of the so-called old fashioned aids are still effective when suited to certain needs. Some of these have, however, found a resting place in storage rooms collecting dust. Hoban says,

A visual aid is any picture, model, object, or device which provides concrete visual experience to the learner for the purpose of (1) introducing, building up, enriching, or clarifying abstract concepts, (2) developing desirable attitudes, and (3) stimulating further activity on the part of the learner. For convenience these various visual aids have been classified as (A) the school journey, (B) museum material, (C) motion pictures, (D) still pictures, (E) graphic materials. ¹

The purpose of this program was not to stress any particular visual aid but to recognize all aids as valuable to the learning experience and to initiate a program that would employ these diverse aids appropriately.

Other studies in the visual aids field related to this problem.

Much research has been and still is being carried on in the use of visual aids, their effectiveness in the learning process, and the improvement of the types of these aids.

In the last decade much of this has dealt entirely with the projected picture.

After much research only two other studies could be found that parallel this problem. Herbert W. Deem submitted to The Ohio State University, 1938, a thesis for a Master's degree entitled, "The Administration of a Visual Education Program in a Centralized School." This study dealt entirely with films and film-strips, and the buying and operation of projecting equipment. A thesis for a Master's degree entitled, "The Introduction and Use of Motion Pictures in the Curriculum of Garfield High School, Akron, Ohio," was submitted by John Griffith at the University of Akron, Akron, Ohio in 1944. This study limited visual education to films, and the program set up was the administration of projection machines, films, evaluation, and so forth.

Many other studies have attempted to discover more about the role of visual aids in the learning process. These findings are evidence of the need for a definite visual program. The following studies are mentioned in order to insure an understanding of this program.

Clarence Welty submitted a thesis for the Master's degree to The Ohio State University in 1938 entitled, "An Evaluation of the Visual Instruction Exchange Services of
the Ohio State Department of Education with Special Reference to Modern Elementary Education. This study related the problems connected with the distribution of educational films and established criteria for judging film services as they were related to the elementary school.

The Knowlton and Tilton study in New Haven measured the retention of historical knowledge over intervals varying from approximately three to seven months.

Hill and Fenton studied the use of visual aids in the teaching of Latin. The group studied was too small to be of any worth other than to show a potential.

Wyman in a study of the worth of visual aids in general science found among other things that visual aids are easily adjusted to teaching methods.

Gatto made experiments in the use of visual aids in geography.

The use made of visual aids in the study of arithmetic

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and spelling was studied by Zyve.  

Hoban studied the effectiveness of visual aids as used in the military forces. In this study measured results, types of films used, and teaching techniques were reported. He pointed out that films can be employed as teaching materials in the field of education on a scale comparable to that attained in the war-training program.

Organization.

In setting up this problem a short history of the use made of visual aids in education seemed necessary in order to establish a basis for the aims and objectives of the present use of visual aids.

In the next chapter the local situation is described in detail with particular reference to peculiarities of the situation which bear on the problem.

The vital part of this study is found in Chapter IV

6 Claire Zyve, "The Effectiveness of Slides in Teaching Drill Subjects; and Experimental Study of Methods of Teaching Spelling and Arithmetic Combinations," Visual Instruction News, V (January, 1932), pp. 7, 8, 12.

which brings out the struggles, trials, and errors of the committee and staff of teachers as each part of the program was studied and initiated.

Chapter V describes the final program as it was in operation at the close of the school year 1946-47.

This program was not considered final at that time. It was assumed that each subsequent year a visual education committee would be active in furthering a visual aids program.

In the light of this assumption, Chapter VI deals with a summary of conclusions and recommendations for the future.
CHAPTER II

VISUAL AIDS IN EDUCATION

Today speed is emphasized in almost everything man does. Visual aids are educational resources which provide a means by which man can more quickly and easily gain knowledge. Learning through the use of visual aids reached a peak during World War II when millions of men and women in the armed forces and in industry were trained in a great diversity of fields through visual aids.

Short history of the use made of visual aids in education.

From the earliest days of man to the present day, visual aids of one sort or another have been used to aid learning. Before the development of a vocabulary, primitive man conversed by the use of signs, gestures, facial expressions, and crude imitations. The youth of that early period were doubtless taught to hunt, fish, swim, and protect themselves through observing and imitating their elders. Hieroglyphics or picture writing followed, which was definitely education through the eye. The American Indian used such visual symbols to represent rain, thunder, and other hard-to-explain facts about nature. Brown and Bird remark that:
The concept of visual education is neither new nor unique. Its origin can be traced back to primitive peoples of the earliest times. When the man of the Bronze Age attempted to instruct in the use of the bronze sledge, he utilized the principle of visual education. When the Indian of our plains wished to recount the history of his people he drew crude sketches, pictures, and diagrams on dried skins to represent the daily happening in the village and to portray the progress of the tribe and the prowess of the tribal heroes. Primitive people understood the value of visual records in assisting in the problem of education.

As formalized education became a necessary social institution, the need for the concrete was in evidence. With the development of printing came reproductions of drawings, followed in 1658 by Comenius’ "Orbis Pictus," the first illustrated textbook, published in 1690, and used for more than a hundred years. The invention of photography by Niepce and Daguerre in the nineteenth century along with the development of modern engraving processes increased the possibilities of illustrative materials in books and other forms.

In the early Greek schools trips were common. These and other aids were highly recommended by Pestalozzi, Rousseau, Froebel, William Penn, Benjamin Franklin, Horace Mann, and other great thinkers, educators, and leaders.

Nearly two centuries ago museums were first being organized. These institutions encouraged the use of their material by teachers, pupils, and the public. "The museum arose," says Dale,

as part of the development of science in the mid-seventeenth century with the secret societies of experimental scientists who worked toward a "diffusion of knowledge." People had begun to collect specimens, art objects, rarities of all kinds, curiosities of natural history; but as T. R. Adams points out in The Museum and Popular Culture, these things were, for the most part, the toys of the wealthy and eccentric.

From these humble beginnings arose the modern museums of the present day which can be found in all centers of learning and in many communities.

Samuel Hall's Lectures on School Keeping written more than one hundred years ago advocates many ideas commonly thought of as originating with modern education. Some of these are (1) the need of appealing to child's interest, (2) recognition of individual differences, and (3) developing self-control on part of pupil. Evidence of visual thinking can be found in the "Introductory Discourses and Lectures" delivered before the American Institute of Instruction in Boston in 1832. Among these lectures one by

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Walter Johnston on "The Utility of Visible Illustration" is especially relevant to this study. Mr. Johnston discusses practically all of the types of visual aids which would be discussed today in a similar situation except, of course, projected aids, including the family of films. Says Cook,

... he particularly stresses the desirability of first-hand contacts—seeing the thing to be studied itself when possible. He refers to the use of models and specimens.10

The relation of educational objectives to the use of visual materials.

The worthwhile use made of visual aids depends largely on how well they serve educational purposes. These aids must not be considered ends in themselves, but means by which educational aims can more effectively be realized.

The relationship between environment and the individual is recognized as very important in education. The child must continually reorganize his past experiences in the light of new experiences in order to develop new concepts clearly. These experiences must be made real or as near true to life as possible. Through the use of visual aids the first-hand experience can be supplemented and aspects of the more remote can be brought closer to the child, and

related to the immediate environment in ways which enrich meaning. McKown and Roberts maintain that,

Acquainting the child with his environment and leading him to understand and appreciate its many elements and their relationships always has been and always will be a most important aim of any fundamental education because an individual must live in close contact with the elements of this setting.11

The use of visual aids reduces the likelihood of verbalism. Verbalism is defined by Hoban and Zisman as

... the generic term applied to the use of words without appreciation of the meaningful content of the words or of the meaningful context in which they are used.12

Teaching without the use of concrete materials leaves vague impressions and concepts in the child's mind.

A curriculum that is interesting and attractive will appeal to the child and make his learning more meaningful.

Charles F. Hoban, Jr. points out,

If nothing else could ever be said about films used in school, it would be enough to know that students like them, that students are sensitive to their educational values. These reactions are not the ends toward which education is directed, but they are conditions that are essential if the ends of education are to be achieved. Any kind of material that makes the curriculum interesting to


12 Hoban, Hoban, and Zisman, op. cit., p. 3.
the students, that makes school experience pleasant, and that does not blind students to basic essentials in education, is justified for school use on these values alone.

Motion pictures are not limited to these values; however the values are not contingent on motion pictures. Little progress in education can be made without the above mentioned values and they may be served variously.

Individual differences can be provided for through the use of visual curriculum. The slow-learning child can be helped to understand through the use of various visual aids. Material which would be beyond his reading grasp may be grasped with less dependence on the printed page. The experience background of many of these children is meager and therefore it is practically impossible to develop ideas and concepts from words alone. The mental health of the non-academic child can be improved by recognizing this difference. The superior child is helped by greater originality and a larger participation in project work and self-initiated activities. In a scientific world children must learn to act and to think scientifically. The ability to concentrate, to think more accurately, and to reason more soundly can be acquired through the

---
use of appropriate and diverse visual aids. Zirbes\textsuperscript{14} in an article entitled "The Relation of Visual Aids to Educational Objectives," writes that visual aids assist in the organization of ideas in a manner which promotes recall and fixes certain significant relationships for later use.

A greater degree of social sensitivity is necessary in this world if the peoples of the world are to live in peace. Education through the use of films can help to bring these people into a closer understanding of each other. Zirbes says,

Thus education cannot be primarily child centered, nor can it neglect the child in its concern for societal values. The unique responsibility of education is a concern for these reciprocal processes of social advance which involves both.\textsuperscript{15}

The use of all types of visual aids leads children to trace relationships between cause and effect. This can be done very skillfully in the use of special photography and the ability of a film to show a completed whole process. Zirbes\textsuperscript{16} refers to the use of graphs to develop a surer grasp and realization of significant numerical


relationships.

Visual materials help to simplify the learning processes and reduce the effort required to understand abstract, written, and oral descriptions. Aughinbaugh says,

The superiority of the cinema lies in the fact that it can do more than one thing at a time, it can describe, narrate, explain, and argue all at once, whereas, the printed, or spoken word, is almost solely confined to doing one of these things at a time. 17

Hansen studied the effect of using motion pictures in teaching of pottery in junior and senior high school. He says,

The educational motion picture is an aid to learning especially in the acquisition of information such as portrayed in the film in this study. 18

In Gatto's experiment cited previously he studied the acquisition and retention qualities when using just slides, still films, and stereographs as against the use of all the visual aids including motion pictures. Says Gatto,

From the results of these studies, it would appear that insofar as the acquisition of information is concerned, the addition of motion-picture films to lantern slides, still films and stereographs increases learning by about 14.5 per cent with the chances of a true difference in favor of the group using motion


picture being 98 in 100.\textsuperscript{19} 

Gatto goes on to say,

However, when all the visual aids enumerated are used the consequent increase of information is practically 23 per cent greater than the amount of information accruing in the absence of such aids.\textsuperscript{20}

Aesthetic values may be cultivated through the use of motion pictures. The lens of the camera can make it possible for the eye to see and appreciate the beauty of the commonplace and the magnificent. Through visual aids an appreciation for the physical environment as an inheritance can be broadened.

Fundamentally, \textit{Hays says} the only way to reach and develop the mind is through the senses. There must be a reaction of the mind upon the impressions it receives, and this reaction must result in some bodily activity on the part of the receiver. The impression coming through the senses is the foundation for the reaction. The more pronounced and clear the impressions that are made upon the mind of the learner, the more efficient will be his development.\textsuperscript{21}

A marked improvement in range and accuracy of vocabulary is insured through the use of visual aids. Hill and Fenton found this to be true in a previously mentioned study. They say,

The difference in the number of words forgotten after about three weeks is slightly in favor of the visual method, as is also the difference in the number of errors

\textsuperscript{19} Gatto, op. cit., p. 495.

\textsuperscript{20} Ibid., p. 495.

in inflection and grammar.22

The effects of films on the formation of attitude was studied by Stillwell in a Master's thesis submitted at The Ohio State University. Stillwell writes, "We can conclude that the pictures had exerted an influence on the attitude being tested."23

It would be an unwarranted assumption that movies produce the greatest change in attitude, when so many other forces in the environment interplay, but it is safe to say that the educational picture can and does produce a marked influence on the individual.

A summary of the above mentioned values follows:

1. Visual aids promote an effective interrelationship of the environment and the individual.
2. Visual aids reduce verbalism.
3. The curriculum is made more interesting and attractive.
4. Individual differences can be met through the use of visual aids.
5. Visual instruction can develop the ability to think scientifically.
6. Visual aids can help develop a social conscience.

22 Hill and Fenton, op. cit., p. 678.

7. Visual aids assist in understanding relationships.
8. The learning process can be simplified.
9. Aesthetic values may be cultivated.
10. The range and accuracy of vocabulary can be increased.
11. Films assist in the formation of attitudes.
CHAPTER III

THE LOCAL SITUATION

The local community and the school are described in the following chapter. It was essential to study and consider these factors in the development and evaluation of the program.

The community and its relation to the school.

Fraunfelter school is situated in an industrial area near the Goodyear Tire and Rubber Company in Akron. Early in the history of the school this district was largely residential. As the factories expanded, stores and apartment buildings were built to provide for the needs of the increased population. Over a period of years this industrialization caused the wealthier families to move into newer districts.

Most of the people who now reside in this part of the community work in some industry, primarily the above mentioned. In a large percentage of the homes the father and mother both work.

A racial and foreign problem does not exist because each of these elements compose a very small minority. About five per cent of the population is negro. Fifteen per cent is of mixed foreign parentage including Polish, Greek,
and Italian. A large number of children come from homes with Swedish backgrounds.

A Swedish Lutheran church is an integral part of the community. A large segment of the community is Catholic, which is shown by the presence of a Catholic church and school.

The families of Swedish origin are the bond between the community and the school. These parents have grown to adulthood in the community and are now sending their children to the same school that they had attended. These mothers and fathers have a stabilizing influence in community and school relations.

A very active Parent-Teacher Association operates within the school. However, the membership consists of less than fifty per cent of the parents of the school. This organization has been very cooperative with the school by donating, in the past, large sums of money for the purchase of library books, tables in the cafeteria, and playground equipment. Much of this money was earned in the school through the collection of sales tax stamps by the children.

More than half of the parents of the school show little or no interest in the problems of the school and the community.

The physical setting, material, and equipment of the school.

The school building consists of twenty-two rooms, of
which fourteen are used for regular classes. A teachers' rest room, an instrumental room, principal's office, library, music room, kitchen, dining room, and nurse's room, comprise the remaining rooms. All of the rooms on the first and second floor open into a large court which is used as auditorium. There is a small playground surrounding the school.

All but three of the classrooms are equipped with stationary seats. In the kindergarten there are tables and chairs. In the two first-grade rooms there are movable seats plus a number of small chairs. In all of the classrooms, space for tables is limited because of the overcrowding of the rooms with seats.

There were very few framed pictures in the rooms. Three large paintings were located in the court.

The teaching equipment in the science room consisted of a few bottles of limewater, cans of powdered chemicals, a broken barometer, one dozen test tubes, six thermometers, and a considerable collection of miscellaneous objects of very little worth.

The equipment of the social studies room was limited to a half dozen maps standing in the corner, one table, three chairs, and forty stationary desks with seats attached.

The mathematics room contained nothing but the usual desks and seats fastened to the floor.

The library was furnished with tables, chairs, and
one hundred volumes of books.

The teacher personnel.  

Fraunfelter school is one of forty-seven elementary schools of Akron that range in size from three-teacher buildings to forty-three. Fraunfelter is average in size with fourteen regular and four special teachers.

The kindergarten through the fifth grade is organized traditionally with one teacher in charge of each grade. The sixth, seventh, and eighth grades are departmentally arranged with the children moving to music or art, English and literature, science or physical education, social studies, and arithmetic.

Since the success of any program in a school is controlled by the professional qualifications and concerns of the school’s faculty, a brief description of the amount of training, the number of years' experience, the years' experience in the present position, the last date of college training, and the participation on special education committees, was necessary.

These data are presented in the accompanying chart.
<table>
<thead>
<tr>
<th>Faculty</th>
<th>Present Position</th>
<th>Years of Training</th>
<th>Years of Experience</th>
<th>Years in Present Bldg.</th>
<th>Last Date of College Work</th>
<th>No. of Education Committees: Member</th>
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<td>5-year Kindergarten</td>
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<td>48</td>
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<td>2</td>
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<td>33</td>
<td>21</td>
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FORM I (Continued)

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<th>Years of Training</th>
<th>Years of Experience</th>
<th>Years in Present Bldg.</th>
<th>Last Date of College Work</th>
<th>No. of Education Committees: Member</th>
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<td>Mrs. O.</td>
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<td>Miss P.</td>
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<td>Principal</td>
<td>5 - BS &amp; MA</td>
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History of the use made of visual aids at Fraunfelter school.

In the early history of the school when the community was one of the finest residential districts in Akron, a fine lawn and many beautiful flowers surrounded the school. The children were given garden plots to plant and tend. This school was considered a scenic spot in the neighborhood.

As more and more industry located in the community, and the area became more densely populated, the lawn, gardens, and flowers disappeared. This change was followed by a resultant lack of community interest in the school.

At this early period the visual aid equipment consisted of maps, globes, drawings, blackboards, a few models for study of arithmetic, and a number of hand stereoscopes.

A number of years ago a 3₁/₂ x 4" slide projector was purchased; then later a Bal-Optician. With the acquisition of these two machines, very little use was made of the stereoptican slides; thus they were discarded and removed to the attic. Finally a silent movie projector was purchased, which similarly brought an end to the use of the still projectors.

With little direction and study on the part of the teachers this revolutionary device seemed to be an interesting way of presenting material and above all, it solved many of the problems of discipline and interest.
The social science room was chosen as the best place to house and utilize this new aid to education. Since most of the early film subjects were pertaining to science, history, and geography, this was probably a wise decision. However, in time this seemed to be too inconvenient. The demand to show films steadily increased until someone decided to use a screen in the court in order that large numbers of pupils could see the films at the same time. Again speed was the important value and not the quality of the education.

Since there were few films and no delivery services from the central office, the circuit film came into use. This use of films remained an integral part of the school practice until two years before the beginning of this study.

Finally, dark shades were installed in the science room and the projector was moved to that place. Instead of using pictures from the circuit an attempt was made to study the needs of each teacher and then order films at the time they could be used most satisfactorily.

Limitations.

The following limitations were evidenced at the beginning of this study. These factors were recognized by the writer as contributing to the results of the program.

1. The committee lacked ample funds to be used to initiate a program.
2. The architecture of the building was outdated.
3. Low salaries of the personnel gave little support to initiative for in-service training.
4. The entire school personnel lacked a common philosophy; therefore unity of purpose was lacking.
5. The principal was new to the building.
6. Much of the equipment of the school was old and worn out.
7. The lighting in the building was poor.
8. The teacher of the kindergarten was changed four times during the year.
9. The first-grade teacher was ill for three months during which time many substitutes were used.
10. Most of the teachers lacked recent professional training.
11. No delivery service to the schools was provided.
12. For a considerable period of time much of the teachers' interest and time were concentrated on passing a local school levy.
13. Finally, failure of the levy lowered the morale of the teachers toward the end of the year so much that progress was retarded.
CHAPTER IV

REPORT OF THE FUNCTIONING OF A COMMITTEE DESIGNATED TO STUDY AND DEVISE A VISUAL AIDS PROGRAM

In a number of schools the writer observed a lack of understanding by teachers of the relationship of visual aids to educational objectives and a consequent misuse of these materials. In these same schools all of the visual aids were ordered by the principal or superintendent and distributed to the teachers. Dale refers to situations of this sort when he says,

... Programs are often started by order of the superintendent of schools or the principal without allowing teachers enough opportunity to become familiar with these materials before using them. 24

In regard to the motion picture projector, usually a science teacher, preferably a man, was given the responsibility of showing the pictures without much thought given over to the value of visual education for all teachers. Consequently the machine failed to function as an effective educational device.

It was recognized that any program should provide for teacher participation. A visual aids committee composed of interested teachers was necessary to study and initiate a

program of visual education that would be of practical value for all the teachers of Fraunfelter school. Fern and Robbins have this to say about such a committee:

Promoting more effective utilization of films for teaching is another responsibility of the director of audio-visual aids, a responsibility delegated to him by the school administration and shared with an audio-visual aids committee composed of his fellow instructors. In larger school systems, the audio-visual committee functions as an advisory group, but it may be a combination working-advisory group in smaller systems in which it is necessary to divide the responsibility for carrying out details of a program. 25

Selection of the committee.

Since the idea of developing such a program at this school originated with the writer, the principal had to be enlightened as to the need for such a program. This was not difficult because of his previous military experience at which time he had gained an overall picture of the tremendous and effective use made of visual materials by the armed forces. With the cooperation of the principal assured, the writer was ready to consider the selection of a committee. This was not a job to be taken lightly, since the success of this program largely depended upon a wise selection of the committee personnel.

Before the committee was chosen, the following criteria

were developed to aid in the selection:

1. a teacher with much enthusiasm demonstrated by his willingness in the past to work for the common good.
2. a teacher with a high degree of open-mindedness.
3. a teacher who acquaints himself with new trends in education.
4. a teacher from each area of the school; primary, middle, and upper grades.
5. a teacher interested in visual aids shown by his experience with these aids.
6. a teacher socially adjusted with his community and fellow-workers.

Only two teachers did not return to their old positions when school began in the fall. However, this did not prove a handicap to the program since they were replaced by experienced teachers new to the system, who in turn added much enthusiasm to the faculty.

After considering each teacher's qualifications with the criteria, four were selected to serve on the committee with the writer as chairman.

The schedule of the chairman was arranged so that Friday afternoon was free time. Much of the work on the program was done at that time.

On the first Friday following the selection of the
committee, individual conferences were arranged with the four selected members in order to investigate their willingness to serve. Eighth-grade girls were assigned to take care of their classes during that time.

Miss Z. was first to be asked because she seemed to possess all the qualities set up in the criteria. Her untiring enthusiasm and willingness to work for the common good was unsurpassed. Miss Z. was very zealous about the possibilities of such a committee. She said she thought that this school needed something of that kind to help bring the teachers together. It was learned in the discussion with her that she had made some use of the film strip at another school.

Miss B. was next to be considered on this committee. She had a fair knowledge of recent trends in education. This was her first year in the Akron system. It was hoped that her eagerness to do a good job of teaching in her first year would be reflected in her work with the committee. She was very willing to do her best although she had very little practice with films.

The next person spoken to was Mrs. L. She was chosen principally because of her position as school librarian. Judged by the established criteria her qualifications rated only fair. Mrs. L. had shown considerable interest in visual aids, especially films, by making use of them in her teaching.
At first Mrs. L. was somewhat reluctant to be a member of the committee. She felt that a few teachers should not do the work for the rest of the group. Quite a little time was spent in trying to show her the real need of this program in the school. Finally she agreed to serve on the committee, but said she would not be able to spend much time after school.

Miss G. possessed enthusiasm in her teaching and willingness to work for the common good. Her interest in visual aids had been shown by her past use of films. Being asked to be a member of the committee seemed to please her, but she said that she was somewhat pessimistic toward the success of the program due to the lack of cooperation on the part of the faculty. However, she accepted after she was a little better acquainted with some of the possibilities of the program.

After the four teachers had been interviewed, the chairman discussed the results with the principal. He approved the committee and the names were announced at the next regular meeting of the faculty.

Committee meetings.

A feeling of animosity for faculty meetings was prevalent among the teachers. The cause for much of this dislike was lack of training, lack of enthusiasm, and lack of genuine
sharing in a common purpose and philosophy. These limitations prompted the chairman to select a committee that might show leadership in working in the democratic way, with the hope that others might catch a spark. It can be said that care and consideration for the teacher were always taken into account in weighing committee decisions. This was considered most important in that very little could be accomplished without teacher support.

The first meeting of the committee was held at eight o'clock in the morning for the purpose of discussing the general plan of the program. A short review of the work done with visual aids at The Ohio State University was made by the chairman. Some of the recent literature and leaders in the field of visual education were mentioned. The meaning of the term, visual aids, was clarified. The possible scope of the program was outlined and provoked much discussion. The problem of how the school could finance the program was first to be discussed. It was pointed out that no money was available from the Board of Education for individual schools since they already financed the operation of the central exchange, which in turn would assist the program. Nevertheless this did not discourage the committee for they suggested ways and means of raising money. Miss Z. offered to sponsor a marionette show for the Christmas season. A play was
suggested by Mrs. L. Miss B. mentioned movies to be shown after school. It was time for the first bell before any decisions could be made, and so ended a very successful meeting.

The next meeting of the committee was called to develop and discuss the program that would be pursued. At this meeting the chairman had placed on exhibit all the magazines, books, and pamphlets that he had gathered together on the subject of visual education. The following objectives were formulated in order to give direction to the plan.

1. Acquaint the teachers of Fraunfelter school with all the visual aids valuable to education.
2. Make a survey of all the existing visual aids in the building.
3. Develop a workable system of previewing all films.
4. Set up a program for administering the mechanical problems concerned with visual aids.
5. Make a study of maps and globes, and later extend it to include all graphic materials.
6. Establish the beginnings of a film strip library.
7. Make some attempt to get each teacher to share with others her own visual aids resources for the common good.
8. Survey community resources.
9. Encourage in-service training of the faculty.
10. Make plans for a more coordinated use of the school journey.


12. Study and suggest ways of remodeling the building to make for better efficiency in operation of program.

13. Cooperate with the central visual aids program by offering constructive criticism.

14. Through the leadership of the committee strive to bring the entire faculty into a closer working relationship.

At the close of the meeting plans were made for the committee to visit the central visual aids office. Teachers all took some of the writer's collection of literature on visual aids that was exhibited in order to acquaint themselves with the various visual aids. These were later exchanged among the teachers.

The plan for a trip to the visual aids office was set for Friday afternoon. Due to the chairman's previous knowledge of the central office, he remained at school and took charge of the kindergarten. Arrangements were made for teachers to care for the other three rooms affected by the trip. Much information about films and operation of different kinds of equipment along with catalogs and literature were brought back by the committee. The trip had been for all those sent a very profitable experience. Miss G. and Mrs. L. were
reassured of the need for such a program and began to realize the worthwhileness of giving to it.

The interest in projected aids was greatly increased by the committee's trip, and it served as a spring board for the following week's meeting. At this time all of the mechanical visual aids owned by the school were arranged in the science room. These included a lantern slide projector, an opaque projector, hand stereoscopes, a film strip and 2\" x 2\" slide projector, and a sound movie projector. All of these aids were owned by the school, the one exception being the film strip and 2\" x 2\" slide projector. This was borrowed from the central visual office. The chairman assisted the teachers in learning about the machines by actually having them perform some of the operations such as focusing, threading, and so forth. At the close of the meeting the desirability of having rooms with dark shades was discussed. The science room was the only room thus equipped. However, it was brought out that an order had been placed for the installation of electric outlets in the room almost a year before, and no action had yet been taken. This had a very discouraging effect on plans and prospects of getting additional rooms properly equipped. The meeting adjourned without reaching any conclusions.

When the next meeting was called it was decided that there were two rooms available most of the week that could
be darkened. These two rooms did not meet the best needs of the school, but the committee thought that their use for visual instruction would be a step in the right direction. One of these rooms, which was used just once a week for instrumental lessons, was located in the basement. A larger room located on the second floor was used twice a week for vocal lessons. The chairman planned to arrange a schedule that would make one of these rooms available to any teacher every day in the week. The need for every teacher to preview film material was also discussed. It was agreed that an answer must be found to this problem, before effective educational values would result from the showing of films. The thinking on this subject of Hoban, Dale, Fern, Robbins, and others was pointed out. Hoban writes in regard to this problem:

The first step for the teacher who is considering the use of a film in teaching a unit of instruction is to analyse the content of the film. In this way there can be determined the content of the film which relates to the objectives of the unit, the organization of this content, the important aspects of the film which should be studied by the pupils, and the relation of the film to other teaching aids, reading assignments, etc.26

This quotation seemed to focus the problem, and it was used in committee discussion.

One meeting of the committee was given over to a discussion of the means by which the mechanical aspects of

26 Hoban, Hoban, Jr., and Zisman, op. cit., p. 129.
the program could be administered. Such things as ordering of films, transportation of films, operation of equipment, and a method of assigning equipment, were discussed. Who was to do the ordering of the films? Should it be one teacher's responsibility? Should a standard form for ordering films be worked out, and what things should it include? Whom should be charged with the responsibility for transportation?

Should teachers always operate the equipment with the assistance of the students, or should the students be trained to do this alone? How could the right to the use of equipment be definitely established at any hour of the day?

Many of the above problems were discussed at great length so that it was necessary to hold a second meeting to finish the work. At the second meeting Mrs. L. clearly showed that she had not yet gained in enthusiasm toward this program, when she mentioned that she was doing enough in her own field and that she could not see the value in using her time and money in the transportation of films for some other teacher. Again she was reminded by the group of the common good. Miss Z. suggested the use of eighth-grade boys to operate the equipment. Miss B. raised the objection that teachers might disagree with the appropriate-
ness of certain boys out of their classes. Miss G. moved that some boys from each of the five upper-grade home rooms be trained. All of the teachers agreed that the chairman should carry out this training program.

Up to this point nothing specific had been done about purchasing a film strip projector. At a meeting called to decide on whether or not this was advisable Miss Z. informed the committee, for the first time, that she was being transferred to another building. The committee was so upset upon hearing this that nothing but personalities were discussed for the remainder of the time. The chairman recognized that he had lost a very valuable member of the committee.

At the next meeting the business of deciding on the kind of film strip machine to purchase was handled. This was the first meeting for Miss M. who had been asked by the chairman to fill the committee vacancy. It was decided to take the advice of the director of visual aids as to what make of machine would be best. However, the committee members suggested that the machine to fit their needs should be small, multiple in purpose, and simple to operate.

The program was moving along, with some parts working better than others. The chairman decided that a meeting should be called to review the success of the practices already established. He was alarmed about the lack of the
use of these aids by many of the faculty. Concerning this
Dale writes,

Teachers can find many excuses as to why they do not
need to use these materials, but often these are mere-
ly rationalizations for covering their fear of using
them unskillfully.27

In the meeting the members of the committee decided that
much of this fear could be eliminated by a general in-service
training program. Realizing that such a program was im-
possible at this time, they decided to teach the teachers to
operate and use the film strip machine, and also to show
films that would guide the teacher in the use of the motion
picture. Each teacher was assigned the responsibility of
assisting a certain group of teachers in the ordering of
films and in helping to decide the problem of suitability
of each picture for particular age levels. It was evident
that every effort had to be extended to make the use of
visual aids easy for the teacher.

Maps and globes were next to be studied. These aids
come under the heading of graphic materials. Other aids
classified under this heading are cartoons, illustrations,
posters, charts, graphs, and diagrams. All of the maps
and globes in the building were collected, cleaned, and placed
in the court. The committee checked each one of these and
disposed of the outdated and unrepairable units. It is in-

27 Dale, op. cit., p. 476.
interesting to note that four very good, useful maps were found stored in the attic. In order that this would not happen again the committee decided to make a study of the qualities found in good maps. Finally before a map was discarded or ordered from any company, the committee with other interested teachers would view that map. In this way ordering from a catalog would be eliminated, ill considered confiscation would be avoided, and no map would just be sent to the building by the central office without some teacher expressing a need for it.

A film strip library was the next goal of the committee. Most of the teachers had made some use of film strips by this time. It was decided by the committee to start out with purchases of primary films and films on arithmetic. This decision was arrived at because the primary films in the central office were in poor condition, and there were now new films that correlated with the primary reading program. Ways and means of improving arithmetic were being studied by the school, and this offered the committee a chance to help that group of teachers.

The last meeting dealt with a review of the program plus the possibility of projecting ideas that had come from all the teachers into a larger program in the future. After discussing with most of the teachers the needs of the school in terms of what had already been accomplished, ideas were
gathered. An outline of a projected program follows:

1. To correlate the school journey more effectively with the curriculum.
2. To start a central mounted picture file.
3. To interest teachers in making their own slides.
4. To start a small school museum.
5. To encourage participation in in-service programs.
6. To study and suggest ways of remodeling the building to suit the use of visual aids.

Interaction of the committee and the rest of the faculty.

The first time that the faculty was asked to participate in the visual aids program followed the second meeting of the committee. Some of the teachers were asked to care for the children in the rooms of those teachers who visited the central visual aids office. The teachers who were asked cooperated willingly.

Soon after the work of the committee got underway, a report was made at a regular faculty meeting. The proposed program of the visual aids committee was outlined. The need for previewing all films before showing them to a class was stressed. Very little discussion followed, and this was very discouraging to the committee.

In a later teachers' meeting the mechanical aspects of the program were explained. The method of assigning equipment
the operation of the equipment, and the method used to order films were discussed. Some of the teachers had difficulty in understanding the method they were to use in checking out equipment. In order to clear up all misunderstanding of the program the chairman talked with each teacher separately.

After the film strip projector was purchased, one Friday afternoon was spent in teaching each teacher how to operate it. Mr. S. cooperated in this program by helping to arrange schedules so that a few teachers at a time might be given this training. A mimeographed drawing of the projector, with the parts clearly indicated and the steps of procedure listed, was given to all teachers (Figure I, see Appendix). First, they were shown each step in the operation. Next, they were assisted in each step of the operation. Finally each teacher was given the chance to experiment alone. Many that learned quickly were helping the slower learners. Some of the teachers had not only learned how to operate the machine, but they had found satisfaction in helping one another.

At the next faculty meeting Miss B. demonstrated to the teachers the possible uses that could be made of the film strip. Primary films, single and double frame, were used. She stressed the need for knowing the material thoroughly before showing; also that in the case of small children, a long film was not always desirable to show in
its entirety in one sitting. Miss B. mentioned that the film
strip allowed children to participate. This was a very suc-
cessful meeting, judged by the remarks of the teachers.

All teachers were asked to list on a survey sheet all
the maps and globes that they would like in their rooms.
After this information was received the committee invited
the social studies teacher and all other interested teachers
to go with them to the administration building to view and
select needed maps. The following criteria were used to
evaluate each map.

1. Maps should be large for group instruction.
2. Maps for wall purposes should not include too much detail.
3. Lettering on wall maps should be large and easily read.
4. Color should not detract from the real purpose of the map.
5. Color arrangements should be pleasing to the eye of the
   observer.
6. Physical and political borders should be clearly outlined.
7. A map or globe should be purchased with definite values
   and purposes in mind for its use.

Seven teachers and the principal made the trip. Many
fine maps and globes were ordered as a result of the trip.

Individual conferences and conversations related to the prob-
lem.

At times during the program it was necessary to contact
individuals and groups outside of Fraunfelter school.

After the committee had decided upon the requirements of a film strip projector the chairman visited the central visual exchange and talked with the man in charge of repair. The chairman was advised to purchase an S.V.E. Tri-purpose Projector from the same camera store that had sold the school their sound movie projector. It was decided to have a look at these machines.

Next a visit to the camera store had to be made. The chairman, quite by accident, met a member of the Fraunfelter Parent-Teacher's Association in the store. Immediately interested in the purpose of the machine, she promised that she would make a motion at the next parents' meeting that part of the cost of this machine should be assumed by that organization. On the strength of this promise a machine and portable screen were sent to the school.

The machine and screen were demonstrated at the next parents' meeting by the chairman. He was asked to tell about the program and the values underlying the use of visual aids in the teaching of children. After a short speech a motion was made for the organization to pay for the entire cost of both the screen and the projector.

During the first part of the second semester it was necessary for the chairman to call on the Assistant Superin-
tendent in Charge of Business Affairs. The school had waited over a year and still there had been no action on electric outlets in the science room. New requisitions had been sent in recently for dark shades and more electric outlets. An appointment was finally made with the man in charge in order to explain the program that the committee was developing. When he understood what was being done in this particular school, he became very cooperative and assured the chairman concerning all the things that were requested.

Mr. T. remarked, "a school that is attempting to use visual aids in the right way deserves all the help our budget will allow."

A conference with the director of curriculum was held and the chairman was well received. When told of the desire of the committee to study maps and globes, Mr. U. said that he was sure that any plan mapped out by the teachers would meet the approval of his office. Mr. U. is quoted as saying, "I would be glad to see more buildings develop programs of that kind."

The visual aids director of the Akron schools was interviewed the last week of school. The possible use of school busses for school journeys was discussed; also the possibilities of borrowing museum material from The Ohio State University. Mr. V. promised to check into the use of
busses, and the chairman was to find out all the information about museum materials and report to him.

During the summer the chairman had a very interesting conversation with the supervisor of education at the Ohio State Museum. Arrangements were made to make long-term loans to the Akron schools, if it were acceptable with Mr. V.

Mr. W. remarked, "we are glad to extend the services of this museum to as many people as possible."

After conversing with Mr. V. it was learned that arrangements would be made for long-term loans from this museum. Fraunfelter school was to be given first preference in each one of the exhibits for the following year.

A letter to Mr. V. which contained a verification of the exact time in which the material would be used at Fraunfelter school, followed the interview. (See Form XV, Appendix)
CHAPTER V

DESCRIPTION OF THE PROGRAM OF VISUAL AIDS
FORMULATED BY THE VISUAL EDUCATION COMMITTEE WITH
THE COOPERATION OF THE FACULTY

This program is not final, but is a summary of those activities concerning visual aids that were either in operation or studied at Fraunfelter school at the close of one year of work. The principles of democratic living were the guiding influence in all the efforts of the committee. Moreover the committee recognized the school as an ever-growing institution in a dynamic society; therefore, any action by the school must be constantly re-evaluated in terms of growth and change.

An outline of the program that was developed by the committee follows:

A. Purchase of Projection Equipment
B. Operation of Machines
C. Pre-viewing Films
D. Preparing for Dark Rooms
E. Transportation of Equipment
F. Evaluation Data
G. Use of Graphic Materials
H. Use of the School Library

I. Use of the School Journey.

The role of the central visual aids department in relation to Fraunfelter School.

In order to provide a setting from which to view the program developed at Fraunfelter school, the citywide visual education program is presented.

A central visual aids department is located in the Administration Building of the Board of Education. The board employs a full-time director of visual education with a staff of three regular assistants. The main purpose of this department is to aid and coordinate the use of visual aids in the forty-seven elementary schools and the eleven high schools of Akron, Ohio.

A library of films, film strips, and lantern slides is part of this department. This collection contains 160 silent films and 450 sound films covering a variety of subjects. Six hundred film strips representing all grade levels are available for loan. Seven sets of 2" x 2" lantern slides and four sets of 3½" x 4" lantern slides make up the remainder of the projected picture library. Catalogs listing the films classified by subject areas are available with the latter containing brief summaries of the film content.

In addition to their own library of films this department
borrows freely from a large state library located at Columbus, Ohio, the Akron Public Library division of films, and many industrial sources. These films are in turn loaned to interested schools of Akron for a period of one day.

In addition to operating a film exchange this department possesses and loans to schools other visual aids which are listed as follows:

2 opaque projectors
2 fan-cooled opaque projectors
6 film strip projectors
2 sound projectors
2 overhead keystone projectors
1 illustrevon
76 pieces of stage lighting equipment
25 mounted bird specimens
25 mounted leaf specimens.

Purchase of projection equipment for Fraunfelter School.

An S.V.E. Tri-purpose Film Strip Projector was purchased by the visual aids committee at a local camera store. The experience of the central visual aids department with these machines aided the committee in the selection of this particular make. A 300-watt bulb made it possible to project pictures in a partially darkened room. Adaptation could easily be made to the projection of 2" x 2" lantern slides. Moreover, the simplicity of operation made this machine a favorite with the
teacher. A rewind roll which automatically rewound the film strip as it was being shown added further to this convenience.

Along with the purchase of a film strip machine, the need arose for a portable screen. The only screen in the building was a permanent one located in the court. Films were projected on newly painted walls in the science room up to this time. This was a poor method because of the possibility of eye strain among the children. To correct this a Da-Lite beaded screen was purchased by the Fraunfelter P.T.A. This screen brought out greater detail in the picture and reduced the need for a totally darkened room. However, it may be said that any beaded screen from a reliable company would have been just as satisfactory. During the school year another portable screen was ordered as part of the science materials. When this screen was received it was possible to use one screen in the basement dark room for use with the film strip machine and the other in the science room to be used with the sound projector.

Operation of machines.

All of the machines for projected aids were stored in the science room. This made it easier for the chairman to supervise the care and operation of this equipment. Teachers and students had to be trained to operate and schedule these aids. In the past teachers were skeptical of their ability to learn the mechanics of the movie projector. Inasmuch as
some of the older teachers had formerly operated the opaque and lantern slide projectors, prospects for learning to operate the film strip machine were not too discouraging among the faculty. When the movie projector was introduced these same teachers became so alarmed over the expensive machinery and the high cost of the films that they hesitated about learning its operation. This helped to encourage auditorium showings of films.

An agreement was reached by the committee that the teachers should be taught how to operate the filmstrip machine. This program is explained in the preceding chapter.

In order to save the teacher time and energy in setting up her own equipment, students were assigned to relieve her of this responsibility. The following chart was devised to eliminate complications arising from two persons desiring like equipment at the same time. Each teacher that desired to use any of the projected aids was asked to fill in the time and room number in the space provided. With this information the student assistants could set up the projectors at the proper time and have them in working order for the teacher to operate.

The selection of the students by the chairman was the first important problem connected with the training program. Three characteristics of good operators that influenced the selection were interest, initiative, and
### FORM II

**CHART FOR SCHEDULING EQUIPMENT**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>S.V.E. Projector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movie Projector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slide Projector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3½&quot; x 4&quot;</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bal-Optican</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Globes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
dependability. These traits were considered of equal importance, and all three were characteristics of each boy.

Two boys were chosen from each of the five home rooms of the sixth, seventh, and eighth grades. In this way each of the departmental teachers would have two boys capable of projecting a picture in their class.

The ten boys were called to their first meeting after school. At this meeting the boys were told of the importance of their job. The value of the machines and the cost of the films used in the machines were stressed in order to make them conscious of their large responsibility. The stories, "I am The Motion Picture," and "The Film Prayer,"28 taken from the manual of the slide and film exchange of the State of Ohio were read and discussed with them. Each boy was given a list of the operations that he was to learn how to do. This list was found in Bernardis'29 "Audio-Visual Projectionist's Handbook." It includes such items as before the show, starting the picture, during the showing, ending the picture, after the showing, and lubrication and maintenance. Because two of the boys selected already knew how to operate the sound


projector they were chosen to help teach the remaining boys. Each of the new boys was required to demonstrate his ability to the student operators first, and after successfully passing a performance test they were finally checked by the chairman. A worn-out practice film made especially for training purposes by the department of visual aids was used for practicing threading and focusing operations. Many meetings were held after school until all of the boys were able to perform all of the operations pertaining to the movie projector.

The boys had learned to operate the movie projector by the time a film strip projector had been purchased. An outline drawing of the machine, with the steps of operation outlined, was given to each boy (Figure I, see Appendix). After demonstrating and explaining the entire operation, the chairman gave each boy a chance to practice with the machine. Since this machine was simple to operate, the boys were soon mastering it. The same procedures were used in teaching the operation of the opaque projector and lantern slide machine.

Finally after most of the boys had completed the requirements, a chief operator and an assistant were chosen from the group. The two boys selected had demonstrated unusual dependability and interest while using the machines; therefore, it was expected that they would show leadership in helping

30 Ibid., p. 16.
to keep the program moving.

These two boys helped the chairman in many ways, thus giving him more time to work with the committee in planning for the total program. These two boys accepted their assignments willingly and showed an unusual interest in the titles given them.

Each morning the chief operator checked the schedule chart in the office, and if any machines were needed in the lower grades for that day he assigned a boy of the operators group to that task. Many times the work of setting up the machines would be taken care of by the chief or his assistant. Most of the time the teachers operated their own machines, in which case it was necessary for the student operators to return later, check the machine and filmstrip, and return them to the visual aids storage room. Inasmuch as some teachers lacked confidence in their own ability, they would sometimes ask to have a boy remain with their class and help them with the machine. It was soon learned that caution had to be used in the selection of certain boys during given periods. Teachers complained that certain boys could not afford the loss of work in their classes. Another problem that arose was with one of the boys with a low ability rating. Because this boy was large and inactive in class, the teachers took little interest in his progress in school work and assumed that he
was a failure. Consequently he absented himself from class many times without assignment from the chairman or chief operator, because the teacher was glad to be rid of his presence.

Each operator's privilege of showing films outside of his own class was shared in turn. The opportunity to operate the movie projector when entertainment movies were shown after school or to project pictures at parents' meetings was given to the chief and assistant operator. This privilege was highly regarded by the boys.

Near the middle of the school year a written test was given to the boys covering the operation of the various machines (Form III). This served as a review for the boys, and a final check by the chairman on each boy's ability. At this time a projectionist operator card was issued to each of the operators who, in the chairman's opinion, was capable of handling the equipment alone (see Form IV for card). All of the boys seemed proud of this card, which gave some importance to their job.

**Systematizing orders.**

Some system had to be worked out for ordering films and slides from the central office. Here again was a chance for teachers and operators to work together. At the close of each year the director of visual aids had always asked the teachers to go through the state catalog of films and
FORM III
OPERATOR'S TEST

1. In what order should the following switches be turned ON when starting projection?
   ____ Motor  ____ Amplifier Volume  ____ Light

2. In what order should the following switches be turned OFF when projection is finished?
   ____ Motor  ____ Amplifier Volume  ____ Light

3. Give three causes for loss of top film loop.
   1. __________________________
   2. __________________________
   3. __________________________

4. Give two causes for loss of bottom film loop.
   1. __________________________
   2. __________________________

5. Give three causes for loss of loop behind lens.
   1. __________________________
   2. __________________________
   3. __________________________

6. Give three causes for unsteady picture.
   1. __________________________
   2. __________________________
   3. __________________________

7. Give four reasons for dim picture on screen.
   1. __________________________
   2. __________________________
   3. __________________________
   4. __________________________

8. Write "Yes" or "No"
   ____ The projector is put into reverse when it is desired to rewind a picture.
   ____ Sound will continue to be reproduced from the sound track even though the exciter lamp is burned out.
   ____ Film should always be handled by the edges.
8. (Continued)

Film should always be rewound after the last showing.

Film damage is usually the fault of the operator rather than the projector.
The speaker should be placed on the floor for best sound quality.
It is unnecessary to clean the gate and other film travel surfaces oftener than once each week.
There are five oiling points which should be oiled liberally once a month.

10/17/46
FORM IV

PROJECTIONIST CARD

Non-Theatrical Projectionist
DEPARTMENT OF VISUAL AIDS
SUMNER VANICA, Dir.

This Certifies that has passed the required tests for operation of the following equipment:

Board of Education
Akron, Ohio
OTIS C. HATTON, Supt.
19 19

NOTE: DETACH THIS HALF AND KEEP ON FILE

Non-Theatrical Projectionist
DEPARTMENT OF VISUAL AIDS
SUMNER VANICA, Dir.

This Certifies that has passed the required tests for operation of the following equipment:

Board of Education
Akron, Ohio
OTIS C. HATTON, Supt.
19 19

INSTRUCTOR

REQUEST FOR VISUAL MATERIAL

AKRON PUBLIC SCHOOLS

Visual Aids
Cat. No. Title

Date Desired to Date Reserved

Subject or Grade Room Teacher's Signature

Date of return of this card to teacher

☐ Check here if you have listed alternate film titles or range of dates on back of card.

Note:—After the "date reserved" has been recorded from the returned copy of requisition, this card shall be returned to the teacher.

FORM V. ORDER CARD

60
slides and write down all the aids that he would like to use for the next year.

No doubt this meant some long-range planning, and since many of the teachers of Akron would have different time needs for the film it was impossible to satisfy each teacher. A convenient card was devised by the central visual aids office to simplify and ease the work of ordering films (see Form V, p. 60). Each teacher filled out this card with the help of the chairman of the visual aids committee. The order for the films was typed from the cards and sent to the central visual aids office (Form XVI, Appendix).

Besides the films found in the visual aids library, each month a list of films received from other sources was placed in the superintendent's bulletin issued weekly.

Since these films were loaned for too short a time to go around to all the schools, an order had to be placed the same day the calendar was released if films were to be expected. In that this did not leave time for individual teacher selection, the chairman, using his best judgment, ordered a sampling of the pictures for each grade level. A list of these films was then posted on the bulletin board. If a teacher desired to order a film or set of slides he filled out the following form.
Upon receipt of this order the chairman called the visual aids office, if it were a city-owned aid, to verify the date requested. Toward the end of the school year the chief operator was given this responsibility, which he carried out very capably. When the film had been officially scheduled, the name of the film and the room number were placed on a daily calendar on the chairman's desk. It was the duty of the chief operator to check this calendar daily, along with the schedule chart already referred to (Form II, p. 53), and be prepared to have the aid that was needed ready before the beginning of school the following morning.

Pre-viewing films.

This activity presented a problem all during the school year that was never satisfactorily solved. A one-day loan
of most films, indifference on the part of teachers, and lack of the proper physical setting for previewing, limited the successful solution of this problem. Whenever at all possible the picture was ordered for more than one day. This enabled the teacher to view the picture after school. Also a child or group of children could be invited to see the picture before the whole class had seen it. In this way pupil reaction could be brought into the planning for the picture on the following day. This was tried by the chairman and found to be quite successful. However, after school hours was an unsatisfactory time to the majority of the faculty.

The committee worked hard and long to overcome the indifference of the teachers to previewing. An understanding that the use of the film is not an end in itself but a means to an educational end was slow to materialize. An in-service training film entitled "Using the Classroom Film" was shown to the faculty and discussed. The importance of previewing films was discussed many times in faculty meetings. The previewing of films was compared to the teacher's needing a thorough knowledge of the subject matter before introducing a new unit or lesson.

In order to improve the physical setting of the previewing room, the projector was set up and put in running order a half hour before school began. Teachers were asked to preview the film that they were expecting to see at that time. For many this was too much of a chore, while a few of
the more conscientious teachers found this time very satisfac-
tory.

Inasmuch as some teachers did not use films, perhaps because of the feeling that they were expected to preview and use the film correctly, the committee decided that they would try previewing all the films and filmstrips that were ordered for the building. Any film that was ordered specifically by a member of the committee was previewed by him and the information was then passed on to whatever teacher he thought the film would suit. If it were a general film the chairman made it a point to see the picture and inform each teacher of its contents by written note. This plan helped to change the attitudes of teachers and changed the old idea of being invited to see a picture. Soon teachers began to prepare their students for the film, and as a result youngsters could be seen carrying notebooks to the visual aids room. Children began seeing films with a purpose in mind other than that of being entertained.

Preparing for dark rooms.

The committee recognized that for the most part auditor-
ium projection of films was a poor substitute for the classroom. It also understood that the ideal approach to projection was to make possible the darkening of all classrooms.

The committee held that the following three factors made the request for too many darkened rooms inadvisable at this
time: (1) the great demand for darkened rooms throughout the city, (2) the limited number of projectors owned by the school, and (3) a limited school budget. The committee, acting conservatively, asked to have two additional rooms equipped with dark shades and electrical outlets, and the request was granted. An electrical outlet was also installed in the science room and in one other lower grade room.

When selecting the rooms the committee made every effort to select those rooms which would be available the greater part of the day for visual aids. The following schedule was arranged for their use.

### FORM VII
### SCHEDULE FOR USE OF DARKENED ROOMS

<table>
<thead>
<tr>
<th>Day</th>
<th>Instrumental Room</th>
<th>Voice Room</th>
<th>Science Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon. AM</td>
<td>Instrumental Lessons</td>
<td>Music</td>
<td>Films</td>
</tr>
<tr>
<td>Mon. PM</td>
<td>Music</td>
<td>Films</td>
<td></td>
</tr>
<tr>
<td>Tues. AM</td>
<td>Filmstrip</td>
<td>Films</td>
<td></td>
</tr>
<tr>
<td>Tues. PM</td>
<td>Opaque Proj.</td>
<td>Science</td>
<td></td>
</tr>
<tr>
<td>Wed. AM</td>
<td>Filmstrip</td>
<td>Films</td>
<td></td>
</tr>
<tr>
<td>Wed. PM</td>
<td>Opaque Proj.</td>
<td>Science</td>
<td></td>
</tr>
<tr>
<td>Thur. AM</td>
<td>Filmstrip</td>
<td>Music</td>
<td></td>
</tr>
<tr>
<td>Thur. PM</td>
<td>Opaque Proj.</td>
<td>Films</td>
<td></td>
</tr>
<tr>
<td>Fri. AM</td>
<td>Speech</td>
<td>Films</td>
<td></td>
</tr>
<tr>
<td>Fri. PM</td>
<td>Science</td>
<td>Science</td>
<td></td>
</tr>
</tbody>
</table>
One copy of this schedule was given to each teacher and one was posted on the office bulletin board.

Transportation problem.

For the past three years Mr. Rhad assumed the responsibility of obtaining and returning all the visual aids from the central office. This service was accepted by Mr. R. largely because of an interest in this means of education. However, it was common practice in many of the schools to delegate that responsibility to the man of the building, if there happened to be one, or to the principal. The visual aids committee decided to cooperate on this matter; as a result the following schedule was worked out:

FORM VIII

TRANSPORTATION SCHEDULE

<table>
<thead>
<tr>
<th>Teacher</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. S.</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. R.</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Miss B.</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miss G.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

Later in the year the chief operators were used to fill in when one of the committee was ill or when other emergencies
occurred. The boys were given bus fare and sent during school time with their parents' consent to the central visual aids office. The entire trip required about forty-five minutes of the child's time.

**Evaluation data.**

Something more is required of a teacher who uses a film than simply using it for his own best advantage. The democratic spirit of sharing requires a teacher to record information about the picture that would help other teachers to select more appropriate films at a later time. An evaluation record (Form IX) follows.

After a picture was shown to a certain group, the teacher was asked to fill out an evaluation record. If more than one teacher saw the same film the several records were condensed into one and filed alphabetically in the office. Sometimes the remarks by the teachers were so different that more than one copy was filed.

Although most of the teachers cooperated, nevertheless, one incident occurred in which a teacher discussed with the chairman for fifteen minutes, indicating why she should not fill out a record for a certain picture. Later in the day she completed the job that could not have taken her more than five minutes at the most. No difficulty was experienced after this by the chairman.
FORM IX

EVALUATION RECORD

I. Film - Film Strip - 3 1/2" x 4" Slide - 2" x 2" Slide
Time__________________

II. Title -
Silent - Sound - Color

III. Source of film -

IV. Description -

V. Strong Points -

VI. Weak Points -

VII. Is this film one which predominately -

___ 1. Raises Questions?
___ 2. Answers questions?
___ 3. Does both equally?
___ 4. Does neither?

VIII. What is your judgment of the film as a whole?

___ 1. Excellent
___ 2. Good
___ 3. Fair
___ 4. Poor
___ 5. Useless

IX. In what subjects or grades is this film suited?

X. How could this film best be used?

___ 1. To introduce
___ 2. To prevent material during unit
___ 3. To summarize
Use of graphic materials.

A definite lack of suitable maps and globes at Fraunfelter school interested the committee in a program that would increase and improve the use of this visual aid in the classrooms. First, all of the maps and globes were assembled in one place and checked by the committee as to their value. Following this, a form was circulated among the teachers in order for the committee to ascertain teachers' needs (Form X).

From the form, the committee learned that the teachers were not specific as to the kind of map and that there were many duplications of need for the same map. This showed clearly that criteria for judging good maps had to be discussed with the faculty. A copy of the criteria already referred to in the preceding chapter was given each teacher so that he could better acquaint himself with some of the better practices in judging the worth of maps.

After the committee had asked the director of curriculum about the possibility of seeing a map display from some of the leading companies, they were told to submit in writing the particular kind of maps they would like each company to exhibit. By making use of various catalogs and the teacher survey, the committee was able to formulate the following letter (Form XI) to the director of curriculum.

The committee received a reply to this letter, from
## MAP REQUEST FORM

The committee on visual aids would like to know what kind of a map (World, U.S.A., Asia, Outline, South America, etc.) you use from time to time in your teaching.

We are planning on ordering more.

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>None</td>
</tr>
<tr>
<td>6</td>
<td>Nothing</td>
</tr>
<tr>
<td>107</td>
<td>None</td>
</tr>
<tr>
<td>106</td>
<td>Do not use maps</td>
</tr>
<tr>
<td>105</td>
<td>I need a Western Hemisphere and World</td>
</tr>
<tr>
<td>104</td>
<td>A map of the world</td>
</tr>
<tr>
<td>103</td>
<td>Only a globe</td>
</tr>
<tr>
<td>102</td>
<td>U.S., S.A.; globe, Africa, Western Hemis., Blackbd. map</td>
</tr>
<tr>
<td>208</td>
<td>Do not need any</td>
</tr>
<tr>
<td>207</td>
<td>South America, Africa, Australia</td>
</tr>
<tr>
<td>205</td>
<td>Need a plain globe</td>
</tr>
<tr>
<td>204</td>
<td>Global, U.S.A., Asia, Europe, Africa, South America</td>
</tr>
<tr>
<td>203</td>
<td></td>
</tr>
<tr>
<td>202</td>
<td>A Globe would be nice in the Library</td>
</tr>
</tbody>
</table>

Place any suggestions below.
February 7, 1947

Board of Education
Akron, Ohio

Dear Sirs:

The visual education committee of Fraunfelter School would like a representative of the Denoyer-Geppert and Rand McNally Company to display the following articles before the faculty of their school:

Social Science Series
U.S. Phys - Pol. Large
World Phys. - Pol.
Asis Phys. - Pol.
North America Phys. - Pol.
South America Phys. - Pol.
U.S. and World Simple Political 3rd & 4th
Geographical Terms Chart

Best Samples for Elementary Use --

Literature and Language Maps
Single Countries of Europe
U.S. Possessions (centered map)
Zones of the World
Health and Safety Charts
Historical Series Maps
Sample of Display Fixture
Samples of Small and Large Globes

We would appreciate the earliest possible date.

Committee:

Sara Greenlee
Ethel Fisher
Mary Zimmerman
Rebecca Rumsey
Carroll K. Gustely, Chairman
the director of curriculum. (See Form XII)

At a later date the committee was invited to examine an exhibit of maps and globes by four of the major companies. The director of curriculum informed the committee that the exhibit was placed at the administration building in order to share it with other schools. A special day was arranged for all the teachers of Fraunfelter school to view the display. Following this meeting an order for a number of these aids was sent to the Board of Education (see Form XVII in the Appendix).

The committee arranged three plans for the distribution of these maps and globes. One of these pertained to the departmental classes in the upper grades, another to the lower grades, one through five, and still another plan to cover each individual teacher's need.

All of the maps and globes for the sixth, seventh, and eighth grades were located in the social studies room. Enough map rail was purchased for the social studies room to allow six maps to remain hanging in the room at all times. In order to economize, four three-foot sections of rail were purchased which were spaced at intervals of three feet rather than making them into a solid rail along the wall. A cork center was a feature of this rail which provided a place for pictures to be put up with thumb tacks.
Mr. Carroll K. Oustely, Chairman
Visual Education Committee
Fraenkel School
Akron 5, Ohio

February 18, 1947

Dear Mr. Oustely:

Letters were mailed today to Denny-Ceppert, Rand McNally, A. V. Nystrom and Oren Companies asking that they submit maps and globes for display. I will notify you as soon as the materials are received. This probably will not be much before April 1.

Again I would like to express my appreciation for the interest displayed by you in this phase of the social-studies program.

Very truly yours,

A. J. Dillehay
Executive Director
Curriculum and Instruction
Two globes were placed in this room. The science room took charge of an older, twenty-two-inch, metal outline globe. One of the globes was placed in the library for use as reference material.

A small central storage room was located on the first floor. The committee decided that all maps that were not used regularly by anyone teacher in the lower grades should be stored in that room while not in use. Teachers that used maps from this room were asked to return them within a reasonable time. Whenever a map was borrowed, the teacher was asked to place her name, room number, name of map, company, and the approximate time she would need the map, on a form sheet located on a table in the room (Form XIII).

**FORM XIII**

**MAP LOAN SHEET**

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Room No.</td>
<td>...............................</td>
</tr>
<tr>
<td>Name of Map</td>
<td>...............................</td>
</tr>
<tr>
<td>Company</td>
<td>...............................</td>
</tr>
<tr>
<td>Time of Use</td>
<td>...............................</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Room No.</td>
<td>...............................</td>
</tr>
<tr>
<td>Name of Map</td>
<td>...............................</td>
</tr>
<tr>
<td>Company</td>
<td>...............................</td>
</tr>
<tr>
<td>Time of Use</td>
<td>...............................</td>
</tr>
</tbody>
</table>

(Six such groups on one sheet)

If a child were sent to the room to borrow a map, the name of
the child was placed in the space marked "name." Inasmuch as the room was sure to get dirty and out of order, the maps were hung on racks which made it convenient for one of the fifth-grade children to keep the room clean and in order.

After discussing the third, fourth, and fifth grade map needs with the teachers, an individual plan was followed which would help that small group. Each teacher kept in her room the one map and one globe that would be most frequently used in her room throughout the year. In the fifth grade this map was a large United States map. In the fourth grade a world map was suggested by the teacher. The third-grade teacher decided on a map of Ohio. Since geographical terms were studied practically for the first time in the fourth grade, this map was kept in that room.

Finally, in order to keep an active record of the location of these maps, an inventory was filed in the office. The name of the map, the company, the date purchased (new maps only), and the location, were necessary. Copies of this inventory were posted in the map room and in the social studies room. No iron-clad rules were asked to be followed as to what maps could be borrowed because the committee considered the materials as belonging to the school and were to be used for the benefit of all. These suggestions were used only to help facilitate distribution.
Besides investigating maps and globes, the committee gave some thought to the use of charts, graphs, and bulletin boards. The science room lacked many necessary materials. A set of "Health and Hygiene Charts"31 and "Science Charts"32 were borrowed and tried out with the science classes (refer to Appendix, Forms XVIII and XIX).

The first set was purchased by the Board of Education while the second set was purchased by the eighth-grade class.

In connection with a study made of arithmetic, several teachers made charts on various difficult processes. These charts for the most part were made from white poster cardboard. Miss M. used several charts to aid in teaching fractions. The ideas for these were taken from Dale's33 book on Audio Visual Methods in Teaching. Mrs. H. used charts for teaching long division which proved very helpful. Charts as number games, were used in the primary grades. Miss G. and Miss I. made use of silent reading charts. Miss B. and Mrs. C. were aided in the use of mounted colors on large chart paper with the name after the color. Large bar graphs


were made by the students in correlating art, arithmetic, and social studies. One very fine graph was made in large size to show the difference in the production of natural rubber by various countries. Chart material from many industrial sources was used in social studies and science. In the fall, leaves and leaf prints were mounted on large poster paper. Weather charts were made by the eighth-grade children. Many charts on safety were studied and others made by the students.

The following charts were purchased by the Board of Education for use in the science room:

1. Washburn Insects
2. Beginners Botany - Stems
3. * * - Leaves
4. * * - Fruits
5. * * - Flowers

The bulletin board space was used to good advantage in the court by the art teacher. Many interesting displays centered around holiday themes and customs of peoples in other lands.

Use of the School Library.

The library was designated by the committee as the proper place to house the school-owned filmstrips, a mounted picture file, and a show case for museum articles. A small collection of filmstrips was started by first considering the needs of primary reading and upper-grade arithmetic. The
following filmstrips and their producers were purchased by the school.

1. "Skip Along Text Film" ) Row
2. "Tell Another Story" ) Peterson
3. "I Live in the Country" ) Company
4. "I Live in the City" ) Company
5. Multiplication and Division ) Jam Handy
6. Addition and Subtraction ) Company

School journeys.

Although very little time was given to the study of the school journey by the committee, a few teachers made use of this visual aid. Mrs. H. made successful trips with her fourth and fifth grade class to a bakery, public library, and a theatre. Mrs. L. took her sixth grade class to a rubber exhibit and an exhibit of museum materials at the public library. Miss J. visited a museum exhibit with a seventh grade art class. Mr. R. visited the weather bureau, the airport, a rubber exhibit, and John Brown's Home and Historical Museum with some of his science classes. In the fall Mr. R. took his science classes on a number of field trips to study leaves and insects.

The following questionnaire was worked out by the chairman in conjunction with the committee (Form XIV).

The purpose of this questionnaire is to obtain, for educational purposes, information from industries, stores, and public institutions which concerns the possibility of school trips to these places.
FORM XIV

SCHOOL JOURNEY QUESTIONNAIRE

Dear neighbor:

The visual education committee of Fraunfelter school would appreciate your cooperation in filling out the form below and returning it to our school in the near future.

We are working on a visual aids program in which the school journey is an important part. If a trip to your business will help the children to become better adjusted citizens of our community, I am positive we shall all benefit.

Sincerely yours,

Name of Firm or Institution

Are there provisions already established for class visitation?

If you have not planned in the past for visits by children, would you be interested in working this matter out with us?

What processes or educational interests would the children be able to view?

Designate the age group you could accommodate: 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18

What number is the largest group of children you could handle in one visit?

Do you have supervised tours?

How much time would the tour consume?

What days are most suitable? A.M. and P.M.?

Whom would we contact to schedule a trip?
CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

The development of the program of visual aids at Fraunfelter school was started when a group of teachers, including the writer, studied ways of making instruction more effective through the use of visual aids. However, it was recognized by these teachers from the beginning that merely studying a problem without effecting a change in the school program would be of little educational worth. Moreover, it was desirable for this program to be constantly improved, and a continuous evaluation and reconstruction would be necessary. The conclusions and recommendations recorded in this chapter are the result of the writer's experiences with a committee of Fraunfelter teachers as they searchingly studied and explored this problem and pursued its developing implications. As one consequence and outcome of this study and action, the writer has arrived at the following conclusions which may be helpful to others.

Conclusions.

To carry out a program of visual aids in an individual school of a large city, a visual aids coordinator must be selected who is enthusiastic about visual education and
who is willing to accept such a challenge to the degree that he will help others of his fellow teachers to gain this enthusiasm. Nevertheless, one person cannot successfully initiate a program of this kind. Confidence and interest in the program can be maintained best through the establishment of a committee of teachers who are willing to work on this program with the coordinator. The teacher who possesses a sound democratic philosophy of education makes a good member of this committee. During the period of this study the progress of the committee was slowed many times by the unwillingness of one of its members to accept the principle of working together for the common good. While one group of teachers may assume leadership in visual instruction, all of the teachers must participate in using these aids if the program is to be successful.

Teachers are slow to accept change. The members of the visual aids committee were discouraged many times throughout the year by the indifferent attitude on the part of some of their fellow teachers. At times it seemed that the program was doomed to complete failure by the lack of teacher cooperation. Some of the teachers would make no effort to preview films; others would fail to follow out instructions in scheduling equipment and evaluating films;
and still others were so engrossed in method that they could not find time to use this aid to learning. All of this lack of understanding by some of the teachers shows clearly that something must be done to teach the teacher to recognize that visual education is not an educational extra to be used if and when the teacher can find time for it, but is definitely valuable as an aid in meeting certain educational objectives.

The security that results from being a member of a large school system often causes the less aggressive teacher to maintain the "status quo" in teaching methods and knowledge. In turn, this makes it difficult for the progressive teacher to receive assistance. Some teachers view their work day as commencing when children arrive at school and ending when the last bell tolls in the afternoon. With this attitude prevalent in so many teachers, an in-service training program in the use of visual aids is a necessary part of every school program. Dale says:

Teachers who have developed confidence and security in teaching by a certain method may become fearful or insecure when required to learn a new way of teaching. They may enjoy a fine reputation as drill-masters who make students learn the hard way. Then along comes a new method in which interest, meaning, and understanding are paramount.

Will it be easy for such teachers to shift over to the new technique? It all depends upon the flexibility
of their minds. They may feel that their success as teachers may be jeopardized. Hence, why not stick fast to the old and criticize the new? Why not cover up these fears by making a vigorous attack upon "new fangled notions"? They can always count on support from other unenterprising elements. 34

Cooperation must be received by the administration in both the individual school and the entire school system if an effective program of visual aids is to supplement the curriculum. Since this program was started by the enthusiasm of one teacher it was necessary to draw upon the leadership of the principal of the school to help in obtaining the interest of all the teachers. At the beginning of the year each school in the city was asked by the director of curriculum to choose a problem related to that school, and by means of workshop groups, attempt to solve it. In that a visual aids committee had already been appointed at Fraunfelter school, this directive presented a grand opportunity for the faculty to study the needs of visual instruction. However, the principal failed to see the scope of the visual aids program and instead elected to choose the study of arithmetic. Inasmuch as two studies were made simultaneously, neither had the entire support of the teachers. Nevertheless, the principal gave much support and encouragement to the work of the visual aids committee.

It is possible to secure a generous measure of coopera-

34 Ibid., p. 522.
tion from the central administration if the teachers themselves show a determination to work together to improve educational practices in a school. This was made clear in Chapters IV and V.

Pupils and teachers can work cooperatively in the administration of a visual aids program in a school. Some teachers are skeptical about giving important responsibilities to elementary age children. The writer discovered that sixth-grade youngsters can learn how to operate visual equipment as quickly as eighth-grade youngsters. Furthermore the sixth-grade boys are as dependable as the older boys in the maintenance of the machines. It must be remembered, however, that these youngsters must first be selected with care and then given thorough training before these results can be realized.

A city-wide visual aids program of visual education can be effective only when the teachers of each school make an effort to understand and explore the use of these aids in their own situation. Dale, in writing of the administration of audio-visual materials, points out problems which were also encountered in other schools:

... All teachers must participate in administration. As a teacher you must help plan for effective

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administration of curriculum materials, for if you do not, a curriculum will be "handed down" to you from above. Any really democratic program of administration looks upon teachers not as the persons to be administered by some higher up, but as co-administrators. 35 Leadership from individual schools is necessary if the services of the central visual aids department are to be improved. The writer found that ideas resulting from the program at Fraunfelder school were whole-heartedly accepted by the central visual aids director. Furthermore, as a result of the writer's interest in visual aids, he was invited to participate in the "Ninth Annual Conference on Elementary Education," sponsored by The Ohio State University and the Department of Elementary School Principals of the National Education Association.

Throughout this study the mental hygiene of the teacher played a significant role in the development of the program. Economic insecurity of the teacher lowers his morale to the extent that it lessens his desire to improve himself and his teaching standards. After the defeat of a local school levy by the citizenry of Akron it became increasingly difficult to get the teachers to give more of their time for educational improvement. However, once the teacher is relieved of this insecurity, courageous democratic leadership

35 ibid., p. 470.
by the administrative staff will be necessary before any appreciable change in the attitudes of teachers can be realized.

**Recommendations.**

To study and establish a successful program of visual aids in an individual school, two to three years' time is needed. This length of time is short in comparison to the length of time it has taken the average teacher to understand the values underlying the use of visual aids. As far back as 1924, studies were made proving that accelerated learning took place when visual aids were used.

Frank N. Freeman says,

> Scientific experiments have shown that well selected pictures, slides, stereographs, silent motion pictures, or talking pictures may add 10 to 25 percent or more to the scores on tests of the subjects which have been studied. 36

Almost a quarter of a century later, teachers are still skeptical of the worth of the time allotted to the use of these aids.

Libraries should be large enough to house and distribute all visual aids.

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Teachers' meetings should be given over periodically to the discussion and demonstration of the correct uses of visual aids. More in-service training films shown at this time would encourage each teacher.

The school should establish a regular means of securing or earning money to finance its own program of visual aids. A number of filmstrip machines need to be purchased, so that certain teachers can make use of this simple machine every day without too much program adjustment. The frequent use of these materials in the home room in direct relation to regular instruction could be encouraged in this way.

A central visual aids department should own more than one print of each film in order that schools might borrow them for at least two days. This central office should establish motorcycle delivery service to each school so that the physical effort and time expended by each teacher to secure, use, and return these aids would be reduced to the minimum, and so that children would not need to be used for this service. The central office should provide a broad program of school journeys for each school making transportation by school bus available for the children. The central director of visual aids has expressed his desire to use the idea presented in Chapter V concerning this matter.

A trailer museum should be established for use by
the schools of Akron. This project could be financed by various community sources such as: the Board of Education, public library, historical societies, or by public subscription.

A functional course covering the use of visual education should be a part of the curriculum of all colleges and universities that offer a degree in education. This would make it convenient for teachers to attend their nearest local university and receive in-service training in visual education.

A teacher workshop should be established by the central visual aids department to instruct the teachers in the making of slides and the developing of pictures. This has already been planned by the director of visual aids in Akron for the following year.

The responsibility of democratic committee work and the responsibility of democratic committee leadership, investigation, and report on problems of this sort constitute very unusual opportunities for professional growth and a very functional process of in-service education.
BIBLIOGRAPHY


"Debunking Visual Instruction," High School Teacher, VIII (December, 1932), 370-93.


Zywe, Claire, "The Effectiveness of Slides in Teaching Drill Subjects; and Experimental Study of Methods of Teaching Spelling and Arithmetic Combinations," *Visual Instruction News, V* (January, 1932), pp. 7, 8, 12.
FIGURE I

STEPs IN THREADING

1. Lift film retaining bar.
2. Insert film in top film magazine; place so film rolls 
   counter-clockwise as it feeds.
3. Open gate by releasing gate catch.
4. Thread film on sprocket teeth. (Be sure sprocket teeth 
   engage with film perforations.)
5. Close gate.
6. Turn on projection lamp switch.
7. Frame film by pushing in on operating knob and rotating. 
   When picture is in proper frame, pull out on knob.
8. By turning control knob clockwise, picture will be ad-
   vanced in proper frame automatically.
Mr. Sumner Vanica  
Director of Visual Education  
Board of Education Building  
Akron, Ohio  

Dear Sir:

The material I received at the Ohio State Museum is enclosed, with the approximate dates listed on each item that would be satisfactory for our use at Fraunfeiter.

Please note the exception of only a one-month loan of No. 3 box of insects. Also, the natural history color slides are available for not longer than one week and not more than two or three sets at a time; however, Mr. Jenny made it clear that they could be borrowed more than once during the school year.

I'll be looking forward to making use of these in our program at Fraunfeiter.

Sincerely yours,

Carroll K. Gustely
Form XVI
VISUAL AIDS REQUISITION

Akron Catalog

Name of School ______________________________ Date ____________
Visual Aids Representative ____________________________

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<th>Date desired</th>
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<td>This is a special requisition submitted by the visual aids committee of Fraun-</td>
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<tr>
<td></td>
<td>felter School</td>
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<td>1</td>
<td>Health and Hygiene Charts - Dr. William I. Fishbein - A. J. Nystrom</td>
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<td>1</td>
<td>New Davis Smith Science Charts - A. J. Nystrom</td>
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<td>4</td>
<td>3' Sections of Map Rail - A. J. Nystrom</td>
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Remarks

NOTE: Use this form for all materials not requisitioned from the Warehouse. The School Supply Catalogue carries the list of supplies in the Warehouse. Use requisition Form No. W1 for those supplies. Use only columns headed Quantity and Description.
All requisitions for educational supplies and equipment or pertaining to the maintenance of equipment used in connection with instruction should be sent to the Business Office.
All requisitions pertaining to the building and its mechanical operation should be sent to the office of the Maintenance Department.
FORM XVIII

A. J. NYSTROM & COMPANY
3333 Elston Avenue
Chicago, 18, Illinois

April 24, 1947

Mr. Carroll Gusteley
Fraunfelter School
159 N. Arlington Street
Akron 5, Ohio

Dear Mr. Gusteley:

As arranged with Mr. A. J. Dillehay by our representative, Mr. J. C. Rutherford, we are glad to send to you for examination our set of Fishbein Health and Hygiene Charts. This will come to you on manila in fixed chart head with tripod stand but, as indicated on the tag, other mountings are available.

If, on examination, you have any questions regarding these charts, we shall be happy to assist you from this office or through the personal attention of Mr. Rutherford.

Very truly yours,
A. J. NYSTROM & COMPANY

G. J. Carlson

GJC:lr
FORM XIX

A. J. NYSTROM & COMPANY
3333 Elston Avenue
Chicago 18, Illinois

Dear Mr. Guteley:

Sorry I didn't get to see you Friday morning, but tied up at the University and then had to make a rush trip to Cleveland. Would have liked to get the reaction of the youngsters on charts.

Am taking the privilege of sending you a couple of pamphlets which might be of help to you and your committee in the selection of maps, globes, and charts.

Thanking you for an enjoyable visit, I remain

Sincerely,

J. C. Rutherford