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The Effect of Motion Pictures on Learning in Anderson County, Texas Based on a Survey of One Hundred and Twenty High School Students

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THE EFFECT OF MOTION PICTURES ON LEARNING IN ANDERSON COUNTY, TEXAS BASED ON A SURVEY OF ONE HUNDRED AND TWENTY HIGH SCHOOL STUDENTS

By

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DEDICATION

To my mother Bessie Lyons Furch, for her patience and inspiration, my daughter, Esther Eugene, and my three sons, Maurice Augustus, Harold, and William Lincoln, for their constant insistance.

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CHAPTER I

INTRODUCTION

For several years a difference of methods has existed regarding the relative effectiveness of when orientation for a film should be given as to motivation for learning. The many procedures and practices, as evident now, have been based on limited observation and very little experimental evidence to support or justify their continued use.

Statement of the Problem

It is the purpose of this study to show the teaching procedures used with the motion picture as a teaching aid in certain situations for vocational agriculture students in six Anderson County, Texas high schools. A further purpose is to show the learning rate of students as revealed through tests and questionnaires and to outline practices which should be used with motion picture films, thereby, enhancing learning through problem solving with the proper motivation.

Justification of the Study

The motion picture is of value in teaching to the extent that it contributes to more effective teaching and greater comprehension. If every teacher would challenge himself with the question, "Will my teaching be more efficient and will the students learn more rapidly and with greater understanding, if I use films?" If this is given thought, the teacher would be more discriminating in his choice of films. He would, at least, avoid the use of films as a respite from an otherwise dull presentation of a subject.

The motion picture film would take over forms of teaching aids when motion is necessary to the understanding of the subject matter. The

variety and interest provided by the motion picture, in addition to close-ups, slow motion, and animation, stimulate learning and understanding which would not be possible through other visual media.

The effect of sound with motion pictures further stimulates learning, particularly in the cases where sound is necessary for developing the impressions about the subject presented.

The possible number of situations in which motion pictures may be used is too large to permit an enumeration of suggestions of what is required in each circumstance. However, this study is limited to the teaching of vocational agriculture.

Teachers in this field have been among the most progressive seizing upon new teaching methods, materials, and tools to adjust their teaching to todays' problems. They know that the important thing is to teach meanings, not brittle facts soon forgotten. They know that words are merely convenient labels for meanings and are not generally important in themselves. Thus, they have been most active in the intelligent, ingenious, and effective use of motion picture materials. Yet, the use of the motion pictures has not been correctly placed as an integrated instructional material in the curriculum of the six Anderson County, Texas high schools' vocational agriculture departments to get the maximum retention of learning for students.

Methods of Procedure and Source of Data

An experimental test was conducted with vocational agriculture students in six Anderson County, Texas high schools, with the showing of the same film, "High Level Profit," to vocational agriculture students of each school.

The test was conducted by the writer, giving the test before viewing to determine how much each student knew about the contents of the film.

Then giving a detailed orientation covering the high points, which the writer feels was sufficient to arouse interest, create ideals and define terms in relation to their experiences, the film was shown and the same test was given after viewing the film.

The score of each student was tabulated. The one before viewing was subtracted from the one after viewing, which gave a per cent gained. The per cent gained was considered to be knowledge learned as a results of the film.

The first test was followed by a second within ten to twenty days.

The second experimental test was conducted with vocational agriculture students in six Anderson County high schools, with the same students taking the first test using a film, "Formula for Profit."

The test was conducted by the writer, giving the test before viewing to determine how much each student knew about the contents of the film, "Formula for Profit." The students were allowed to preview the film. They were given a detailed orientation covering the high points which was sufficient to arouse interest, create ideals, and define terms in relations to their experiences.

The film was shown and the same test was given students before previewing the film, "Formula for Profit."

The scores of each student were tabulated, the one before previewing was subtracted from the one scored after viewing the film for the second time, which gave a per cent gained. This per cent gained was considered to be knowledge learned as a results of the film.

The per cent gained on the film "High Level Profit," after orientation was subtracted from the per cent gained on the second test on the film, "Formula for Profit." This was credited to the amount of knowledge

gained as a results of the difference in timing of orientation for motivation of learning.

Questionnaires were sent to each vocational agriculture instructor in the six Anderson County high schools. Replies were received from each teacher..

The questionnaire contained questions revealing the history and background of each vocational agriculture department, tenure of teachers, geographical location and teaching procedures used with the motion picture as a teaching aid.

An evaluation of the replies from these questionnaires revealed fallacies of procedures in the use of the motion pictures as a teaching aid, also, availability of equipment, size, and geographical location.

Definitions of Terms Used

Animation - Learning experiences taught that are full of life and spirit with a strong resemblance of life.

Full-time - A vocational agriculture department with an instructor devoting all of his time in the field of organized vocational agriculture education.

Mental Image - A mental image is a pictorial feature of a definite object or act brought about due to any stimulation or result of methods of presentation to make a visible representation in the mind of a student.

Motive Power - Motive power is to connect the guiding or controlling ideas of learning situations with definite objectives in mind.

Motivation - Motivation is an act or gesture to arouse interest and establish ideals of achievement, which will lead to action for some future effort. A means to and not an end in itself.

Neurological Memory Stimulation - Neurological memory stimulation is the results of any thought provoking situation that effects the nervous system to cause retention of ideas and interest or the loss of both ideas and interest.

Organismic Functioning - Organismic functioning is the action of any thing or structure composed of distinct parts and so constructed that the functioning of the parts and their relations to one another is governed by their relation to the whole. Often referred to by teachers as training the "whole child."

Orientation - Orientation is the adjustment of pupil's mind to the awareness of the existing situations with reference to time, place, persons and the why, to create interest for learning that will be useful when needed.

Part-time - Part-time refers to a vocational agriculture department of a school, when the vocation agriculture teacher does not teach agricultural subject matter all of his working hours. The Texas Education Agency recognizes department on fifty per cent basis and seventy-five per cent basis.

Sensory Experiences - Sensory experiences are those that register in the brain as a result of any or combination of the five senses. These are regulated by society and individuals whether they are desirable or undesirable.

Visual Metaphor - Visual metaphor is an image that identifies one object with another and ascribe to the first the qualities of the second.

Review of Related Literature

Patton[1] used the motion picture, "Nature's Half Acre," as a core for a nature study unit. He showed the film without introducing it or presenting any form of orientation. After viewing, questions suggested by the students was the theme for study in the second viewing.

The second viewing suggested projects for applications that the students could perform during the next day. These results brought about a need for a third viewing.

The third viewing was to find out the relationship of other natural resources brought about as a result of the projects.

This study pointed out that the motion picture can promote a broader development of subjects than would be impossible in present day educational programs. They make available to the teacher expert time elapse; photography of subjects that would otherwise require endless hours of observation to the average student.

Hass and Parker[2] stated that visual aids should be regarded as adjuncts to good teaching. Such aids cannot displace good textbooks and instructional techniques that have been used for generations. Visual aids are primarily intended for group study, and the contents of even a series of motion pictures may not equal the content value of a good textbook. Further, students can study a textbook at their on pace; they are not regarded or speeded by the fixed pace of the motion picture or sound film.

Dale[3] evaluated the place of the motion picture in classroom in-

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[1]Barrett Patton, "Teaching Tools," Audio-Visual Education Association of Arizona, (January, 1956), 22-23.

[2]Kenneth B. Hass, and Harry Q. Parker, Preparation and Use of Audio-Visual Aids, (New York: Prentice-Hall, Inc., 1950), p. 279.

[3]Edgar Dale, Audio-Visual Methods in Teaching, (New York: The Dryden Press, 1951), p. 195.

struction by saying that, "Motion pictures cannot displace teachers, but films do make the job of the teacher more complex and more responsible." Today the motion picture is essentially a group device, not for individual study. The films can help teachers make their work more effective.

Perfect teaching is a situation in which every one learns, everyone has fun, and no one feels that he has been overworked.[4]

There is no best teaching aid, but when an illusion of reality is desired, and when it is desirable to see persons and things in action, living and moving, the motion picture is usually the best aid to employ.[5]

No one can tell a teacher exactly what to use. The good teacher knows the pupils in his class, their weaknesses, and their strength.

Kinder[6] stated that motion pictures are instruments which teachers can use to enhance the effectiveness of their work and they are not to be looked upon as a substitute for the teacher, for textbooks, or for other time-honored instrumentalities of the classroom.

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[4]Robert Hoppock, Group Guidance, Principles, Techniques, and Evaluation, (New York: McGraw-Hill Book Company, Inc., 1949), p. 56.

[5]Anna Curtis Chandler, and Irene F. Chypher, Audio-Visual Techniques, (New York: Noble and Noble Publishers, Inc., 1948), p. 22.

[6]James S. Kinder, "Audio-Visual Materials and Techniques," (New York: The American Book Company, 1950), 78.

CHAPTER II

HISTORY AND BACKGROUND OF SIX ANDERSON COUNTY HIGH SCHOOLS' VOCATIONAL AGRICULTURE DEPARTMENTS

Anderson County is a Central East Texas County. It is bounded on the east by the Neches River and on the west by the Trinity River; on the north by Henderson County and on the south by Houston County.

The population was thirty-one thousand eight hundred and seventy-five in 1950. The scholastic population was six thousand nine hundred and nineteen in 1955.[7]

United States highways eighty seven, seventy nine, eighty four and one hundred seventy five; and State highways two hundred ninety four and one hundred fifty five, are the principle thoroughfares.

A. M. Story High School. The A. M. Story High School is located in the city of Palestine, Texas. The school district, Palestine District, is composed of the urban and surrounding rural areas. United States highways seventy nine, two hundred eighty seven, and eighty four and State highways nineteen and one hundred fifty five, are the principle thoroughfares.

The vocational agriculture department was instituted in the old Lincoln High School in 1950, to serve the rural scholastics of the school. The name of the school was changed to A. M. Story High School in 1953, when the new school was built.

The department was accredited in 1950 and has continued to be recognized as a full-time one by the Texas Education Agency.

The physical plant is modern, with a classroom, farm shop, office

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[7]Texas Almanac, The Dallas Morning News, (1955 Edition 514), 415 pp.

and storage space to meet the requirements as set up by the Texas Education Agency.

The vocational agriculture department maintained an active New Farmers of America chapter. The chapter is affiliated with the district, area federation, state association and national organization. The local chapter has rated high in the New Farmers of America organization with outstanding performance in the State judging contests and leadership activities, also, the district "Corn Growing Contest" for the supervised farming program.

The tenure of the vocational agriculture instructors for the department has been constant, having had one teacher for the six years of organized instruction.

Carver High School. The Carver High School is located three miles north of Frankston, Texas, eight tenth of a mile from United States highway one hundred seventy five, in the Frankston school district. The Frankston school district is situated in the northwestern part of Anderson County, also a small portion of the southeastern part of Henderson County.

The vocational agriculture department in Carver High School was instituted in August, 1940 to serve the farming families in the district.

The department was accredited in 1940 by the State Board of Education and has continued to be recognized as a full-time one by the Texas Education Agency.

The physical plant has been adequate to meet the requirements as set up by the Texas Education Agency, with sufficient space for classroom, farm shop and storage.

The department has maintained an active New Farmers of America chapter. The chapter is affiliated with the district, area federation, state association and national organization. It has furnished the state

association with officers. The supervised farming activities have had several winners in the State Fair of Texas annually, with their swine production program. Representatives have appeared on Radio Station WFAA, Dallas, Texas, on the "Early Bird Show."

The tenure of instructors has been constant, having has only two instructors for sixteen years of organized instruction. The first instructor stayed only two years and present instructor has remained for fourteen years.

Clemons High School. The Clemons High School is located in the Neches School District, five miles north of Neches, Texas on Farm Market Road nineteen.

The Neches district is situated in the northwest part of Anderson County. United States Highway seventy nine, State Highway one hundred fifty five and farm market roads are the principle thoroughfares serving the community.

The vocational agriculture department in the Clemons High School was instituted in 1940 to serve this district's farming section of Anderson County.

The department was accredited in 1940 by the State Board of Education and has continued to be recognized by the Texas Education Agency as a full-time department.

The tenure of agricultural instructors has varied with three instructors--the first serving three years, the second, one year; and the third, and present one, serving thirteen years uninterrupted.

The physical plant has been adequate, with a classroom, farm shop and storage space sufficient to meet the requirements of the Texas Education Agency. In 1954, the first plant was destroyed by fire, however, it was immediately replaced.

The department has maintained an active New Farmers of America chapter. The local chapter has had several students to participate in leadership contests and in livestock judging contests on State and National level. This chapter has been used annually by teacher training institutions for students preparing to be instructors in vocational agriculture.

Green Bay High School. The Green Bay High School is located seven miles from Palestine, Texas on United States Highway seventy nine, in the mid-western part of Anderson County. The school district, known as the Tucker District, is bounded on the west by the Trinity River, on the south by the Elkhart School District, on the east by the Palestine School District and on the north by the Four Pines and Tennessee Colony School Districts. United States Highway seventy nine and State Highway two hundred ninety one, are the principle thoroughfares serving the community.

The vocational agriculture department was added to this school in 1934 by the State Board of Education, with fifty two students enrolled in agricultural instruction the first year.

The department was accredited in 1934 by the State Board of Education and has continued to be a full-time department until 1954. Since that time it has been operated as a full-time department by the local school board and as a part-time department by the Texas Education Agency.

The vocational agriculture department has had two instructors. The first one had a tenure of two years and the present one has had twenty years of uninterrupted tenure in organized instruction.

The vocational agriculture department has had sufficient floor space for shops, classroom and storage to meet the requirement as set up by the State Board of Education. The requirement for equipment has been

more than satisfactory in this department since the beginning.

During World War II, beginning early in 1940, this department began to participate in the Out-of-School Youth Training Program as set up by the United States War Department, with an outstanding shop program training youths and adults in metal and wood working.

The local chapter of the New Farmers of America has maintained district, area federation, state association and national organization affiliation since the beginning. The local chapter has furnished some outstanding leadership of youth on district, area, and national levels, for the New Farmers of America organizations. Also, this chapter furnished some leaders in organized recreational activities when this was a part of the New Farmers of America program.

This department uses the motion picture in its organized instruction for adults as well as for in-school teaching aid.

Henry High School. The Henry High School is located in the city of Elkhart, Texas. The school district is situated in the southern part of Anderson County, comprising twenty-five square miles of territory between two rivers. The Neches River on the east side and the Trinity River on the west, also extending into a small portion of the northern part of Houston County forming the southern boundaries and on the north by the Palestine and Tucker districts, are extents of the boundaries of the district served by the Henry High School.

The vocational agriculture department was instituted in the Henry High School in 1939, to serve forty-nine students enrolled for vocational agricultural instruction.

The department was accredited in 1939 by the State Board of Education and has continued to be recognized by the Texas Education Agency as a full-time department.

The vocational agriculture building was constructed by the students enrolled in the classes of the school year of 1939 and 1940. The building is twenty-five by fifty feet, with sufficient space for storage, classrooms and a teacher's office, which meet the requirements set up by the State Board of Education.

During World War II, beginning in 1940, this department participated extensively in the Out-of-School Youth Training Program as set up by the United States War Department, with an outstanding farm shop program for training youth and adults in metal and wood working.

This activity was carried over after the war in 1946 into the Veterans' Farm Program, to further the training of young farmers returning from serving in the Armed Forces. Since the beginning, this department has maintained an excellent farm shop program.

The Henry High School vocational agriculture department has had two instructors, the first taught four years--leaving to enter the Armed Forces, and the present instructor has given fourteen years of uninterrupted service in organized instruction.

This department has maintained a local chapter of the New Farmers of America. It has also maintained its affiliation with the district, area federation, state association and the national organization of the New Farmers of America.

This department was the first one in the county to use the motion picture as a teaching aid, also to own its motion picture projector.

Massey Lake High School. The Massey Lake High School is located two and five tenth miles west of Tennessee Colony, Texas on Farm Road three thirty one. The school district is situated in the northwestern part of Anderson County. United States Highway two hundred eight seven and State Highway nineteen, are the principle thoroughfares serving the

community.

The vocational agriculture department in the Massey Lake School was instituted in August, 1949, to serve one hundred and ninety farm families. The department had forty four boys enrolled in all-day classes the first year. The department has an adult agricultural program with forty male students enrolled.

The department was accredited in 1949 and has continued to be recognized as a full-time department by the Texas Education Agency.

The physical plant was not the best at the beginning of 1949--which was at that time composed of one shop building--twenty five by fifty feet. The present classroom, office and storage room was constructed by the pupils in agricultural classes in the year of 1951. The classroom is twenty by forty feet, with seventy square feet of window lights, ninety square feet of blackboard space and a teacher's office. An average of forty students have been enrolled in agricultural education for the past seven years. There is a little more than twenty square feet of classroom space and thirty square feet of farm shop space per pupil; which is larger than the requirements setup by the Texas Education Agency.

The department maintained an active New Farmers of America Chapter that is affiliated with district, area federation, state association, and national organization of New Farmers of America. The local chapter has assisted financing five hundred to two thousand dollars in supervised farming programs annually, though local banks.

The tenure of instructors in this department has been constant, having had only one teacher for the seven years of organized instruction in vocational agriculture.

CHAPTER III

LEARNING THROUGH MOTIVATION

Vocational agriculture teachers have been somewhat reluctant to accept motion pictures for educational purposes, but that hesitancy and skepticism seem to be on the wane. The motion picture has earned a place in educational programs on equal terms with that of other forms of teaching aids. Yet, the problem of many teachers is a clear concept of how to apply the techniques to motivate students to get the desired amount of learning over to their students. Consequently, the teachers hesitate to make further use of motion pictures.

Sensory Experiences With Motivation For Learning

The motion picture supplies the visual and sound stimulants that will aid in creating the proper mental image for the learner and that is a true basis for learning. Textbooks and oral discussions of words usually mean nothing to a student until translated into mental image. Dewey[8] has been one of the ardent exponents of this idea that learning will be facilitated if students form correct images. His pedagogic creed includes the following statements:

> 1. The image is the great instrument of instruction. What a child gets out of any subject presented to him is simply the images which he himself forms with regard to it.
>
> 2. If nine-tenths of the energy at present directed towards making the child learn certain things were spent seeing to it that the child was forming images, the work of instructing would be greatly facilitated.
>
> 3. Much of the time and attention now given to the preparation and presentation of lessons might be more wisely and profitable expended in training the child's power of imaginary and in

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[8]John Dewey, Education Today, (New York: G. P. Putnan's and Sons, 1940), p. 13.

seeing to it that he was continually forming definite, vivid and growing images of the various subjects with which he comes in contact in his experiences.

With a broader concept as to the when, where, and how of the subject matter, all learning is the results of sensory experiences. The responsibility of the instructor is to discover and use the various sensory experiences in the proportion that produces the most effective results. The students will be stimulated by desires to find the answers to questions which arise in their minds. The students weill have sound reasoning habits which they will take into adulthood.

Lancelot[9] states the fact that ideals can be established only after interests have been aroused. Thus, interests and ideals comprise the essential parts of what is called motivation. Therefore, interests and ideals or goals which students seek to attain must be aroused through a prerequisite of subject matter as near as possible, thereby enhancing the degree of attention and creating a desire for learning through motivation. If students have ideals, the motive power is generated within themselves. Even more important it seems, are the effects upon the quality of the work performed by the students. Work motivated from within is better done than that which is performed under external pressure. The knowledge acquired is better retained.

Learning Aids Effectiveness

Dale[10] summarized the manner in which students learn from direct and indirect experience and of concrete and abstract experience, in a pictorial device called the "Cone of Experience."

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[9]W. H. Lancelot, Permanent Learning, (New York: John Wiley and Sons, Inc., 1948), pp. 49-60.

[10]Edgar Dale, Audio-Visual Methods in Teaching, (New York: The Dryden Press, Publishers, 1946), pp. 37-41.

> The "Cone of Experience" is not offered as a perfect flawless picture to be taken with absolute literalness in its simplified form. It is merely a visual aid to explain the inter-relationships of the various types of audio-visual materials, as well as their individual positions in the learning process. Even the hastiest look at the cone shows that sensory materials can be readily classified as they move from the most direct to the abstract kind of learning.

As you study the "Cone of Experience," you can recognize that each division represents a stage between the two extremes, between direct experience and purs abstraction. As you study by traveling upwards from the base, you move in a order of decreasing directiveness. Thus, the learning effectiveness is lessened as you read from the base upward.

> However, you will make a dangerous error if you regard these bands on the cone as rigid, inflexible divisions. For the different kind of sensory aids often overlay and blend into one another. For example, the motion picture can be silent or they can combine sight and sound, dramatization is often something which you view as a spectator, and yet you might participate in it as an actor. Students may merely view a demonstration, or they may view it and participate in it. In other words, the devise of the cone must be taken for nothing more than it is--a visual metaphor of learning experiences, in which various kinds of learning audio-visual materials appear in the increasing abstraction as one proceeds from direct experience.

The "Cone of Experience," places the motion picture on the sixth band counting upwards. The motion picture, as a teaching aid is not the end itself but only one way towards getting the students to learn more and use what they learn in order that they may live a worthwhile life within the framework of education in American Democracy.[11]

The Learning process. In modern curriculum designing, the tendency now is to be less concerned about the contents of learning but more concerned about the dynamics of the process of learning. Otto[12] made the

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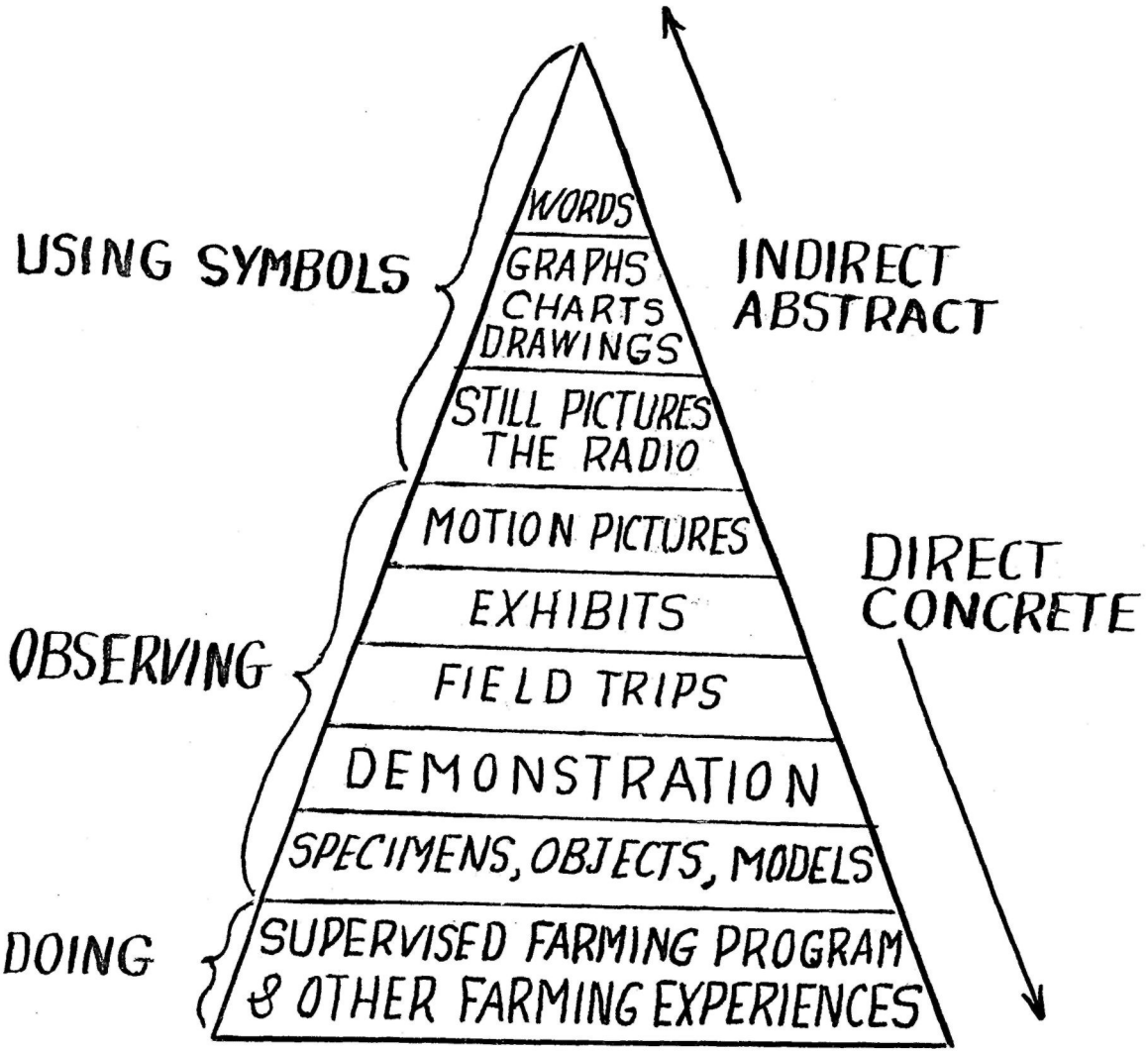
[11]Loren E. Whipp, Are Your Teaching Aids Effective, (New York: Harper and Brothers, Publishers, 1954), p. 37.

[12]Henry J. Otto, Elementary School Administration and Organization, (New York: Appleton-Century-Crofts Company, Inc., 1954), p. 56.

Figure 1. The Cone of Experience



Adapted from University of Missouri, Bulletin No. 45-A, Modification for Vocational Agriculture from Edgar Dale.

following statement as to when learning is most likely to take place:

> Learning takes place in problem solving situations. All learning involves the solving of problems. Learning takes place when in his goal seeking effort, the student acquires a new way of behaving. Although, man is capable of two types of behavior, reflex and problem solving, only the problem solving type of behavior results in learning.

Using the motion picture film as a teaching aid enhances learning. We must endeavor to make the orientation or motivation problem solving, or the net result will be negative. The film must be selected carefully, utilizing teacher-pupil planning; the film must represent the closest possible relationship between the pupil's needs and interest. To motivate learning is to make use of established motives or to stimulate an objective one.

How Motivation Stimulates Learning

The individual must be motivated to learn. Ideals arise out of organismic functioning and the inter-actions between organism and environment. When the equilibrium of the organism is upset by change, either within or without them, there ensues a stress to maintain a wholesome, satisfying equilibrium out of which grows behavior. Behavior is thus goal seeking. Basically, it is purposive. Motivation arises out of the pupil's desire to meet his needs. Interest is that relationship between the pupil's present tendencies toward and capacities for behavior and the immediate goal toward which he is working, interest prevails when the student regards the goal and the effort to achieve it as worthwhile.[13]

Motivation relates to the energizing of behavior. Adequate motivation involves the vitalization of tasks which results in efficient behavior. Motivating conditions initiate and energize activity, directs

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[13] Ibid., p. 56.

organism behavior and disposes it to select some responses and to disregard or to eliminate others. Motivation serves to direct and to regulate behavior toward a goal.[14]

All learning involves motives. The motive in a given learning situation determines the quality and direction of the activity that will be carried out. The strength of the desire to participate in a learning situation is usually related to the needs of the student. To motivate learning is to make use of already existing motives or stimulate the discovery of new ones. Since needs, interest, desires, and goals results in part from earlier experiences, the teacher by selecting activities with the framework of the learner's need may greatly influence future desires and interests.

Therefore, many circumstances influence the nature and intensity of motives. The moral of the school has a significant influence upon motivation. An individual student's relationships within the class and the school affect motivation. Teacher-pupil relationship influence the desire to learn. Any procedure which lowers or raises the pupils' prestige motivates the learner, but not always in desirable directions. The student learns more effectively when tasks are presented to his world which he can understand and accept as being relevant. Teaching aids which offer opportunity for discovery, exploration, and creativity usually result in efficient learning. The more definite the goal in the eyes of the learner, the more direct his activity, and the more efficient the learning. The learner tends to learn more efficiently when he has knowledge of his progress. Motives are the basis of learning.

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[14]Ibid., pp. 56-58.

CHAPTER IV

LIMITATIONS IN THE USE OF MOTION PICTURE AIDS

Motion picture in this scientific age has become the key teaching aid for creating interest and diffusing knowledge in a wide range of lessons to be taught. We must realize, too, that what we "learn by doing" is maximum in amount and in retention when the "doing" is purposeful, meaningful, and satisfying. The effective use of motion picture materials in the school for vocational agriculture instruction must be based on sound principles to create a learning situation.

Motion pictures used properly as a teaching aid will save time for the instructor and help him do more effective teaching. Results of their use can be measured in terms of quicker, more correct, and richer learning, improved student attitudes and interest. Motion pictures, as an aid, however, can be a waste of time and money if they are not used effectively. They are tools and should be handled correctly.

Vocational agriculture, while an integral part of the curricula of schools, is usually taught somewhat differently from the so-called "academic" subjects. Consequently, there are certain problems peculiar to the use of motion pictures as an aid in vocational agriculture. Classes often are not conducted in the traditional manner, but in one of variety of ways, including field trips, tours, panels, judging contests, demonstrations, and experiments. The schedule of agriculture classes, because of the use of these techniques, frequently does not fit in perfectly with traditional class routine.

Instructors must know the principles and skills involved in using motion picture films as a tool in their teaching. They must know how to operate and care for equipment and how to get materials. They must be

constantly alert to find new materials and develop sound methods of using them. The rapid increase in availability of new, more efficient films and equipment makes this point still more important.

The Functions of Educational Motion Pictures in the Teaching of Vocational Agriculture

Stickrod[15] points out that the functions of educational motion pictures in the teaching of vocational agriculture are:

1. To arouse student's interest in a discussion topic.

2. To create a desire on the part of the student to learn more about the topic through other teaching medias.

3. To supply factual information about a topic different or impossible for the teacher to present through and other means.

4. To stimulate thinking on the part of students in all grade levels.

5. To improve the learning processes of all students.

6. To improve the retention of what is learned.

7. To supplement and improve other learning activities.

8. To vary classroom teaching activities.

9. To vitalize the work of the teacher.

10. To provide stimulated experiences out of which the students develop thinking, forms opinions, and judgments.

11. To supply a common background of information for highly hetrogenous groups of students.

12. To help equalize individual differences in the class.

The need to provide more vitalized and concrete growth experiences must be one of the primary objectives of vocational agriculture education. This is very pronounced in the field of agricultural education where basic skills, both manual and mental, must be thoroughly and promptly taught.

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[15]Marvin Stickrod, "Movie With a Purpose," County Agents and Vocational Agriculture Teachers, VII (November, 1952), 18-20.

The vast increase in the many complex techniques of modern agriculture must be presented as actual or clear cut stimulated experiences.

The modern agricultural films, when properly used, assist vocational agriculture teachers to meet these challenges and turn out young farmers thoroughly familiar with the modern world in which they must live.

Teaching Procedures Used By the Instructors in the Six Schools

The experiment was limited to six schools, observation and discussion with the six vocational agriculture teachers showed that the following practices were in general use:

1. Adequate preparation in selecting film was not made.

2. The films are used to do a teaching job in themselves rather than as a tool or aid in instruction.

3. The pupils have no part either in the selection of the films or in producing the motivation materials used to enhance the learning situation.

4. The purpose for using the motion picture film is not made clear before showing or afterward.

5. The films are ordered from commercial producers and very seldom are on time for the lesson to be taught.

6. The teacher depends upon his lectures to help the pupils to proceed from the "more concrete" to the "more abstract" ideas rather than the materials of the film used.

The Operation of the Machine

The use of films as a teaching aid requires invariably speed and timing of operation. The use of student operators have been very useful in expediting effectively the use of the motion picture in a classroom. While viewing a picture with student operators, what would happen if there

should be a breakdown of equipment? When the machine is in the hands of a student operator, the teacher can take up the lesson immediately with the class while repairs are being made unobtrusively. At all times the teacher can certainly control the class better if he is in front of the room attending to it than if he is in the back of the room attending to a machine.

The mechanics of showing a picture must never interfere with the learning situation. Furthermore, equipment fails to operate at perfection at all times and needs adjustments. A trained student operator can make the necessary adjustments as well as a teacher, who most of the times lacks the mechanical aptitudes.

The real justification of the use of students in projection is in the good it does the boys themselves. Therefore, it is very important that wherever student operators have been used, teachers have almost unanimously agreed that the boys have been taught the very things that the school is most interested in teaching by means at its disposal.[16]

Selection of Films

The selection of films should be based upon a direct relationship with the course of study, units, and the particular lesson for the day. Weaver and Bollinger[17] gave the following suggestions for selection of films for instructional purposed. They suggest using films that:

1. Show simple, direct treatment.

2. Challenge the pupils' thinking.

3. Depict basic principles and operations

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[16]Paul Wendt, "The Need for Operators' Club," Education, LXXV (June, 1955), 629.

[17]G. G. Weaver, and E. W. Bollinger, Visual Aids, (New York: D. Van Nostrand Company, Inc., 1951), p. 234.

4. Presents clearly the technical facts or information.

5. Alternate a series of "shorts" with discussion.

6. Dramatize and recreate events.

They also suggest "avoids" in the use of films that:

1. Are "interesting" but present little or no useful information for students learning.

2. Are technically correct, but have no specific application to the problems of your training schedule or course of study.

3. Are of considerable length with a limited amount of useful information.

4. May be considered as entertainment as far as the course of study is concerned.

5. Consume the entire period, and permit no time for discussion.

The desired procedures for teaching with films are:[18]

1. The purpose for using the motion picture film must be clear.

a. The following questions must be answered in the pupils mind before the film is shown: Why are we using this film? What can we learn from this film? How can we use what we learn?

2. The meaning of the film must be assured.

a. No matter how "good" the film may theoretically be, it will be practically worthless if the pupils vocabulary potential is not within their grasp of comprehension and understanding.

b. Simplicity and concentration in the organization and presentation of a film are conducive to getting attention and assuring the development of understanding.

c. The film, no matter how good, is insufficient in itself to do a teaching job. The teacher must arouse curiosity and inspire the desire to learn through the use of the film. He can do this by thought-provoking questions involving pupils in the process of interpreting their experiences with the film

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[18]C.R. Crakes, "Movies in Your Classroom," County Agent and Vocational Agriculture Teacher, VII (November, 1952), 26-28.

d. Motion picture films must be used often and in varying extent throughout an entire unit of learning. Just one film version is not enough.

3. Experiences With the Films must be Satisfying to the Pupils.

a. The pupils should be involved as much as possible in the selection, creation, discussion and evaluation of the films. This involvement must be friendly, democratic and successful and should result in much oral communication.

The Effects of a Motion Picture in a Vocational Agricultural Classroom

Crakes[19] states in his discussion of "Movie in Your Classroom," the benefits a student will derive from teaching when the teacher use films that follow:

1. Pupils who had the benefit of learning through films attained and retain more learning growth than those who did not learn through film use.

2. Films exert a powerful influence in changing attitudes of students.

3. Students were stimulated to do more outside reading and extra preparation.

4. The general teaching level was improved in the schools using films.

5. Communities where the films were used became more enlightened and school-parent-community relations were greatly improved and stimulated.

Some of the important functions of educational motion pictures in the teaching of vocational agriculture are:

1. To arouse students' interest in the discussion topic.

2. To create a desire on the part of the student to learn more about the topic through other teaching medias.

3. To supply factual information about subjects which are difficult or impossible for the teacher to present through other means.

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[19] Ibid.

4. To stimulate thinking on the part of students in all grade levels.

5. To improve the learning processes of all students.

6. To vitalize the work of the teacher.

7. To help equalize individual differences in the class.

CHAPTER V

RESULTS OF THE GROUP EXPERIMENTS

This study was designed to detemmine the effect of a motion picture shown with orientation before viewing the picture the first time versus one shown with orientation after pre-viewing and viewing the picture for the second time.

The Study Groups. The six groups tested were composed of twenty vocational agriculture students; each group was from six Anderson County, Texas high schools. They were members of the vocational agriculture classes--first year, second year, and third year selected at random with no cther known means of training or socio-economics background.

There were thirty-one agriculture first year students, fifty-one second agriculture students, and thirty eight third year agriculture students.

They were not told that this study was being made but they were instructed to make an honest effort to pay close attention to the film, for they would be given a test after viewing the movie. The purpose of the study was not given in order to avoid deliberate misrepresentation.

The Test. All members of the experimental groups were given a test that contained sixteen questions about the film to be shown. This was done to determine what they already knew about the contents of the film about to be presented.

Then they were given an orientation of what the film was about. High points that they should look for and their relative value that could be advantageous for them in their farming situations were cited. This was done to set the stage for problem solving to motivate interest. New terms that the teacher knew to be technical or unfamiliar to the students

were defined. This motivation was designed to interest the learning of materials about to be presented and direct attention to the revelant aspects of what was to be shown.

The film, "High Level Profit," was shown which was a sixteen minute sound and color production which deals with poultry production and feeding of certain feeds to get the maximum growth in a certain time.

Immediately after viewing the film the group was given the same objective test as given before, which was based entirely on material found in the film.

The possible maximum score on the test was one hundred. Applying the correction formula as set up by the writer, six and twenty-five hundredth per cent for each question was answered correctly. The high score was sixty-two and five tenth per cent and the low was twelve and five tenth per cent. The range was fifty per cent which followed a normal distribution. The average being twenty-five per cent.

The same procedure was followed with all six groups, giving the same film, "High Level Profit," and the writer giving the same orientation to each group, using the same correction formula for grading the test papers.

The results were tabulated for the test given to determine what they already knew about the material in the film and the test scored after orientation and viewing. The first score was subtracted from the second, thereby giving the percentage gained by each student, also the total score was divided by one hundred and twenty which gave the average per cent gained of the six groups.

The results of the test given to determine what the pupils already knew about the film to be presented is shown on the following table.

Table 1. The Composite Score of Before Viewing Versus Orientation, then Viewing

Number of Students	Per cent gain Per Student	Total gain
39	6.25	253.75
58	12.50	725.00
18	18.75	237.50
5	25.00	125.00
Total 120		1341.25

The average gain per student was 11.175

The Second Test. After a period of from ten to twenty days the second test was given, using the same pupils as in the first test.

The second test followed the same procedure as that used in the first. A test was given to determine what the students already knew about the contents of the film. Only the film was changed. The film "Formula for Profit," was shown.

The material in this film covered the feeding of dairy cattle for production by comparing the records of one herd with that of another as to the feeding of antiobotics. The film demonstrates why it is profitable for farmers to use formula feeds. It also shows results that can be expected from feeding well-balanced formula feeds that contain aureomycin, the first antiobotic to be used and the most successful to promote growth and improve health of farm animals.

It is a twenty minute color and sound production well documented.

The film was previewed with orientation and comments being omitted before the first viewing. After the film was shown the orientation was given, questions were asked, and the picture was discussed thoroughly.

Then the film was viewed again.

The students were given the same test they had taken before viewing. Immediately after viewing for the second time with the orientation.

The possible score on the test being one hundred per cent, the correction formula of six and twenty-five hundreth for each question answered correctly was applied for sixteen questions making up the test.

The high score was seventy-five per cent and the low score was twelve and five tenths. The range was sixty two and five tenths which is a little high above normal distribution on the test viewing the film.

With the same correction formula, the high score was eighty-seven and five tenths per cent and the low was thirty-one and twenty-five hundreth per cent and followed normal distribution. The range was fifty-six and twenty-five hundreth per cent on previewing then orientating before the film is viewed for the second time.

The same procedure was followed with all six groups using the same film, "Formula for Profit," with the writer giving the same orientation to each group and using the same formula for grading the test papers. The results are shown in the following table:

Table 2. Composite Score of Before Viewing Versus Orientation after Previewing then Viewing the Second Time

Number of Students	Per cent gain Per Student	Total Average Gain
1	6.25	6.25
37	12.5	462.50
57	18.75	1068.75
19	25.00	475.00
5	31.25	156.25
1	37.50	37.50
Total 120		1341.25

The average gain per student was 18.38 per cent

Results and Interpretations. The correlation between orientation before viewing and after viewing, then orientation before viewing the second time showed the average score for one hundred and twenty students was eleven and seventeen per cent for orientation before viewing the first time for the film, "High Level Profit," while the relationship varied considerably for the one hundred and twenty students taking the test, twelve and five tenths to sixty-two and five tenths, respectively. This shows a range of fifty which is almost a normal distribution for a test of this type. In a report on an exploratory study, Motion Picture Research Project, Yale University, it was shown that an average gain of eight and two per cent was made for factual presentation with orientation of a motion picture film, "The Heart and Circulation of the Blood," over a factual presentation of the film without orientation.[20]

On the second test, the average score for the one hundred and twenty was eighteen and thirty-eight hundreth per cent for previewing, then orientating before viewing the second time for the film, "Formula for Profit." The score of the test varied from thirty-one and twenty-five hundreth per cent to eighty-seven and five tenths per cent in the individual scoring. The range was fifty-six and twenty-five hundredth per cent. This showed a normal distribution for a test of this type. In version four of the Report on Exploratory Study, Motion Picture Research Project at Yale University, on one hundred and fifty tenth and eleven grade students showed an average gain of fourteen per cent.

The range of the differences in the tests could have been due to many outside factors, previous training, in individual differences or the realization that this was a competitive test that resulted in over-anxious-

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[20]Weaver and Bollinger, op. cit., pp. 374-379.

ness on the part of the student. Most significant, however, is the fact that the net average gain per student was seven and twenty-one hundredth per cent could be stated as more than justifiable for the time used in viewing the film for the second time.

The results help to show a base comparison for evaluating the worth of the motivation procedure. Also, they point to the need for further study of the use of devices to increase motivation in the learning process from films and the effects of repeated film showing on increased learning of students in vocational agriculture.

CHAPTER VI

SUMMARY

A film which uses entertainment plus information is not necessarily educational. Education is more than mere information. Ideally, it is presentation of information and issues in such a way as to make pupils think. Without thought, without controversy within viewers, there is very little real learning. For learning is more than mere retention; it is formulation of ideas and opinions as a result of neurological memory stimulation.

Implications

Why do the students that I teach daily in vocational agriculture forget what I try to instruct them? One will hear this in every agricultural teachers meeting or anywhere an attempt is being made to evaluate the effectiveness of the vocational education program. Then, if you counsel the students of vocational agriculture, they will as you, "How can I remember more and forget less of what I have been taught?"

The agricultural teachers have sought and tried varied solutions in search for the answers. All of the answers are not entirely satisfactory to either the teacher or the student. From this study only one over all answer is implied--that is motivation through experiences to acquire learning. The study points out a need for the correct time for using motivation procedures, making the sensory experiences of the eyes and ears a rich one; at the same time making them clear and meaningful, also.

This study implies that to promote effective learning, one must proceed from proper motivation, to clear goals, then put to adequate use by the learner. Before we can claim the subject materials have been

presented to the learner in such a way that he will retain what we try so hard to teach, we must stimulate our motivations to create a desire for learning.

However, this is only a partial solution of the problem. Knowledge, notwithstanding its great value to people generally, is not to be regarded as an end in education, but simply as a means to other ends which lie years ahead. To these ends must agricultural instructors teach, and see to it that these ends are actually realized by the students.

There is not always inter-instructional advantages shared from teachers by inter school use of motion picture materials found to be well adapted for this locality. Furthermore, the use of motion pictures, as a teaching aid is taught in subject isolation.

The need of timing our motivation activities, together with a decisive plan for evaluation of what is learned, have not been creating the best learning situation for the high school students. The desire for motion pictures as a teaching aid is increasing, because of the space and time spanned in the showing one film and because of the changes made in the curriculum to give the students training that they will need in a democratic way of life. Our lives are too short to permit us to learn all we need to know by doing. We are compelled to get much of our experiences by indirect observation for learning. Agricultural instructors are fortunate in having useful means of indirect observation, as the motion picture. Through them we are able to see what the camera has recorded on film anywhere and everywhere in the world

Recommendations

The following practices should be put into operation to make the teaching with a film more effective:

1. The vocational agriculture teachers of the county should form an organization to make their teaching methods more effective.

2. A study to determine where similar problems are of the same nature outlined.

3. The methods of solving these problems be uniform, and placed in the units of instruction so that they will be taught at the same time during the period.

4. When the motion picture films are to be used as an aid to instruction for these problems, they should be circulated from school to school.

5. A list of well-documented films and synopsis of each be studied before ordering and a common acceptance after evaluation for each.

6. That the file be flexible to allow changes to be made when a better film is produced covering this unit of instruction.

7. Motion pictures for entertainment have no place in the instructional program.

8. That motivation for learning with the film be standardized, clear, concise and uniform.

9. The tests, and other methods of evaluating the effects on learning be standardized and kept up-to-date with ideas, ideals and theories of good instruction.

10. That joint projects of good supervised farming programs be filmed and made a part of the county file for the instructional program.

11. Test of materials learned from films be made competitive for all students in the six county schools. Awards for outstanding preformances be given.

12. The administrator of each school be asked to take an active part in the evaluation, operation, and procedures of the organization.

13. Limit the membership to the six schools in Anderson County. The scope can be too large for the orderly function and circulation of motion picture materials.

14. That all members of the classes be taught to operate the projectors.

15. That when the time comes to replace the projectors, the stop and go types will be purchased.

16. The community people should be asked to take an active part in evaluating the results of the organization and its effects on the learning situation.

Conclusions

We can have a greatly accelerated learning rate in vocational agriculture by coordinating all the teachers' efforts to make a county unit system, while using the motion picture as a teaching aid. Motion pictures are most pronounced in the field of vocational agricultural education, where basic skills--both manual and mental, must be thoroughly and promptly taught.

The modern educational films, when properly used, assist agricultural instructors to obtain the learning required to turn out young farmers thoroughly familiar with the modern world in which they must live and work.

Most learning takes place because of visual stimuli. There is a time element in our efforts to motivate pupils to learn more and to eliminate entertainment, that may or may not be in an instructional film. We must attack the problem to create the best learning situation possible by analyzing results of our teaching procedures as they relate to films.

Students learn more from a film by previewing the film.

The film selection should be democratic to the extent that pupils, administrators and community people can participate. Valid instruction, regardless of how much it is desired, can be best attained in an atmosphere of participation of all concerned with the education of youth.

Agricultural instructors do not have a working knowledge of the "phychology of learning" to give sufficient orientation or motivation to agricultural pupils for them to be stimulated and to get the desired results in learning retained from a film.

Budgeting of funds to be expended by agricultural instructors is not large enough to allow the desired uses of films as a teaching aid.

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APPENDIX

QUESTIONNAIRE

1. Name of School_____
2. Town_____ Texas_____
3. No. students enrolled in V. A. I_____ V. A. II_____V. A. III_____
4. Is your department par-time_____, Full-time_____(Check one)
5. Tenure of V. A. teachers in this department in years, first one_____ second _____ third_____others_____
6. Number in your Young Farmer Class_____ Adult Farmers_____
7. What is the present tenure of the V. A. teacher?_____
8. How often do you show pictures for your NFA Chapter?_____
9. How many instructional pictures do you show annually?_____
10. How many do you show to V. A. I_____, V.A. II_____, V.A. III_____
11. Your farmers_____ Adult farmers_____Others_____
12. Do you give tests after each movie?_____
13. How do you test to see the amount of learning obtained? (circle one)
    Multiple-choice Question and Answer True and False
    Combination of the first three.
14. Do you orientate before showing each film?_____
15. Do you show any movie in combination with the NFA?_____
16. If so, how many?_____ Do you preview your films?_____
17. Do your school have a 16 mm projector _____35 mm filmstrip_____
18. Do you have a trained student operator?_____
19. Do you have a film catalogue for your department?_____
20. Does the film catalogue relate to your units of instruction?_____
21. Do you time the ordering of films to agree with time planned for your unit of instruction?_____
21. Do you ask your students to assist in the selection of films?_____

22. How do you select your films? (circle one) (1) by synopsis, (2) interesting titles, (3) at random to interest of commercial advertising.

23. Do you consult administrators and supervisors in the selection of films?

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24. Do you ask adult farmers or farmers' council to assist in the selection of films?_____

25. Do you have a budget allowance for film expense?_____

Signed: _____
Vocational Agriculture Instructor