AN EXPERIMENTAL STUDY OF THE VALUE OF THE SILENT MOTION PICTURE-CONFERENCE TECHNIQUE AS A TEACHING AID IN CLASSES IN PUBLIC SPEAKING

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AN EXPERIMENTAL STUDY OF THE VALUE OF THE SILENT MOTION PICTURE-CONFERENCE TECHNIQUE AS A TEACHING AID IN CLASSES IN PUBLIC SPEAKING

by

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INTRODUCTION

Purpose of the study. This is a study of the value of the silent motion picture-conference technique as a teaching aid in beginning classes in public speaking at the college level. There have been many opinions advanced relative to the merit or lack of merit in the use of motion pictures as an aid to the teaching of public speaking. Whether students at the college level acquire more skill in the delivery of a speech as a result of using the silent motion picture-conference to complement general teaching procedure or whether the use of silent motion pictures has little value other than of creating interest among the students in the teaching of public speaking is a matter, the writer believes, not for conjecture but for experiment. This study attempts to discover objective data and to compile systematically subjective reactions which will point to the acceptance or rejection of the former hypothesis.

Justification for the study. Why use motion pictures in the teaching of public speaking? The answer lies in the psychology of learning. We learn through sensory experience, and in no other way. Destroy its capacity to receive stimuli and you have destroyed the capacity of an organism to learn. Sensory experience may be roughly classified into three types. First, sensory experience with reality; second, sensory experience with representations of reality, such as

pictures and models: and third, sensory experience with language symbols which stand for reality. Since all sensory experience may be classified under one of these headings, and since we learn only through sensory experience, it follows that all of our teaching must be based on providing the student with experience of one or more of the types mentioned.[1]

Applying this theory to the teaching of public speaking, what do we have to guide us? Of course, the first of these types, sensory experience with reality, is to be found when the student delivers a speech in the public speaking classroom. There he receives sensory stimulation in the form of class and instructor reaction during and following the speaking experience. The teacher of speech regards this form of learning as one of the most valuable. In the public speaking classroom the student may receive the second type of stimulation, sensory experience with representations of reality, as he listens to and observes his fellow students as they speak. It is in this category that the use of motion pictures would appear, for the student would be able to see himself as others see him. The last type of sensory experience in which the student comes in contact with language symbols which stand for reality implies the use of a textbook and the reading of model speeches and the reports of real speech situations.

It might be well to mention at this point errors in terminology which are applied to the use of motion pictures in the teaching and learning process.

(1). The motion picture is regarded as a supplement

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[1] Jayne, Clarence D., "Making Pictures Teach", The Educational Screen, Vol. 19, No. 5, May, 1941, p. 191.

> instead of as a complement to other educational materials and procedures. Used supplementarily, motion pictures are intended to supply more of the same kind of experience (usually provided through lectures or reading assignments). Used complementarily, they are intended to supply a different kind of experience necessary to complete a whole. The one is primarily illustrative, the other developmental. The one further illustrates a principle already developed, the other serves as a basis for the development of a principle.
>
> (2). Motion pictures are a basis for conceptual development, and not exclusively an interest-getting device. It may lead to new activity or it may clarify and organize experiences.[2]

If the theory of learning through sensory experience is acceptable, and if there is no dispute concerning the classification of types of sensory experience, is it not logical to conclude that the use of motion pictures as a teaching aid completes the whole learning process, rather than supplements it? The place of the motion picture among pedagogical devices theoretically appears to be secure. To discover objective data which might substantiate the theory would seem to justify the experiment.

Scope of the study.

> Recently on the campus of Michigan State College a new Auditorium was built. The Department of Speech and Dramatics is located in this building. Facilities for the taking of motion pictures have been installed in the public speaking classrooms , and a splendid opportunity exists for experimental work to be done.

Not only a study of the value of the silent motion-picture-conference technique as a teaching aid in beginning classes in public speaking at Michigan State College is intended, but also a study of the general value of the silent motion picture-conference technique, as applied to the field of speech.

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2. Hoban, Charles F., Jr., "Curriculum Implications of Motion Pictures," The Curriculum Journal, Vol. 11, No., December, 1940, p. 365.

Delimitation of the study. The present study is concerned with an experiment conducted during the winter term, 1941, in the Department of Speech and Dramatics at Michigan State College. Eight sections of students enrolled Public Speaking 101 have been included in the experiment. Public Speaking 101 is a course in the principles of and practice in speaking before a group.

The emphasis in the teaching of the course is placed upon the acquisition of skill in the delivery of a speech. The purpose of the course should not be confused with the scope of a course in the Fundamentals of Speech.

The writer wishes to point out that this study does not include a section dealing with motion picture equipment and apparatus, its selection, use, and upkeep. A colleague in the Department of Speech and Dramatics has been conducting experiments in which motion pictures were used but in which entirely different speech phenomena were tested and studied. A discussion of motion picture apparatus and equipment may be found by referring to the report of his findings.

Origin and history of the study. The recognition of the value of pictures in the classroom, of course, is not new. For generations teachers have used illustrations, maps, diagrams, and charts either to stimulate or to present new ideas. Textbooks for many years have included graphic materials in their pages. In recent years, particularly since motion pictures have become increasingly available for classroom use, there has been a revival of interest in visual education.

The interest in visual education has carried over to the field of speech. The appearance of many of the world's greatest public speakers in the motion picture newsreels, both silent and sound, has encouraged the application of this device to the teaching of speech.

The interest of men in the field of speech in this new development has not been a mere passing fancy, as will be subsequently reported. Yet, the writer has found that in spite of widespread use of the motion picture, either silent or sound, very little scientific investigation of its value to the teaching of speech has been conducted.

Because of the dearth of concrete evidence relative to the value or lack of value in the use of motion pictures in the teaching of speech, and since a unique opportunity for such experimental work to be carried on in the Department of Speech and Dramatics at Michigan State College is available, the writer, with the backing of various interested parties, has deemed a study of this nature worthwhile. That certain phenomena can be observed and objective data collected and studied is feasible, if one accepts the validity of the methodology of the report of the Committee on Cooperative Research of the National Association of Teachers of Speech.

A Research Into The Teaching Of Public Speaking.

Procedure. The principal problems of this experimental study of the value of silent motion picture-conference technique as a teaching aid in beginning classes in public speaking are three in number, namely: (1). To what extent are motion pictures used in Departments of Speech among the colleges and universities of the United States and what scientific experimentation has been conducted in connection with the value of motion pictures to the teaching of speech? (2). Can objective data be gathered which will show whether the use of motion pictures aids in the acquisition of skill in the delivery of a speech? (3). Will the personal reactions of the students who learned with the aid of motion pictures show a subjective conclusion favoring or rejecting the use of motion pictures in the teaching of public speaking?

To attack the first problem a survey was made of available periodicals in which articles and reports of studies and experimentation pertinent to the problem were presented. Any publications of books dealing with visual education were also investigated. When the findings relative to the problem were found to be inadequate, a general motion picture questionnaire was mailed to twenty-nine (29) arbitrarily selected Departments of Speech; the replies from this questionnaire are reported elsewhere in this thesis.

Certain speech phenomena capable of objective measurement were selected for study, and observers were chosen, coached, and trained to observe and collect data, as the attack on the second problem was begun. These data were tabulated and entered into mathematical formulae from which facts relative to the basic problem were gathered.

The third problem was met by canvassing student opinion of and reaction to the use of motion pictures in the teaching of public speaking.

CHAPTER II

A SURVEY OF THE USE OF AND VALUE OF MOTION PICTURES IN THE TEACHING OF SPEECH

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A SURVEY OF THE USE OF AND VALUE OF MOTION PICTURES IN THE TEACHING OF SPEECH

A survey of printed matter. The amount of printed matter relative to the use of and value of motion pictures in the teaching of speech is limited to two items, at the present time. One of these is an article written by a pioneer in the field of motion pictures as an aid in the teaching of speech, Vernon A. Utzinger, Carroll College, Waukesha, Wisconsin. His report concerning the use of motion pictures in the teaching of speech is entitled, "The Use of the Moving Picture Machine and the Recording Instrument in Teaching Speech." The other is a report contributed by William F. Kruse of the panel discussion concerning the contributions that the motion picture and other audio-visual aids make to speech education, conducted at the twenty-fourth annual convention of the National Association of Teachers of Speech, meeting in Chicago, December 27-29, 1939. The printed material available relative to the problem at hand is meager; the writer, however, considers the reprint in this thesis of a goodly portion of these two items not inappropriate and of definite value to the solution of the problem.

> During the past several years much attention has been given to scientific methods which may be used as aids in speech training. With the development of radio, many colleges and universities are now offering courses in microphone speaking. This has led to the wide use of the recording instrument, which has been perfected to reproduce the voice faithfully. This machine is not taking its place in every modern speech department as an indispensable teaching device. I am sure that it is here to stay.

It has always been my belief that those of us in this field should experiment with the use of any device which may aid in the student's self-analysis. The recording instrument has solved the problem as far as audible self-analysis is concerned. The next logical step, would be to find some way by which the student could analyze his physical action, posture, facial expression, in fact, his general speech manner on the platform. With this objective in mind at Carroll College, we purchased a 16mm. moving picture camera to experiment in taking pictures of the student as he actually presented his talks before the class. In order to get as complete a picture of the student as possible, we decided to record the speech at the same time the picture was taken. Before discussing the actual mechanical set-up further, let me say that it has been our desire, while the student is being tested, to shelter him from all outside distractions which might cause self-consciousness and therefore an unnaturalness during the testing situation. To avoid the student's having to face glaring spot lights while making a speech, we decided to use the fastest lens possible on the camera, an f:1.5 lens, and to try to take the pictures under normal conditions, with no artificial lighting.

It would, of course, be possible to purchase a talking picture machine and use it for reproducing the speech and picture of the student. Not only would the cost of this practice be prohibitive, but the mechanical set-up for its use, would, to my mind, completely defeat the purpose for such an experiment. In order to obtain satisfactory results at Carroll, then, the following procedure was developed.

A small, partially sound-proof room was built about twenty feet from the platform, in the back of the classroom, where the camera was placed with the lens covering any action of the student as he gave his talk. The class room where the pictures were taken fortunately has sky lights, and ample lighting from the windows at the sides. In order to reflect the light up into the speaker's face, a piece of white oilcloth was laid on the platform and three large, glossy, white cardboards were placed in front of the speaker. In this way, by opening the camera lens almost as far as possible, and using a super-sensitive film, we were able to get fairly clear pictures without the use of artificial lights. The students were asked to wear dark clothes when they spoke, and we used our white projection screen as a background. In discussing the lighting problem with photographers, I found them very doubtful of the results of pictures taken without the use of

floodlights. However, I felt the success of the whole experiment depended upon the absence of any artificial situation for the speaker. I am sure that if there is any criticism of using moving pictures as a teaching device, it will be that the speaker is so conscious of his strange environment that the picture is not a true reproduction of his speaking manner under normal conditions. This criticism we have tried to avoid in every way. I shall now tell you about how we recorded the speech at the same time.

The pictures were taken about the middle of the first semester. The students were asked to prepare five-minute talks on problems about which they had some definite convictions, in order to stimulate natural physical action. Because of the expense, only fourteen feet of movie film were taken of each student. This amounted to about thirty-five seconds in time. A period of two minutes of the speech was recorded with the recording instrument placed in another room. As the student took the platform to make his speech, he simply fastened the lapel microphone around his neck and began to talk as usual to the class. When the recording was begun, a light signal was given to the movie operator, who began taking moving pictures at the same time. We did this in order to try to synchronize the two later to produce an actual talking picture of the student. None of the students was aware of this arrangement and therefore none knew when the recording was made. Let me say here to those of you who think that the poor student must have been scared to death with all this testing machinery, at least seven students out of fifty-six tried to walk off the platform after their talks without removing the microphone, thus showing that they had forgotten all about it. There is no question but that the student knew when the picture was being taken because of the slight noise of the camera and that he was more conscious of this than he was of the recording. It seems to me that this could be entirely eliminated if a soundproof box could be constructed for the camera so that the student would hear no sound while the camera was running, and thus would not know when the picture was being taken. I plan to do this next year.

Now, what about the results? These pictures were shown at night before the whole class of fifty-six students which constitute the three sections of the fundamentals course at Carroll. Of course, the students were highly interested in seeing themselves on the screen. The pictures were, although

not perfect, adequately clear for our purpose, i.e., to study the action, posture, gestures, facial expression, personal appearance, the use of notes, in fact all of the visual stimuli received by the audience from the speaker...Many students expressed themselves as being highly elated over the opportunity to see and hear themselves speak. Many of them were made to realize for the first time how stiff and awkward they looked while making a speech. Some of the postures were humorous, of course, and the student who stood on the platform on one foot, leaning over the reading stand, looking down at the floor, was certainly impressed with his inadequate speaking manner. I am sure that, as those fifty-six students saw themselves as others see them while making a speech, many made silent resolutions to develop a more pleasing platform personality. Herein lies the value of the moving pictures as a teaching device, it seems to me. We can criticize the student repeatedly for the lack of physical vitality, bodily action, or correct posture, but in many cases to no avail. But seeing himself on the screen makes a much deeper impression upon him. I have discovered in my classes that those students whose physical manner was faulty have corrected these faults since they have seen their pictures. I showed the pictures twice, and expect to show them again. As the pictures are being shown, I make some comments, but they seem unnecessary, for all of the faults are so easily observed by the students themselves.

I am sure that you are interested to know about the cost of this equipment and what each student must pay to cover the actual cost of this testing procedure. The moving picture machine, the projector, and the screen cost about $300. The cost of the supersensitive panchromatic film which I had to use in taking these pictures without artificial light was $6.00 for a hundred foot roll. I took the pictures of seven students on each roll. That averages about fourteen feet of film per student, or thirty-five seconds each. It seems to me that this was sufficient time to study the subject. We charged the student a fee of $1.00 for the moving picture... The student reaction to this experiment was splendid. Not only did it create a great amount of interest, but they all felt that it was exceptionally helpful to them. As far as my own feeling is concerned, I am convinced that it is a worthwhile testing procedure for student self-analysis, and although there are a

great many problems to solve, moving pictures can be used as a teaching device in courses in speech training, with very satisfactory results.[4]

Case of the Motion Picture in Speech Training

Under this caption, the 24th Annual Convention of the National Association of Teachers of Speech, meeting in Chicago, December 27-29, conducted a sympathetic and thorough panel inquiry into the contributions that the motion picture and other audio-visual aids make to speech education. The chairman, Orville C. Miller, of Vanderbilt University, directed the two sessions, and drew many practical suggestions from the rich experience background of the various members of his panel. Prominent among members of the large panel were J. E. Hansen (President of the N. E. A. Department of Visual Instruction), William B. Whitaker (Committee on Motion Pictures, N. E. A. Department of Secondary Education), V. C. Arnspiger (Erpi), and G. Oscar Russell (Chief, Speech Clinic, Ohio State University).

A noteworthy innovation at this meeting was the direct contact established between the august group of outside "counsellors" on the one hand, and the actual makers of motion pictures for speech training purposes on the other. These pictures included examples of 35mm. sound-on-film, 16mm. sound-on-film, and of 16mm. silent, with collateral disc recordings... The second, presented by Mr. Sailstad of the University of Minnesota's Motion Picture unit, as well as a parallel presentation by Paul Kozelka, of Rosary College, showed the great need for a photographic situation that would not destroy the naturalness of students as they were being photographed. The third, which aroused perhaps the greatest amount of helpful discussion of practical picture media and methods, was presented by Vernon A. Utzinger, of Carroll College. The findings of the conference held that in this specialized educational field, the motion picture served three teaching ends: (a) As an aid to mass cultivation of better speech, incidental to motion picture appreciation work; (b) As a direct teaching medium, giving correct pronunciation and delivery, recording dialect and other speech patterns, and aiding in the vitalization of drama teaching; (c) As a recording instrument for the research worker.

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4. Utzinger, Vernon A., "The Use of the Moving Picture Machine and the Recording Instrument in Teaching Speech;" The Quarterly Journal of Speech, Vol. 25, No. 1, February, 1939, pp 10-12.

> Self-criticism was the keynote of participants show-their own films. Mr. Sailstad promised that future film records would be made under a less artificial situation, and that the conversational approach would be used. Mr. Utzinger hoped for the mounting of a second camera so that he could photograph audience reaction while a speech was being delivered. There was much helpful and practical discussion on the cutting of costs, inter-change of record films, and possible future uses.
>
> Aside from two whole sessions devoted to special applications of motion pictures to this field, an interesting presentation and demonstration on micro-photography, as a means of increasing access to rhetorical source material was made by commercial representatives displaying various models of micro-cameras and projectors.[5]

Although the writer does not consider either of the two following articles concerning motion pictures as being particularly pertinent to the study, it would nevertheless be advisable to mention them in this discussion. "The Speech Teacher Keeps Abreast of the Radio and the Motion Picture," written by Jeanette Ross of Shorewood (Wisconsin) High School, appeared in a recent issue of The Quarterly Journal of Speech; it deals with the problem of criticism and appreciation of commercial radio and motion pictures.[6] Josephine Allensworth's article, "Value of the Motion Picture in Teaching Drama and Diction," printed in The National Board of Review Magazine, was reviewed by Domis E. Plugge of Hunter College in The Quarterly Journal of Speech. He summarizes:

> Motion picture study may be a means of stimulating the interest of students in the study of good plays and also of teaching them acceptable diction.[7]

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5. Kruse, William F., "Case of the Motion Picture in Speech Training," The Educational Screen, Vol. 19, No. 1, January, 1940, pp. 26-27.
6. Ross, Jeanette, "The Speech Teacher Keeps Abreast of the Radio and the Motion Picture," The Quarterly Journal of Speech, Vol. 26, No. 3, October, 1940, pp. 431-437.
7. Plugge, Domis E., "In the Periodicals," The Quarterly Journal of Speech, Vol. 26, No. 3, October, 1940, pp. 500.

A report on the prevalence of motion picture equipment

> In May, 1940, at the request of interested manufactures of motion picture equipment, distributors, and producers of industrial and educational motion pictures, and at their expense, the Motion Picture Division of the Bureau of Foreign and Domestic Commerce undertook a survey that would indicate the schools in the United States which have motion-picture facilities, and those which do not....
>
> On May 15, 1940, there were mailed to 28,277 public, private, and parochial high schools and colleges in the United States and its Territorial Possessions, a simple postcard questionnaire....
>
> It is interesting to note that of the 1725 colleges contacted, 1424 or over 82.6% made reply....
>
> 12,411 16mm. projectors and 2,426 35mm. projectors are in colleges and high schools located in Continental United States.[8]

A report on the use of motion picture equipment in Departments of Speech among selected colleges and universities in the United States

Not satisfied with the net results of his search for information pertaining to the use of motion pictures in the teaching of speech, the writer prepared a Motion Picture Questionnaire designed to find out where motion pictures were being used for speech work, what kind of physical plant they were used in, and what subjective opinions and objective facts were available. (See Appendix pp. 62-65). It was hoped that enough could be learned so that an adequate program could be planned for this study.

By talking with individuals whose acquaintanceship and experience in the field of speech enabled them to know where motion pictures had been used for the teaching of speech, by checking carefully through

8. Golden, Nathan D., "The Latest Survey of College and High School Motion Picture Equipment," The Educational Screen, Vol. 19, No. 3, March, 1941, pp. 116-117.

official programs of speech conventions for announcement of speeches or demonstrations to be given by individuals who had employed motion pictures in their work and panel discussions including these persons, and by attempting to apply common sense in deciding where these techniques would most likely be used, the writer arbitrarily selected twenty-nine (29) colleges and universities in the United States and mailed to each of them a personal business letter and a copy of the questionnaire. A copy of each of these items may be found in the Appendix. (See pp. 60-62).

The institutions selected are as follows:

University of Arizona, Tucson, Arizona
University of California, Berkeley, California
University of California at Los Angeles,
Los Angeles, California
University of Southern California
Los Angeles, California
University of Denver, Denver, Colorado
George Washington University, Washington, D. C.
Northwestern University, Evanston, Illinois
University of Illinois, Urbana, Illinois
Indiana University, Bloomington, Indiana
Wabash College, Crawfordsville, Indiana
Purdue University, Lafayette, Indiana
Iowa State College, Ames, Iowa
State University of Iowa, Iowa City, Iowa
Louisiana State University, University, Louisiana
University of Michigan, Ann Arbor, Michigan
Wayne University, Detroit, Michigan
University of Minnesota, Minneapolis, Minnesota
University of Missouri, Columbia, Missouri
Washington University, St. Louis, Missouri
Dartmouth College, Hanover, New Hampshire
Brooklyn College, Brooklyn, New York
Cornell University, Ithaca, New York
New York University, New York, New York
Ohio State University, Columbus, Ohio
Kent State University, Kent, Ohio
University of Pennsylvania, Philadelphia, Pennsylvania
University of Washington, Seattle, Washington
University of Wisconsin, Madison, Wisconsin
Carroll College, Waukesha, Wisconsin

It is interesting to note that the first appearance of a speech on the use of motion pictures in connection with the teaching of speech came at the Twenty-Second Annual Convention of The National Association of Teachers of Speech, meeting in New York, December 29, 30, 31, 1937. The Twenty-Third, Twenty-Fourth, and Twenty-Fifth Conventions were marked by entire sessions devoted to Motion Pictures and Visual Education, Visual Education, or Audio-Visual Aids. Reprints of the section of the official program in which these meetings were announced may be found in the Appendix.

Twenty-two (22) of the twenty-nine (29) schools have reported. These twenty-two (22) returns constitute seventy-five and eight-tenths per cent (75.8%) of the total number mailed. (Usually a return of fifty per cent or better (50%) is considered adequate). Let us examine the opinions and facts gleaned from this survey.

By way of preface it might be well to call attention to the fact that not all reports included answers to all of the general questions.

TABLE I

NUMBER OF COLLEGES AND UNIVERSITIES REPORTING THE USE OF MOTION PICTURES IN THE DEPARTMENT OF SPEECH

QUESTION	YES	NO
1. At any time have motion pictures been used as a teaching device in your department?	11	11

At first the writer was surprised to find that so many Departments of Speech had or were using motion pictures in the teaching of speech.

However, when the fact is considered that the schools to whom the questionnaires were mailed were selected because it was assumed they might have used motion pictures, that fifty per cent (50%) of those reporting should be affirmative answers is not unusual.

The fact should also be considered that schools that can report "yes" to a question will more likely return a questionnaire. Those who have not used motion pictures are not as liable to return a questionnaire.

TABLE II

NUMBER OF COLLEGES AND UNIVERSITIES REPORTING THE USE OF MOTION PICTURES IN THE DEPARTMENT OF SPEECH AT THE PRESENT TIME

QUESTION	YES	NO
2. At the present time are you using them for any type of speech work?	9	13

Why did two of the schools reporting that they had used motion pictures in the teaching of speech abandon the practice? The answer will be brought forth in subsequent statements from the various schools.

The writer was interested in knowing in what phase of speech work motion pictures had been used. Therefore, the question was included: "If you were using motion pictures, in connection with what fields are they being used?" The report on this query is as follows:

Dramatics	4
Interpretation	3
Radio	2
Public Speaking	7
Forensics	1
Speech correction	7

The public speaking course at Michigan State College is not a fundamentals course; therefore, several schools mentioned the fact that motion pictures were used in their basic speech course, or fundamentals course. The count for the item Public Speaking includes these.

TABLE III

RECORD OF THE OPINIONS OF DEPARTMENTS OF SPEECH REGARDING THE VALUE OF MOTION PICTURES IN THE TEACHING OF SPEECH

QUESTION	YES	NO
4. From your experience with motion pictures would you conclude that there is any value connected with them in the teaching of speech?	14	3

Obviously a comparison of the count for this question with that for a question No. 1 will yield the conclusion that some of the affirmative answers are merely opinions, based upon no actual experience, merely on observation. Yet, that fact should not be discounted too heavily as one can see as he reads the following statements taken from the questionnaires.

Statements of those giving an affirmative answer to the question

Of the greatest value. If a sound track could be used, the value would be even greater.

Motivating factor--helps student see his own weaknesses--very much impressed usually.

We have found the use of motion picture photography in our basic course very valuable, especially valuable in teaching objectivity in the personality aspects of speech development. We assume that objectivity is the

basis for refined control and skill in all aspects of speech where there is no structural deficiency.

Motion pictures have a definite value in motivating impromptu student discussion. "Clinical, unrehearsed sound takes" of student conversational groups have great value as diagnostic tools and as demonstration aids.

1. There is definite value in helping the student see objectively his problems related to the physical aspects of speech. 2. They usually encourage the student, for he usually looks better than he expects to.

I have seen the results of motion pictures in other fields, and am convinced of their value. We intend to purchase equipment in time. For the present we have access to equipment being installed by the Extension Division.

We do have projection booths in our new building and anticipate using moving pictures in the teaching of drama and public speaking, but as yet we have had no experience with any kind of motion picture equipment.

Am considering the use of motion pictures--classes in acting and beginning speech. In the latter instance probably without students knowledge until after they have been shot.

I think the idea offers excellent possibilities.

I think they might be of considerable help.

Statements of those giving a negative answer to the question

We are doubtful of their value in the teaching of public speaking. The intense lights necessary, the heat they produce, the noise of the camera, all seem to break up the normal speaker-audience relationship. In addition to this objection, the speaker is bound to be acutely self-conscious, and the necessity for focusing the camera limits his freedom of action in speaking. Good pictures cannot be obtained without heavy make-up of the speaker's face, which further spoils the audience-speaker relationship.

We only used them in one class as an experiment. The cost, we found, was prohibitive.

No, except for a possible interest value, which would be, in my opinion, disproportionately costly.

> Have not used such apparatus. Believe we can use too many machines as a substitute for good teaching.

A general survey of the field has been made. It is time that the experience of those schools which have used motion pictures for the teaching of speech be summarized and put to use on the problem at hand. The second phase of the Motion Picture Questionnaire deals with three items, namely: Equipment, Personnel, and Value of Motion Pictures as a Teaching Device. As the information concerning the survey questions was presented, the more specific aspects of the questionnaire will follow the same manner.

"Will you briefly describe the physical plant in which you have used motion pictures?" was the first question asked the recipient of the questionnaire in the section dealing with Equipment. For the sake of gathering facts pertinent to the study comments on these succeeding questions will be restricted to the use of motion pictures in the teaching of public speaking. The general reply to the question was, "In the classroom," which, of course, would help to eliminate the studio atmosphere. One statement that was particularly helpful offered the following suggestions: "Ordinary classroom. Backdrops of cheap cotton material thumb tacked on the wall; color light grey. Two photo-flood stands that will carry at least two bulbs apiece." Reference to Vernon A. Utzinger's article quoted earlier reveals that in this situation a white projection screen was employed as a background and various devices were used to heighten the lighting effect short of studio lights.

"What kind of camera equipment did you use?" Added to this query were requests for a report on the make and size of camera, the size of the lens, and the film requirements. One school reported that its motion

picture work was done by a professional photographer, although they do have an ordinary movie camera as part of their regular equipment. Several replies indicated that a college-owned camera had been used. Where a motion picture camera was included in a department's equipment, a 16mm. machine produced either by Eastman, Keystone, or Victor was most popular. The f.2.7 lens or the f.1.9 lens was most often used. The report on the film requirements listed Eastman Panchromatic Super X, SSS Agfa, and Dupont SS Panchromatic as very suitable.

With the exception of Carroll College some form of artificial lighting was used in every instance, and at that school indirect lighting in some form or other was found necessary. Kodascope reflectors were used at several institutions; others employed photo-flood bulbs.

Eastman and Bell-Howell projectors are owned more often than any other type of projector, the reports would indicate. A portable beaded screen, a permanent hanging beaded screen, or a white wall served as the screen for the projection of the pictures.

By way of summary for this section of the questionnaire it is interesting to note the frequency of artificial lighting among the schools reporting. That factor has been criticized often by those doubting the value of motion pictures in the teaching of speech.

In the section dealing with Personnel the question was asked: "How many students have participated in classes in which motion pictures have been used?" A wide difference in replies can be noted. A few of them are as follows:

Impossible to estimate.

20 to 30 a semester.

40-100.

About 400 per year; all who take the basic speech course.

200 per quarter for 9 quarters.

20.

20-25 per section. A total of 600 during the past four years.

1500.

"Was the use of motion pictures by each student made optional or compulsory?" Out of seven schools that answered the question three (3) were optional and four (4) were compulsory.

"How did you finance your program?" Here again there was a diversity of reply. Several schools drew from research budgets or the departmental budget for the wherewithal to finance the use of motion pictures. Where a laboratory fee was charged, the following differences in rates can be noted:

Each student was charged $1.00 for 14 feet of film.

Part of the speech fee collected at the Business Office at the time of registration is used. In determining the fee we figured the cost of pictures at 50¢ per 10 feet of film.

TABLE IV

RECORD OF THE MANNER IN WHICH MOTION PICTURE FILMS WERE SHOWN TO STUDENTS IN DEPARTMENTS OF SPEECH

QUESTION	INDIVIDUAL CONFERENCE	GROUP MEETING
4. How were the films shown to the students?	4	7

The last question in the section pertaining to Personnel concerns the showing of the films to the students. Of course, it should be remembered that some schools employ both methods, and that factor creeps into the tally of replies.

TABLE V

RECORD OF OBJECTIVE STUDIES MADE RELATIVE TO THE VALUE OF MOTION PICTURES AS A TEACHING AID

QUESTION	YES	NO
1. Have you made any objective studies relative to the value of motion pictures as a teaching aid?	2	8

The two affirmative replies might tend to show that this particular study was treading upon ground that had already been investigated. However, the writer knows of the situation surrounding each case and believes there is no cause for questioning the soundness of the study on these grounds. One of these studies deals with the problem of discussion methods and the other with the effectiveness of speech; neither has been published to date.

An interesting comment was met in the return of one school. "It is difficult to measure teaching methods. We have found the method the most effective method, by far, to motivate the work in the visible aspects of speech, and exceedingly valuable in teaching the personality aspects."

"What student reaction to the use of and value of motion pictures did you receive?" was the second question of this series.

Very good reaction.

Very much impressed with their weaknesses. Very good reaction.

The student is very interested and very responsive.

Great interest.

Students were disappointed.

Students are intensely interested. They usually believe that recordings are slightly more valuable than the movies. There is an occasional example of exhibitionism on the part of students.

Question No. 3: "Was the student aware that his picture was being taken? How did you govern this factor?"

Camera was placed in sound-proof booth.

We turn on the lights and camera with the first gesture for a distance of 10 seconds; the student continues his talk while the camera is moved for a close-up shot of ten seconds.

Yes, but equipment and Hollywood atmosphere was kept at a minimum. Student could not see camera, cameramen, or technicians.

Yes, it is impossible for pictures to be taken without the student knowing it, unless some special room were provided. The lights, the whir of the camera, make them instantly conscious.

Yes. We prepare the students several recitations in advance by telling about the distraction of lights and camera. We present a challenge to hold the attention of the audience despite any type of distraction. Students respond well to this challenge.

Yes. Why not?

Having a definite bearing upon the study is the fourth question of the series dealing with Value of Motion Pictures as a Teaching Device. "Did the presence of motion picture equipment or the knowledge that his picture was being taken have any visible effect upon the speaker, his poise, his presentation?"

> Yes, it has some effect, but we keep all this at a minimum. We talk only about subject matter--never about machinery.
>
> In many cases, yes. But we consider these reactions as serious symptoms of egocentricity and lack of emotional control which underlies mature speech. Our whole basic course is especially designed to eliminate these personality deficiencies.
>
> Considerable increase in emotion tension, but about 50% of the students became so interested in their impromptu discussion that they forgot that a sound pictue was being made.
>
> Made him extremely self-conscious, generally. Some students giggled; some were stiff; some wanted to "show off."
>
> Yes. Occasionally some exhibitionism. Often the student is stimulated to do better than he usually does. I've never had a student refuse to go through with the project or fail to go through with the project.
>
> Increased stimulation to do better work.

A question the writer was personally interested in whether the reply be based on objective data or personal opinion and observation was, "Did your students improve more or less as a result of the use of motion pictures as compared with groups of students who had no motion picture experience?" Once again the statements are worth consideration.

> I think improvement is noticeable. Purely subjective on my part, however.
>
> About three times more effective for the particular unit in which we use pictures.
>
> No objective data.
>
> We abandoned the attempt too soon to have any conclusion on this question.
>
> Although I've always used them with college classes, my belief is that greater improvement comes with the use of motion pictures.

> Certainly and obviously or we wouldn't have increased our program for six years.

The last question of the section and the last one of the questionnaire comes back to the same type as No. 1. It is as follows: "Do you have any facts to show the effect of motion pictures as a teaching aid?" Some of the replies offer additional help in the study under consideration.

> No. I have been using motion pictures as a routine teaching procedure for 4 years. I think I have good results.

> Probably impossible to separate this factor from other factors in our course which is designed to bring personal integration in speech situations.

> Yes, particularly in connection with the use of theatrical subjects as "discussion springboards."

> Only the definite improvement shown when we re-run films made of the same individuals in succeeding semesters.

The application of the information gathered in this questionnaire can and will be applied in the chapters to follow. It is needless to comment further at this point.

EXPERIMENTAL PROCEDURE

CHAPTER III

EXPERIMENTAL PROCEDURE

Survey of the problem. In order to discover if there is any value attached to the use of the silent motion picture-conference technique in the teaching of public speaking, it was necessary for the writer to compare the results of teaching a class without the use of visual aids with the results of teaching a class with the use of visual aids. Obviously the study would have to be restricted to visible phases of delivery, since the motion pictures to be used were silent. An assumption that the better speaker uses a greater number of certain observable and measureable phenomena in the delivery of a speech was adopted as a working hypothesis; the assumption is based upon the findings of the Committee on Cooperative Research of the National Association of Teachers of Speech as reported in their publication, A Research Into The Teaching Of Public Speaking.[9] It would amount to considerable more investigation than would be necessary to study all the visible phenomena of delivery; therefore, two items were selected for the study.

Not only objective data but also subjective opinions were sought in an effort to arrive at conclusions relative to the problem. These subjective opinions were gathered by means of a reaction-to-the-use-of motion-pictures questionnaire, which was given to every student who

9. Hayworth, Donald, "Problems and Methods in the Measurement of Ability in Public Speaking," A Research into the Teaching of Public Speaking, Part II, Chapter II, pp. 52-91.

had experienced the use of motion pictures in his speech training.

Hypotheses assumed. In connection with this experiment the writer assumed the following hypotheses: first, that there would be a difference in the results obtained from the two proposed methods of teaching; and second, that this difference would be measureable. A third assumption was that the results would be expressed in the incidence of a greater number of the phenomena selected for study.

Problems presented. In trying to discover whether teaching public speaking with the help of silent motion picture-conferences was a valuable technique, the writer encountered a variety of problems. The first of these dealt with the equipment for the phusical plant, its selection and upkeep and use. Valuable information was obtained concerning this problem from the returns to the general motion picture questionnaire. The second problem concerning the division of students into control and experimental sections had to be met. Another problem of paramount importance to the success of the study was the selection of and training of observers whose reliability in counting the selected phenomena could be accepted as high calibre. Still another problem was the selection of the speeches to be observed and the speeches which would be used for motion picture study and teaching. Lastly, the manner in which the motion pictures would be shown to the students, where it would be shown, and what use was to be made of the motion picture in the teaching of public speaking had to be considered.

The physical plant. In the Auditorium at Michigan State College are three classrooms in which public speaking is taught. Two of these rooms have special provisions made for the installation of motion picture apparatus.

The center room of the three is the one used by the writer for the experimental work with motionpictures. The room measurements are twenty-four feet long by eighteen and one-half feet wide by nine and one-half feet high (24' x 18½' x 9½'). There are three windows each six feet high and four and one-half feet wide (6' x 4½') on the south side of the room. Thirteen electricity outlets are available, plus an additional electrical hookup designed to facilitate the use of motion pictures by means of a signal system. The room has thirty-five chairs, arranged seven to the row. At the front of the room, facing west, is a speaking platform six feet wide (6') and elevated above the regular floor level. On the speaking platform are a table which is four feet long by two and a half feet wide (4' x 2½'), a chair, a speaker's stand, and a waste basket. The wall at the front of the room is partially covered by blackboards.

The electrical facilities are sufficient to satisfy any requirements for artificial lighting. There are six dome lights that normally carry two hundred watts (200 w.) of electrical power each. For the experiment this was increased to two hundred fifty watts (250 w.).

The special window at the back of the room used for the photographing of the students is located six and one-half feet (6½') from the south wall and is situated eight feet (8') above the floor. The window itself is sixteen and one-half inches high by eighteen inches

wide ($16\frac{1}{2}$" x 18") and has two panes of glass separated by a dead-air space. In the room back of the experimental room and directly below the window is a platform on which to set the camera. This platform measures seventeen inches long by fifteen and one-half inches wide (17" x $15\frac{1}{2}$"). With the exception of a small opening for the camera lens, the window was covered with paper similar in color to the walls.

No doubt the architect of the building hoped to place the distraction caused a speaker by camera noise and the presence of a photographer at a minimum. The writer has striven to maintain as near a usual-classroom atmosphere as possible. These factors help.

The room in which the pictures were shown to the students is a part of the suite of rooms used for speech correction conferences and practice periods. It is situated in the same part of the Auditorium as the regular classrooms, although on an opposite side of the building. The measurements of this room are ten and one-half feet long by six and one-half feet wide by ten feet high ($10\frac{1}{2}$' x $6\frac{1}{2}$' x 10'). A cupboard housing speech correction equipment is located in one end of the room. For a screen the writer used a large piece of white cardboard which was fastened to the other wall. Next to the cupboard was a small table, three and one-half feet long by one and one-half feet wide ($3\frac{1}{2}$' x $1\frac{1}{2}$'), on which was placed the motion picture projector. There are several electrical outlets, and the electric light switch is handy from wherever an individual is sitting in the room.

Motion picture equipment and apparatus and personnel necessary to its utilization. For the experiment two different cameras were selected. The one used more often, although not as satisfactory as

the other camera, was the Eastman Cine-Kodak Model 25 with an f:2.7 lens. This particular model has a sixty per cent (60%) faster lens than the Eastman Cine-Kodak Model 20 with an f:3.5 lens. The better camera was the Eastman Cine-Kodak Model 60 with an ultrafast focusing f:1.9 lens. Both of these cameras produce silent motion pictures and are of the 8 mm. type. The 8 mm. camera was selected in preference to the 16 mm. silent or sound camera because of the expense of the films and number of feet of film per box. Both cameras are hand-wound.

For the 8 mm. camera it was possible to purchase a twenty-five foot (25') double-width roll at a considerable saving, as compared with the cost of the same amount of film for a 16 mm. camera. For the experiment Cine-Kodak Super-X Panchromatic Safety Film was used. It was hoped that the longer showing of the individual as he spoke would prove more beneficial.

The fact that both models of camera had to be hand-wound made it necessary for the instructor and the photographer to work out a careful schedule, since the film spool had to be turned over at the end of every twenty-five feet (25') of film. The writer secured the services of other instructors who were acquainted with motion picture photography and other individuals who were qualified to serve, as photographers.

The hours at which pictures were taken of the students were as follows: 8:00 - 9:00 A.M. (Tuesday, Thursday, and Saturday); 10:00-11:00 A.M. (Monday, Wednesday, and Friday); 1:00-2:00 P.M. (Monday, Wednesday and Friday); and, 4:00-5:00 P.M. (Monday, Wednesday, and Friday). The early morning and late afternoon hours were not the best

from the stand point of taking motion pictures, for natural daylight was at a minimum. When no artificial lighting or no light-colored backdrop was used, the Model 25 camera did not produce clear-cut pictures. However, the Model 60 camera impressed the writer with its efficiency no matter what time of day it was used. This fact becomes even more valuable when it is known that outside of the regular dome lights no artificial lighting was used, except during one or two film-taking sessions. In these cases the use of artificial lighting or backdrop was made merely to give a basis of comparison for the cameras and to see what effect their introduction had upon the speaker.

Whenever pictures were to be taken, the dome lights were turned on. The ceiling and walls of the public speaking classrooms are a light cream color and reflect light quite well. One of the hardest features which had to be coped with was the blackboard space behind the speaker. The students were not asked to wear special clothing, and the film results showed up this defect in our setup. Two attempts were made at artificial lighting, but the results were not gratifying. A 1000-watt flood lamp was used at one of the sessions of the eight o'clock class, and a 500-watt spot lamp was used at another meeting of the same class. The latter lighting was directed at the ceiling above the speaker. Another device was tried when a white sheet was fastened to the wall behind the speaker's usual area of movement. This helped considerably when the Model 25 camera was used but provided too light a background when the Model 60 camera was used. The amount of sunlight was a definite factor in the clarity of the pictures. In the room where the photographer was at work the venetian blinds were drawn to exclude as much light as possible.

It would be wise to mention at this time that every precaution was taken to insure naturalness in the speech situation. The students were not informed when their pictures were to be taken. The appearance of observers at certain times and their absence at others was confusing to those who were trying to guess when pictures were scheduled to be taken. At all times the instructor attempted to be casual, matter-of-fact in his classroom actions, and if someone did notice the noise of the camera or looked toward the camera window, no special attempt was made to draw his attention away from what was going on. It was found that sooner or later he drifted back to what was taking place in the class and often forgot completely about pictures being taken, even when he went to the front of the room to give his own speech. The speaker himself had difficulty hearing the camera noise.

The desire to make the situation as normal for the experimental group as for the control group that had no pictures taken was based on two points, namely: to maintain an even balance between ordinary class procedures in both groups, and to give the motion pictures every opportunity for doing their work well in offering a natural reproduction of the student in an everyday speech situation, devoid of exhibitionism, or undue self-consciousness.

It was necessary for the instructor to have a signal system set up through which the photographer could be notified when he was to begin taking pictures of a student. This was accomplished by the use of a specially designed system in which the instructor would press a button and an alarm clock would sound its alarm in the adjoining room. The switch on which the button was located could be placed at the side of the instructor in such a way as to be inconspicuous in its use.

Selection of the experimental and control groups. Almost every hour when Speech 101 is taught, there are two or three sections which have been split up from one large section at the beginning of the term. Since the writer of this thesis taught four classes of Speech 101 the winter term, 1941, it would be natural to conclude that two sections of control and two of experiment would be the basis of the study. However, since another instructor was making a study of another group of objective phenomena in relation to a motion picture study, the scheme was evolved whereby observers would be sent to the four meetings of his classes and would count certain data for the writer of this thesis. The matter of teaching by the use of motion pictures then became not only a study of its value but also the manner in which students were taught by either instructor.

At the first meeting of the class the instructor gave a speech to the combined sections in which he described the plan of using motion pictures and attempted to sell as many of the students as possible on the idea. The use of motion pictures was placed on a voluntary basis for the purpose of getting the control and experimental groups as nearly alike in personnel as possible. This was one factor. A sheet of paper was passed among the students and those who were willing to pay the necessary laboratory fee of one dollar and fifty cents ($1.50) signed their names. As soon as it was known how many had committed themselves to the plan in each combined section, this number was divided into two parts one of which became the experimental section and the other the control section. The Accounting Office handled the collection of the laboratory fees.

The personnel of each group was further controlled by pairing students within the combined section in regard to classification (freshman, sophomore, junior, or senior) and division (Liberal Arts, Home Economics, Applied Science, Agriculture, Engineering, and Pre-Veterninary Science), as far as possible.

In order that the sections be checked more closely, test scores of the psychological examination administered to every incoming freshman were secured, and the means of the control and experimental sections determined. The results are listed below. A copy of the American Council on Education Psychological Examination for College Freshman may be found in the Appendix, as well as individual student classification, division, test score, and decile rating.

TABLE VI

MEAN PSYCHOLOGICAL RATING OF EXPERIMENTAL AND CONTROL SECTIONS

	EXPERIMENTAL	CONTROL
Mean Psychological Rating	98.74	93.5

TABLE VII

DISTRIBUTION OF SCORES IN EXPERIMENTAL AND CONTROL SECTIONS OF AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION FOR COLLEGE FRESHMEN

SCORES	EXPERIMENTAL	CONTROL
150-140	2	0
140-130	0	0
130-120	5	4
120-110	4	5
110-100	7	3
100- 90	3	9
90- 80	5	4
80- 70	6	5
70- 60	2	4
60- 50	0	1
50- 40	1	0
Total	35	34

The collection of data. The two items selected for objective study in this thesis were meaningful hand and arm gestures and meaningful head movements. In arriving at a definition of what is a meaningful hand and arm gesture reference to the report of the Committee on Cooperative Research will yield the most satisfactory answer.

Meaningful Hand and Arm Gestures

1. Any movement of the hands and arms that conveys meaning or is used for emphasis.
2. When a speaker keeps arm extended and makes separate motions with his arm, hand or fingers, each separate meaningful motion is counted.
3. When making a drawing on the blackboard, it is one gesture unless the speaker explains each part as he draws it. In that case count one gesture for each explanation.
4. When demonstrating some attitude or idea.[10]

10. Hayworth, Donald, "Nature of the Data Collected," A Research into the Teaching of Public Speaking, Part I, Chapter I, p. 28.

Because this definition was satisfactorily used in the previous research project, the writer assumes the definition to be satisfactory for the purposes and needs of this study.

What is a meaningful head movement? That phenomenon was not included among the twelve phenomena studied in the earlier work. Therefore, a satisfactory and suitable definition had to be evolved. The definition chosen is as follows: Meaningful Head Movement---- Any movement of the head, shaking or nodding, for emphasis or expression. A movement of the entire head shall be considered necessary if a meaningful movement is to be counted. Raising the eye brows does not constitute a meaningful head movement.

Having decided upon suitable definitions of the phenomena to be counted, it was necessary to procure reliable observers for use in the various sections. Since another instructor was also experimenting with the use of motion pictures, although on a different basis, four people were necessary, if data were to be collected in each of eight sections, four control and four experimental. Each observer was scheduled to count in two sections, one a control group and the other an experimental group. By arranging such a schedule it was thought that if a counter were making errors in one he would counter by making errors in the other.

The writer was fortunate in getting the services of several colleagues in the department. To complete the roster several people assigned to the Department of Speech and Dramatics by Mr. Glen O. Stewart, Director of the National Youth Administration at Michigan State College, were used on the project. The group met several times

when they were given the definitions, saw them demonstrated, and were coached in the counting of the phenomena. Practice sessions were held several times during the first few speeches to check on the correlation of the counters. At these meetings the instructors gave the practice speeches.

Each individual was responsible for both phenomena, and the instructor kept track of the total length of time of the speech by means of a stop watch. Since a meaningful head movement often occurs in close proximity to a meaningful hand and arm movement, it was assumed and found to be true that each observer could count both phenomena with a fair degree of accuracy.

TABLE VIII

CORRELATION OF OBSERVERS IN THE COUNT OF MEANINGFUL ARM AND HAND GESTURES DURING A SPECIFIED TIME

Counter	Trial One	Trial Two	Trial Three	Trial Five	Trial Six	Trial Seven
w	25	28	16	5	13	39
x	22	29	18	5	14	40
y	25	30	17	6	18	37
z	22	29	22	6	14	42

TABLE IX

CORRELATION OF OBSERVERS IN THE COUNT OF MEANINGFUL HEAD MOVEMENTS DURING A SPECIFIED TIME

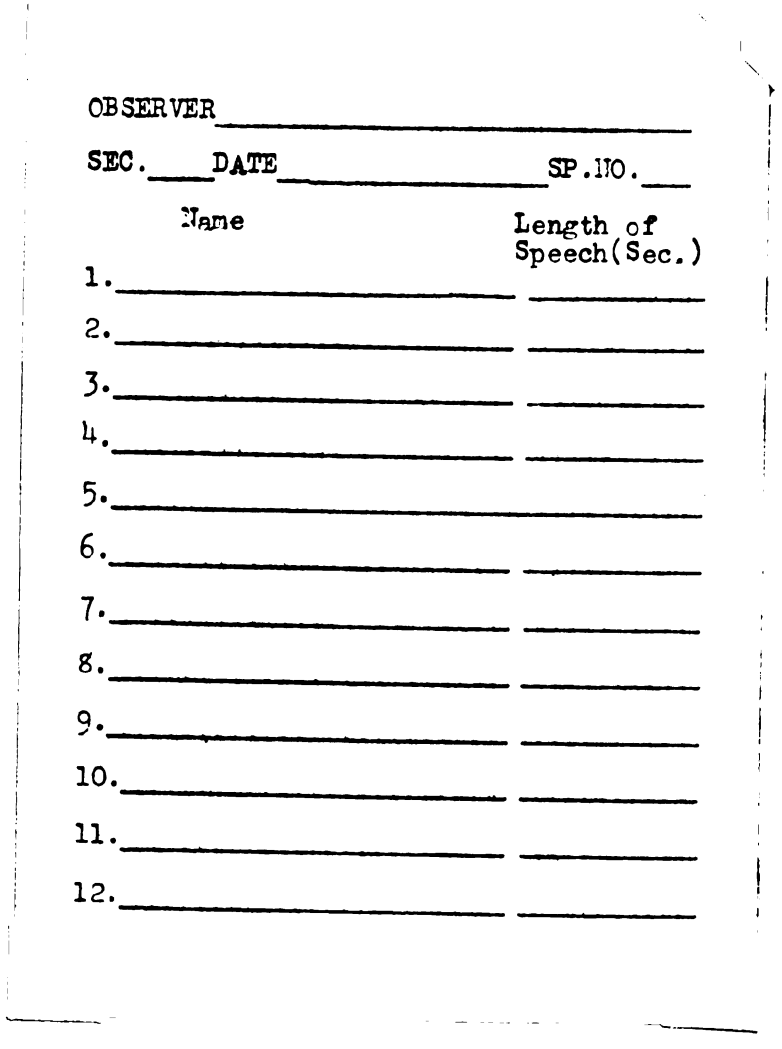
Counter	Trial One	Trial Two	Trial Three	Trial Four
w	9	30	3	20
x	15	28	2	23
y	10	28	3	20
z	13	28	3	21

A glance at either of the tables above indicates the ability of the observers to count meaningful arm and hand movements and meaningful head movements.

The manner in which the observer was coached to keep track of each item was as follows: Indicate a meaninful arm and hand movement by means of a short horizontal dash (i.e. --); indicate a meaningful head movement by means of a vertical mark (i.e. /). Your sheet should look something like this: - - / / - - - / / - / - - - - - /.

In order to get a good measure of the improvement made by each individual in the control and experimental sections it was decided to count the two phenomena for the first three speeches and then again for the last three speeches. The speech numbers, as they appear in the syllabus for Speech 101, are as follows: Speech #1, Speech #2, Speech #3; Speech #12, Speech #14, Speech #15. No attempt will be made to describe the speech given, for it is not necessary to this study. The important fact is that the phenomena were counted in the three initial speeches and in the three final speeches. The results from them will serve as the basis for any objective conclusions.

When each observer came into the classroom, he was given a large sheet of paper on which to tally his count and a small slip of paper on which were written the names of those who were going to be observed. The instructor also had a form sheet on which he wrote the speaking time of the student. At the end of the hour these sheets were passed to the instructor and the results tabulated.



OBSERVER_____

SEC.____DATE_____SP.NO.____

	Name	Length of Speech(Sec.)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		

OBSERVER_____

SEC.___DATE_____SP.NO.____

	Name	H.M.	Ges.
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

The projection of the motion pictures to the experimental sections.

Each student in these sections paid a laboratory fee of one dollar and fifty cents ($1.50). The fee entitled him to twenty-five feet of motion picture film. Half of the student's film was used during Speech #6 and the other half during Speech #9. Between these two speeches and after the latter the exposed film was sent away for processing and upon its return each student was asked to come to a conference session in the projection room. There the film was projected on the screen, and the instructor pointed out to the student ways and

means of improving his visible delivery. The conference for Speech #6 film lasted about fifteen minutes (15 minutes) and the conference for Speech #9 was a half-hour in length. At both meetings the use of meaningful arm and hand movements and meaningful head movements was stressed.

The projector used was a Kodascope Model 20, which shows pictures twenty-two inches by thirty inches (22" x 30") at fourteen feet (14'). It is necessary to rewind, with the motor, after each running of the film.

One of the most interesting aspects of this study has been to observe the student react when he saw himself in the motion picture. The writer carefully jotted down the verbal comments of each student during the showing of each half of the film. Since these were individual conferences at which the film was shown, students felt free to express themselves, even laugh at themselves, without fear of having other students join in the laughter. The log maintained by the writer gives a good indication of the value that might be attached to the use of motion pictures in the teaching of speech. Some of them are as follows:

Student No. 2
Speech #6--"Oh, look at me! I don't move!" This person laughed at the picture.
Speech #9--"I would never have know how lifeless I looked before an audience."

Student No. 19
Speech #6--"I didn't know my arms were sticking out so much." "Gee, just one gesture!"
Speech #9--"Well there's one thing certain--I would never have believed all you were writing on my criticism pad if I hadn't seen it myself."

Student No. 5
Speech #6--"Good night, I look like a totem pole."
Speech #9--"There isn't much improvement is there? ....I don't think pictures have helped me very much, for I'm still as nervous as I was at the beginning of the term, and I don't feel like making gestures."

Student No. 14
Speech #6--"At least I talk all the time."
Speech #9--"Gee whiz! That picture shows me at my worst."

Student No. 13
Speech #6--"Boy, do I ever make the gestures!" (irony)
Speech #9--"It's the same thing over again." "Pictures have helped me to see what I am actually doing wrong."

Student No. 16
Speech #6--"Head movements could be better."
Speech #9--"Well, at last I'm using a few gestures."

Student No. 9
Speech #9--"My gestures were better in the first picture, because there were some strangers present this last time and I knew pictures were being taken."

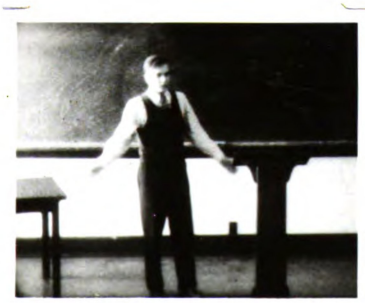
Student No. 10
Speech #9--"Do I ever see what I'm doing wrong! Indeed I do. Oh, my goodness, that's terrible (nervous swinging of the arms to and fro).

Student No. 11
Speech #6--"My gestures are all down by my legs."
Speech #9--"Gee, what a line I'm putting out."

Student No. 13
Speech #6--"I never realized before how bad my posture looks."
Speech #9--(laughed at himself) "Everybody ought to see himself in pictures. It surely helped me."

Student Making A Meaningful Arm and Hand Gesture; Taken Against A White Sheet Back-Ground; f. 1.9 lens

Student Making A Meaningful Arm and Hand Gesture; Taken Under Normal Circumstances; No Artificial Lighting; f. 2.7 lens



Student Making A Meaningful Arm and Hand Gesture; No Artificial Lighting; f. 1.9 lens

Student Speaking In Front Of White Sheet Background; No Artifical Lighting; f. 1.9 lens

Student Speaking With 500 watt Spotlight Focused Above Him; f.2.7 lens

Student Speaking With 1000 watt Floodlight Focused On Her; f. 2.7 lens

RESULTS AND THEIR INTERPRETATION

CHAPTER IV

RESULTS AND THEIR INTERPRETATION

Part I

Objective Data. After the objective data had been collected by counting the incidence of the two selected phenomena as they appeared in the speeches given in the four sections of public speaking classes of Instructor A and the four sections of Instructor B, the results were tabulated and mathematical formulae were applied and comparisons were made.

TABLE X

MEAN SCORES OF MEANINGFUL ARM AND HAND GESTURES IN INITIAL THREE SPEECHES AND FINAL THREE SPEECHES, AND GAIN MADE BY CONTROL AND EXPERIMENTAL GROUPS

Group	Mean Scores in Initial Three Speeches	Mean Scores in Final Three Speeches	Mean Gain
Instructor A			
Experimental	1.42	8.18	6.76
Control	2.64	5.03	2.39
Instructor B			
Experimental	2.30	3.47	1.17
Control	2.20	8.47	6.27
Combined Scores of Both Instructors			
Experimental	2.02	6.04	4.02
Control	2.20	6.21	4.01

Rough Comparison and Interpretation. Looking at the mean scores the mean gain without considering a host of influencing factors, it would be very easy to conclude that the experimental group of Instructor A, the writer, had made greater progress in the acquisition of and use of meaningful arm and hand gestures than the control group, as a result of having received better teaching through the silent motion picture-conference. Yet, if that assumption were true, how does it happen that Instructor B's mean gain was a complete reversal of what Instructor A achieved, since both used motion pictures in the teaching of their experimental sections? There surely must have been other factors operating.

Application of Mathematical Formulae. To determine what factors were influencing the results it was decided to find out if statistically each instructor's experimental and control groups were significantly different at the beginning of the experiment, and also if the combined scores of both instructors were significantly different at the beginning.

The formula for finding the significant difference between two means was applied and the results are as follows:

Instructor A

1. At the beginning of the experiment the two groups were not significantly different. To be significantly different a score has to be over 2. The answer in this case was 1.9, which is almost significant in favor of the control group.
2. At the end of the experiment the score was 5.8, a significant difference in favor of the experimental group. A significant difference at the end of the experiment answers the question of whether there was improvement as compared by using one technique or another.

Instructor B

1. 1.8 is not great enough to mark a significant difference between the experimental and control groups at the beginning.
2. For some reason the control group was more effective at the end of the experiment than the experimental group. The score was 8.03.

Combined Scores

1. 0.1---no significant difference, at beginning.
2. 0.03--no significant difference, at the end.

Putting the combined experimental and control sections on an equal basis, the formula for the analysis of co-variance was applied to the data on meaningful arm and hand gestures to determine, if possible, whether the method or the instruction were the determining factors. To be significant a score should read over 4 points. Methodology rated zero, and instruction did not have a significant effect, although what significance there was leaned toward Instructor A, 2.11 points.

TABLE XI

MEAN SCORES OF MEANINGFUL HEAD MOVEMENTS PER MINUTE IN INITIAL THREE SPEECHES AND FINAL THREE SPEECHES, AND GAIN MADE BY CONTROL AND EXPERIMENTAL GROUPS

Group	Mean Scores In		Mean Gain
	INITIAL Three Speeches	Final Three Speeches	
Instructor A			
Experimental	1.79	2.95	1.16
Control	1.98	2.42	0.44
Instructor B			
Experimental	5.28	2.56	--2.72
Control	6.92	4.58	--2.34
Combined Scores of Both Instructors			
Experimental	3.44	2.78	---0.66
Control	4.74	3.63	--1.11

Rough Comparison and Interpretation. With four of the six items showing a negative sign it is no more than natural to conclude that initial status was better than the final status, that the use of motion pictures in the teaching of meaningful head movements was of no value, that even the teaching of meaningful head movements was not productive of good positive results. However, it is not wise to generalize too quickly. The same technique should be applied in this case as was used with gestures.

Application of Mathematical Formulae. Results of the application of the formula for finding the significant difference between two means are as follows:

Instructor A
1. Beginning ratio---0.15, not significantly different.
2. End Score--0.76, no significant difference..

Instructor B
1. Beginning---2.13, a significant difference in favor of the control group.
2. End---8.4, significantly different in favor of the control group.

Combined Scores
1. Beginning--2.7, in favor of the control group.
2. End---2.9, in favor of the control group.

The correlation coefficient of 0.19 from the use of the formula for the analysis of co-variance applied to the head movement data is not significantly different. To be significantly greater than zero it should be 0.2o. Since the correlation coefficient between initial and final scores is not significantly different from zero, nothing is gained by making adjustments for initial scores.

Part II

Subjective evaluation on the part of the students. In addition to an objective study of any problem a subjective evaluation in which the opinions of those who took part in the experiment are considered is of definite value. With that idea in mind the writer gave each student in the experimental section a questionnaire. This survey of attitudes and experiences covered several phases of the work which were considered of importance. The returns are as follows and speak for themselves:

TABLE XII

RECORD OF STUDENTS' KNOWLEDGE OF THE TAKING OF MOTION PICTURES IN THE CLASSROOM

QUESTION	YES	NO
1. Were you aware that motion pictures were taken of you?		
Speech #6	9	10
Speech #9	9	10

It would appear that a fairly good piece of work had been done in camouflaging the taking of the motion pictures. If any one factor would contribute to a person's knowledge of the fact that pictures were being taken of him, it would most likely be the whir of the camera as the film was being exposed. In spite of the fact that the booth from which pictures were taken had double glass, the vibration

seemed to transfer to the window and even the wall, and many students reported that they heard the noise before going to the platform to speak.

An analysis of the second question, "What made you aware of this?" ought to verify or reject the writer's opinionated statement. Here are some comments:

> The Noise of the camera.
>
> I was in the back row of seats when other pictures were being taken and I could hear the camera.
>
> The white sheet behind the speaker's stand and the window to see what was going on.
>
> There was a spot light focused above me.

The use of the white sheet as a background and the artificial lighting are obvious tips to the student that motion pictures are to be taken. Since these media were not used extensively, the writer does not consider them to be of too great importance. In the experiment there was a very definite attempt made to keep student knowledge of the fact that pictures were being taken at a minimum. Consequently, artificial lighting and backdrop were used no more than for experimental purposes.

TABLE XIII

RECORD OF STUDENT REACTION TO THE KNOWLEDGE THAT MOTION PICTURES WERE BEING TAKEN

	QUESTION	YES	NO
3.	If you were aware of it, did the taking of motion pictures disturb you?	1	14

It might be logical to conclude that knowledge that pictures were being taken had no visible effect upon the speaker and his effectiveness. However, the writer would like to assume that this fact was partially, at least, the result of the effort to keep such knowledge at a minimum. A few comments might add some significance:

> The first time I knew about it I wasn't disturbed because I was too much interested in what I was going to say next.
>
> I forgot about it when I began to speak.
>
> I merely smiled to myself.
>
> Yes, it did, for I concentrated more on my physical activity than on what I was trying to say.

TABLE XIV

RECORD OF STUDENT REACTION TO THE USE OF ARTIFICIAL LIGHTING AND BACKGROUND SHEET

	QUESTION	YES	NO
4.	If such equipment was used, did the addition of extra lights or a background sheet disturb you?	2	8

Comments on the part of the students:

> There was a background sheet, but it didn't bother me. I knew some pictures had been taken but didn't know mine was.
>
> The only time that I was bothered was when I came into the room and saw the background sheet. I sort of tightened up.
>
> When the light was turned on, it startled me.

TABLE XV

RECORD OF STUDENTS' MOTION PICTURE EXPERIENCE

QUESTION	YES	NO
5. Have you ever had motion pictures taken of you before?	13	6

Motion pictures taken at home or at the public school were the most common to those who answered the question in the affirmative.

Question No. 6 gives a pretty clear picture of what effect the motion pictures had upon each student when he saw himself. The question was stated as follows: "What were your reactions upon seeing yourself when the motion picture of you was projected?" Perhaps the easiest way to express the reactions is to read the students' own words.

> Before seeing the pictures I had no idea as to how I appeared as seen by the audience during my speeches. By seeing the pictures I was better able to get a clear idea as to the faults in delivery—posture, gestures in low plane, etc. Simply being told of your faults doesn't make them "sink in" as does the seeing of yourself in action through the pictures.
>
> Was surprised to see how different I looked than I thought. Decided to change some of my actions and looks.
>
> The class had said my posture was bad, but it really struck me when it showed on the screen. My reaction was that I couldn't really be that bad, but there was only one way to overcome these defects, realize them and practice.
>
> Saw my errors in gestures in giving my speech, saw too, many things that probably will aid me in future public speaking.
>
> I felt suddenly very lifeless and as if I should do something besides just stand still. It doesn't seem as if I could be so motionless while talking.

I was very interested. I could see just how I looked when I made the motions that I did.

I wondered if I was going to make any mistakes. I never thought I looked and acted like I did.

Ye Gods! Is that me? Perhaps the class was right in saying that I appeared too tense.

I realized what the instructor had told me and that I had no facial expression, gestures, or bodily movement.

I saw I was an uninteresting and dull speaker. I needed more life and expression in speeches.

I laughed at my first one because I was so lifeless but I was surprised to see that I improved in the second.

I got a big kick out of it.

I was a little embarrassed to see all of my faults staring me in the face, but it also gave me the urge to correct them.

TABLE XVI

RECORD OF STUDENTS' ATTITUDE TOWARD VALUE OF MOTION PICTURES IN THE SPEECH CLASS

	QUESTION	YES	NO
6.	Do you believe the use of motion pictures helped you in respect to public speaking?	17	2

Each student, when he was given the questionnaire to take to his home to fill out, was asked to be very truthful in replying to the questions. He was told that what he said would have no effect upon his mark in the course, that what the writer was seeking was a true statement of each student's attitude toward the use of motion pictures in the teaching of public speaking. It was hoped that by making these preface remarks that it would be possible to condition the student to what was desired.

"In what way did it help you?" followed the question to which the student replied "yes" or "no". Some of the statements are as follows:

> It gave me an understanding of how I appeared to the audience and thereby made correction easier in that I had a definite idea in mind as to my faults.
>
> It helped me most with my gestures. I was making them too low and by seeing how funny this looked was able to correct it. My transitions were also wrong and I think the motion pictures helped to improve them.
>
> Instructors and class members suggestions are of great help, especially if you are interested in making improvement, but a spoken criticism may have a different meaning.
>
> I could see how I looked and some of my motions I discontinued because I could see that they weren't any good. Some others I used more because they were better.
>
> Convincing to me where audience only faintly made me aware of my faults.
>
> It made me try to improve these defects.
>
> I saw how dull I looked in my first one and tried to use a little more expression. Otherwise I don't think they helped me much .
>
> It showed everything you did as far as physical activity was concerned. I found some weak points in my physical activity which probably I wouldn't have otherwise. It gives you a chance to see yourself as others see you.
>
> It cleared shows all faults in gestures which aren't realized while you're making the speech.

As a conclusion to the questionnaire the following request was made: "List any suggestions you might have as to the use of motion pictures in the teaching of speech; in the taking of such pictures; or concerning the experiment in general." A variety of replies was received.

> The taking of pictures certainly created interest in speech class. It gave you a reason for doing good work.

Most any person you talk to that has had public speaking wishes that they could have had pictures taken of them too, so there is bound to be some benefit derived from them and I think speech class is the place to do it because so much emphasis is placed on your action.

I think the evaluation of the pictures by instructor and student in conference is excellent, individually. There undoubtedly is more need for use of facilities, such as pictures and phonograph as teaching devices. The speech department probably has progresses farther along this line than any other department on campus. I feel several shots taken outside the formality of the classroom would bring a good contrast of gesturing for emphasis in ordinary conversation.

I think there should be more secrecy in taking pictures.

I think the experiment is a very good one but there is room for improvement as in everything else. I think perhaps the big fault I noticed is that too many students were conscious they were being taken which was inclined to make them nervous. If in time the sound machine can be used along with the pictures I think it will be much more helpful.

I think it would be grand if more people or if all people taking speech could have the opportunity of seeing themselves speaking. It seems to drive home better than many criticisms the defects in our speech and it also challenges us more strongly to conquer them, by seeing ourselves as others see us.

The pictures could be used in front of your group and subjected to their remarks, so that a better cross-section of opinion might be had. The machine should be so used, as not to make any noise. Several times it was against the glass and the sound was magnified, thus carrying the sound to the speaker and making him flustered.

I think that the speaker should be unaware of the fact that his picture is being taken, and then he will not be "putting on" anything.

Motion pictures show the speaker his faults much more convincingly than the class discussion does.

I think that a move should be taken of every speedh given and then it will enable us to see our gradual improvement. The manner in which this experiment is carried on now is not entirely satisfactory because maybe the move isn't taken of the speech which shows the improvement.

> Motion pictures should be taken when student knows about it so they micht prepare more animation in their speech-- to show defects in way they handle animation.
>
> Taking pictures is a very good idea but if clearer and larger pictures cannot be taken because of the expense, the present type of films help very little and should be discontinued.
>
> It would be a good idea to use the camera that took clearer pictures.

Reading over the replies received on the questionnaire impresses the writer with the fact that a good many of them sound like a testimonial. However, testimonials can be for the good of an experiment as well as for its bad points. The general trend among the replies follows the line of what was reprinted, so that it is possible to conclude that the majority of the students were sold on the plan of using the silent motion picture-conference in the teaching of public speaking.

CONCLUSION

CHAPTER V

CONCLUSION

Summary. The data, both objective facts and subjective opinions, have all been examined. By way of summary what can be said?

Within the limits of this experiment the following statements may be made:

1. A comparison of the mean gain in the incidence of two phenomena, meaningful arm and hand gestures and meaningful head movements, selected for study, indicated that the experimental group made no great improvement over the control group, as a result of having experienced the silent motion picture-conference in addition to the regular teaching technique. However, there are several conditioning and revealing statements that should be cited.

   a. The writer has no certainty that the results are positive.

   b. Of the two phenomena meaningful head movements had a negligible improvement in all instances.

   c. There was a slight improvement among the students in one instructor's experimental sections as compared with his control group. This statement is based upon the results of the application of the formula for the analysis of co-variants.

2. Reference to the reaction attitudes of the students in the experimental group of the writer showed (1) that the group as a whole felt the experience of having the silent motion picture-conference had been of value to them in their public speaking class and (2) that motion pictures offer evidence, visible to the speaker himself, of errors in the physical body aspects of delivery.

Conclusions. Within the limits of this study there are a few conclusions which seem to hold true for the conditions under which this experiment was conducted.

1. Students in the public speaking class on the college level do not improve to any great extent statistically as a result of having experienced the silent motion picture-conference.

2. There is a definite factor in the human significance of the use of the silent motion picture-conference in the teaching of public speaking.

Suggestions for further study. The writer feels that the possibilities of experimenting with the motion picture-conference technique have not been touched. The evidence herein presented has not satisfied his subjective conviction that the value of the motion picture-conference in the teaching of public speaking should be considered. The following studies may be worth making:

1. Whether the sound motion picture--individual and group conference will yield more positive results in favor of the use of this technique in the teaching of public speaking.

2. Whether the silent motion picture-conference technique when applied to more students will yield different results.

3. Whether the silent motion picture-conference technique can be measured more accurately by the observance of other phenomena.

4. Whether the silent motion picture-conference when applied to a situation in which the errors in this experiment have been corrected and in which the visual aids are used more often in the teaching of the physical aspects of public speaking both in individual and group meetings, will yield different results.

5. Whether the use of the motion picture-conference can be extended to other phases of speech work and the results measured objectively.

APPENDIX

Date_____

Dear :

Dr. Donald Hayworth, Head of the Department of Speech and Dramatics, has suggested that I write you for information concerning your experimentation in the use of motion pictures in the teaching of speech.

In order to facilitate a more thorough and more standard reply to this request, which I am sending to those of you in the field of speech who have been using motion pictures, I have prepared a questionnaire which covers the points on which I need information.

We are contemplating the installation of motion picture apparatus in our class rooms for use in the teaching of public speaking. We are anxious to know your honest opinion in regard to the value of this supplementary teaching device, not only in the field of public speaking but in other branches of speech work as well.

Thank you very much for your help.

Very sincerely yours,

Wilbur F. Luick

Date_____

Dear :

We are contemplating the installation of motion picture apparatus in our public speaking classrooms, as a supplementary teaching device. In order to plan our program most effectively we are anxious to have a statement of the opinions and experiences of other departments of speech, where motion pictures have been used for speech work.

Dr. Donald Hayworth, Head of the Department of Speech and Dramatics, has suggested that I write you requesting such information.

In order to save you as much time as possible and to give us a standard reply I have prepared a brief questionnaire containing the points on which we need information. Will you please answer the questions as completely as your experience will permit and return them to me in the stamped and addressed envelope?

Thank you very much for your help.

Very sincerely yours,

Wilbur F. Luick

MOTION PICTURE QUESTIONNAIRE

Department of Speech and Dramatics

Michigan State College

1. At any time have motion pictures been used as a teaching device in your department?
   Yes_____ No_____

2. At the present time are you using them for any type of speech work?
   Yes_____ No_____

3. If you are using motion pictures, in connection with what fields are they being used? Please check.

   Dramatics _____
   Interpretation _____
   Radio _____
   Public speaking _____
   Forensics _____
   Speech correction _____

4. From your experience with motion pictures would you conclude that there is any value connected with them in the teaching of speech?

   Yes_____ No_____

   Statement:

N;B; On the next page are further questions for those of you who have used motion pictures in the teaching of speech. You need not answer any of these questions, unless you have used motion pictures.

MOTION PICTURE QUESTIONNAIRE

Department of Speech and Dramatics

Michigan State College

EQUIPMENT

1. Will you briefly describe the physical plant in which you have used motion pictures?

2. What kind of camera equipment did you use?
   Make and size_____
   Lens_____
   Film requirements_____

3. Did you use artificial lighting?
   Statement:

4. What kind of projector and screen did you use?

   Statement:

PERSONNEL

1. How many students have participated in classes in which motion pictures have been used?
   Number_____

2. Was the use of motion pictures by each student made optional or compulsory?

3. How did you "finance" your program?
   Statement:

4. How were the films shown to the students?
   Individual conference_____
   Group meeting_____

VALUE OF MOTION PICTURES AS A TEACHING DEVICE

1. Have you made any objective studies relative to the value of motion pictures as a teaching aid?
   Yes_____ No_____
   Statement:

2. What student reaction to the use of and value of motion pictures did you receive?

   Statement:

3. Was the student aware that his picture was being taken? How did you govern this factor?

   Statement:

4. Did the presence of motion picture equipment or the knowledge that his picture was being taken have any visible effect upon the speaker, his poise, his presentation?

   Statement:

5. Did your students improve more or less as a result of the use of motion pictures as compared with groups of students who had no motion picture experience?

   Statement:

6. Do you have any facts to show the effect of motion pictures as a teaching aid?

The National Association of Teachers of Speech
in
The Twenty-Third Annual Convention

Motion Pictures and Visual Education
December 27, 28, 29, 30, 1938

Presiding: H. P. Constans, University of Florida
General Theme: The Use of Visual Aids

In the Speech Classroom:

"Use of Motion Pictures for Development of mental Objectivity in Speech" (with film from classes in the basic speech course at the University of Denver), Kenneth Christianson, University of Denver

"Values of the Motion Picture in teaching Drama and Diction," Josephine Allensworth, Humes High School, Memphis, Tennessee

"Visual Hearing Method of Instructing the Hard-of-Hearing" (with demonstration film), Marie K. Mason, Onio State University

"Motivating Classroom Speech Activities by Educational Films," Irene Poole Davis, Akron, Ohio

In the Speech Research Laboratory and Dramatic Workshop:

"Recent Motion Picture Studies of the Larynx," (with 16 mm. demonstration film), Paul Moore, Northwestern University

"The use of 8 mm. Color Film for Teaching the Construction of Puppets," Jean Starr Wiksell, Stephens College

A Summary Discussion:

"The place of visual Aids in Speech Education," Orville C. Miller, Vanderbilt University

The National Association of Teachers of Speech
in
The Twenty-Fourth Annual Convention

December 27, 28, 29, 1939

Visual Education

Presiding: Orville C. Miller, Vanderbilt University
General Theme: Audio-Visual Aids and Techniques in Speech

"Comparative Results of Making Animated Films in Photoflood Studio and Outdoor Classroom," Paul Kozelka, Rosary College

"Developing a Method of Taking Motion Pictures in the Speech Classroom Without Artificial Light and Making Synchronized Speech Recordings," Vernon A. Utzinger, Carroll College

"Making a Sound Moving Picture of Dear Brutus," (A fifteen-minute section of this amateur audio-visual production will be shown.) Josephine Allensworth, Memphis City Schools

"Experiments in Oral Communication," (Experimental Research "Sound on film" motion pictures of students in informal discussion and interpretative situations.) Courtesy of The General College, University of Minnesota

Open Forum

Leader: Alma E. Johnson, Florida Southern College

The National Association of Teachers of Speech
in
The Twenty-Fifth Annual Convention

December 30, 31, 1940 and January 1, 2, 1941

Audio-Visual Aids

Program Sponsor, Elwood Murray, University of Denver, presiding
General Theme: Audio-Visual Aids in Speech

Two films: "Sound Waves and Their Sources" and "Fundamentals of Acoustics"--Erpi Classrooms Films, Inc.

"New Applications of Vocal Recording Technic for the Classroom," Henry V. Andrews, Girard College

"Building Units in Photoplay Appreciation," Josephine Allensworth, Memphis City Schools

"Audio-Visual Aids in the Basic Speech Course," Harold C. Svanoe, Central Missouri State Teachers College, Warrensburg, Missouri

"Use of Audio-Visual Aids in the Speech Clinic," D. W. Morris, Indiana State Teachers College, Terre Haute, Indiana

KEY TO SUCCEEDING TABLES

Schedule of Classes for Instructors

Instructor A	Instructor B
Section 2 (experimental)	Section 5 (experimental)
Section 9 (experimental)	Section 12 (experimental)
Section 52 (control)	Section 2a (control)
Section 12a (control)	Section 9b (control)

Student Numbering System

Experimental Sections	Control Sections
Section 2---1 through 10	Section 5a--1a through 9a
Section 9---11 through 19	Section 12a-10a through 15a
Section 5---20 through 28	Section 2a--16a through 26a
Section 12--29 through 35	Section 9b--27a through 34a

Classification

4--senior
3--junior
2--sophomore
1--freshman

Division

L. A.--Liberal Arts (Business Administration, Hotel Administration, and Music included)
H. E.--Home Economics
A. S.--Applied Science (Police Administration, Physical Education)
Eng.--Engineering
Ag.---Agriculture (Forestry)

TABLE XVII

STUDENTS OF EXPERIMENTAL SECTIONS,

THEIR CLASSIFICATION AND COLLEGE DIVISION,

THEIR PSYCHOLOGICAL TEST SCORE AND DECILE RATING

	Student Number	Classification	Division	Psychology Score	Decile
	1.	1.	A.S.	111	6
	2.	1	H.E.	108	5
	3.	1	L.A.	101	4
	4.	1	L.A.	78	1
Section	5.	1	A.S.	126	8
2	6.	2	Eng.	124	10
	7.	3	Eng.	93	7
	8.	1	H.E.	106	5
	9.	2	Eng.	145	10
	10.	1	H.E.	124	8
	11.	3	A.S.	88	8
	12.	4	L.A.	144	3
	13.	4	Ag.	76	6
	14.	1	Ag.	94	3
Section	15.	1	H.E.	68	2
9	16.	3	H.E.	72	5
	17.	1	Ag.	109	5
	18.	2	Eng.	118	10
	19.	1	Eng.	106	9
	20.	1	Ag.	102	4
	21.	1	L.A.	129	9
	22.	2	Eng.	74	3
	23.	3	Ag.	85	5
Section	24.	1	Eng.	76	6
5	25.	3	H.E.	117	10
	26.	2	Eng.	105	9
	27.	1	H.E.	88	2
	28.	2	H.E.	79	4
	29.	2	Eng.	87	6
	30.	2	Eng.	96	7
Section	31.	1	H.E.	120	7
12	32.	2	H.E.	68	2
	33.	1	A.S.	42	1
	34.	1	L.A.	87	8
	35.	3	L.A.	110	6
			Total	3456	

TABLE XVIII

STUDENTS OF CONTROL SECTIONS

THEIR CLASSIFICATION AND COLLEGE DIVISION,

THEIR PSYCHOLOGICAL TEST SCORE AND DECILE RATING

	Student Number	Classification	Division	Psychology Score	Decile
	1a.	3	H.E.	114	10
	2a	2	Eng.	63	1
	3a.	2	Eng.	76	3
	4a.	3	Ag.	73	5
Section	5a.	1	Ag.	89	2
5a	6a.	1	Ag.	103	4
	7a.	2	Eng.	96	7
	8a.	2	H.E.	91	8
	9a.	2	Eng.	100	8
	10a.	2	Eng.	97	8
	11a.	1	H.E.	64	1
Section	12a.	2	Ag.	59	1
12a.	13a.	2	H.E.	67	2
	14a.	1	A.S.	123	8
	15a	1	L.A.	118	7
	16a.	2	A.S.	91	8
	17a.	2	L.A.	90	6
	18a.	2	Eng.	91	7
	19a.	2	Eng.	99	8
	20a.	1	L.A.	122	8
Section	21a.	2	Eng.	127	10
2a	22a.	1	H.E.	88	2
	23a.	1	H.E.	106	5
	24a.	1	H.E.	111	6
	25a.	2	Eng.	76	3
	26a.	1	H.E.	90	2
	27a.	1	Ag.	85	2
	28a.	1	Ag.	87	2
	29a.	1	H.E.	118	7
Section	30a.	3	Eng.	120	10
9b	31a.	2	Eng.	75	3
	32a.	2	Eng.	111	9
	33a.	1	Ag.	90	2
	34a.	3	Ag.	69	2
			Total	3179	

TABLE XIX

EXPERIMENTAL SECTIONS

LENGTH OF SPEECH

Student Number	Speech Number I	II	III	Seconds Total	Minute Total
1.	58	101	60	219	3.65
2.	298	73	102	473	7.88
3.	76	130	65	271	4.52
4.	160	80	45	285	4.75
5.	109	64	67	240	4.00
6.	197	313	76	586	9.77
7.	97	75	57	229	3.82
8.	86	99	76	261	4.35
9.	182	89	70	341	5.68
10.	61	108	70	239	3.98
11.	180	187	95	462	7.70
12.	145	155	71	371	6.18
13.	153	128	80	361	6.02
14.	120	98	70	288	4.80
15.	112	96	65	273	4.55
16.	110	161	70	341	5.68
17.	231	174	72	477	7.95
18.	121	135	69	325	5.42
19.	155	166	76	397	6.62
20.	83	103	77	268	4.47
21.	121	95	108	324	5.40
22.	75	135	75	285	4.75
23.	189	108	90	387	6.45
24.	177	150	60	387	6.45
25.	127	105	70	302	5.03
26.	149	98	81	328	5.47
27.	133	85	74	292	4.87
28.	78	75	79	232	3.87
29.	65	85	58	208	3.47
30.	152	137	49	338	5.63
31.	171	98	60	329	5.48
32.	145	134	65	344	5.73
33.	126	112	61	299	4.98
34.	176	---	--	176	2.93
35.	175	72	66	313	5.22

TABLE XX

CONTROL SECTIONS

LENGTH OF SPEECH

Student Number	Speech Number I	II	III	Seconds Total	Minute Total
1a.	133	109	73	315	5.25
2a.	142	112	56	310	5.17
3a.	73	96	70	239	3.98
4a.	193	115	61	369	6.15
5a.	58	67	69	194	3.23
6a.	94	151	63	314	5.23
7a.	96	72	59	227	3.78
8a.	144	75	51	270	4.50
9a.	196	176	71	443	7.38
10a.	188	154	64	406	6.77
11a.	54	92	59	205	3.42
12a.	157	175	114	446	7.43
13a.	101	109	57	267	4.45
14a.	101	84	64	316	5.27
15a.	111	146	69	326	5.43
16a.	123	130	64	316	5.28
17a.	144	155	69	368	6.13
18a.	177	140	57	374	6.23
19a.	253	252	75	580	9.67
20a.	112	150	72	334	5.57
21a.	155	130	65	350	5.83
22a.	180	185	70	435	7.25
23a.	117	165	67	349	5.82
24a.	80	105	70	255	4.25
25a.	140	122	75	337	5.62
26a.	---	150	52	202	3.37
27a.	442	175	174	791	13.18
28a.	110	157	60	326	5.45
29a.	119	93	58	270	4.50
30a.	268	189	93	550	9.17
31a.	282	165	63	510	8.50
32a.	104	135	71	310	5.17
33a.	110	88	115	313	5.22
34a.	255	135	---	390	6.50

TABLE XXI

EXPERIMENTAL SECTIONS

LENGTH OF SPEECH

Student Number	XII	XIV	XV	Second Total	Minute Total
1.	100	476	140	716	11.93
2.	175	530	220	925	15.42
3.	280	511	210	1001	16.68
4.	280	409	137	826	13.77
5.	240	301	295	836	13.93
6.	320	417	266	1003	16.72
7.	300	364	220	884	14.33
8.	257	405	180	842	17.03
9.	320	328	209	857	14.28
10.	415	311	187	913	15.22
11.	440	380	282	1102	18.37
12.	485	480	287	1147	19.12
13.	410	590	255	1255	20.92
14.	240	590	186	1016	16.93
15.	240	435	242	917	15.28
16.	410	435	300	1145	19.08
17.	490	315	300	1105	18.42
18.	380	395	268	1043	17.38
19.	430	310	145	935	15.58
20.	377	398	155	930	15.50
21.	210	470	120	800	13.33
22.	440	390	175	1005	16.75
23.	370	463	190	1023	17.05
24.	564	400	135	1099	18.32
25.	362	375	95	832	13.87
26.	360	555	140	1055	17.58
27.	---	265	140	405	6.75
28.	311	430	115	856	14.27
29.	370	340	95	805	13.42
30.	360	278	80	718	11.97
31.	360	310	115	785	13.08
32.	390	260	135	785	13.08
33.	355	240	100	695	11.58
34.	330	386	110	826	13.77
35.	300	210	95	605	10.08

TABLE XXII

CONTROL SECTIONS

LENGTH OF SPEECH

Student Number	Speech Number XII	XIV	XV	Second Total	Minute Total
1a.	375	370	130	875	14.58
2a.	422	360	180	962	16.03
3a.	208	475	219	902	15.03
4a.	300	240	250	790	13.17
5a.	145	390	155	690	11.50
6a.	280	390	195	865	14.42
7a.	320	595	325	1240	20.67
8a.	370	324	220	914	15.23
9a.	455	395	222	1072	17.67
10a.	280	540	308	1128	18.80
11a.	255	410	197	1103	16.72
12a.	465	391	311	1167	19.45
13a.	405	445	282	1132	18.89
14a.	190	510	341	1041	17.35
15a.	330	427	155	912	15.20
16a.	385	305	95	785	13.08
17a.	380	485	140	1005	16.75
18a.	260	209	120	669	11.15
19a.	485	520	160	1165	19.42
20a.	350	420	145	915	15.25
21a.	350	335	103	788	13.13
22a.	300	450	144	894	14.90
23a.	300	375	128	803	13.38
24a.	315	415	137	867	14.45
25a.	310	475	106	891	14.85
26a.	320	---	86	406	6.77
27a.	263	340	153	756	12.60
28a.	275	380	140	795	13.25
29a.	380	370	133	783	13.05
30a.	330	330	130	790	13.17
31a.	443	410	90	943	15.72
32a.	290	360	95	745	12.42
33a.	430	412	88	930	15.50
34a.	325	300	73	698	11.63

TABLE XXIII

EXPERIMENTAL SECTIONS

MEANINGFUL ARM AND HAND GESTURES

Student Number	Speech Number I	II	III	Total Number	Number Per Minute
1	0	0	6	6	1.6
2	3	1	16	20	2.5
3	0	0	0	0	0.0
4	3	5	0	8	1.7
5	0	0	0	0	0.0
6	0	0	0	0	0.0
7	0	3	3	6	1.6
8	0	0	0	0	0.0
9	0	0	0	0	0.0
10	10	6	9	25	6.3
11	9	4	16	29	3.8
12	0	1	8	9	1.4
13	6	5	12	23	3.8
14	3	0	3	6	1.3
15	0	0	0	0	0.0
16	0	5	0	5	0.9
17	0	0	11	11	1.4
18	0	0	0	0	0.0
19	0	0	4	4	0.6
20	1	0	0	1	0.2
21	3	20	14	37	6.9
22	0	0	5	5	1.1
23	0	11	18	29	4.5
24	0	0	0	0	0.0
25	1	0	4	5	1.0
26	12	9	31	52	9.5
27	6	2	9	17	3.5
28	15	1	18	34	8.8
29	0	0	0	0	0.0
30	0	0	4	4	0.7
31	1	1	2	4	0.7
32	0	0	5	5	0.9
33	3	4	1	8	1.6
34	5	-	-	5	1.7
35	0	3	11	14	2.7

TABLE XXIV

CONTROL SECTIONS

MEANINGFUL ARM AND HAND GESTURES

Student Number	Speech Number I	II	III	Total Number	Number Per Minute
1a	0	0	3	3	0.6
2a	0	3	19	22	4.3
3a	1	0	0	1	0.3
4a	22	14	27	63	10.2
5a	0	0	1	1	0.3
6a	9	25	11	45	8.6
7a	0	7	1	8	2.1
8a	9	10	10	29	6.5
9a	0	0	0	0	0.0
10a	1	0	2	3	0.5
11a	0	0	1	1	0.3
12a	9	4	4	17	2.3
13a	2	0	8	10	2.3
14a	0	0	0	0	0.0
15a	5	1	1	7	1.3
16a	2	3	4	9	1.7
17a	0	0	7	7	1.1
18a	17	4	0	21	3.4
19a	0	5	1	6	0.6
20a	0	3	0	3	0.5
21a	0	0	0	0	0.0
22a	4	2	10	16	2.2
23a	0	0	5	5	0.9
24a	9	1	4	14	3.3
25a	0	0	2	2	0.4
26a	-	0	6	6	1.8
27a	26	2	6	34	2.6
28a	0	0	1	1	0.2
29a	3	0	9	12	2.7
30a	0	0	0	0	0.0
31a	2	2	11	15	1.8
32a	7	2	20	29	5.6
33a	0	0	22	22	4.2
34a	12	3	--	15	2.3

TABLE XXV

EXPERIMENTAL SECTIONS

MEANINGFUL ARM AND HAND GESTURES

Student Number	Speech Number XII	XIV	XV	Total Number	Number Per Minute
1	0	2	11	13	1.1
2	23	28	14	65	4.2
3	10	45	37	92	5.5
4	59	59	47	165	11.9
5	0	24	20	44	3.2
6	45	77	40	162	9.7
7	32	86	47	165	11.5
8	7	27	6	40	2.4
9	109	40	24	173	12.1
10	41	68	27	136	8.9
11	96	136	78	310	16.9
12	57	141	88	386	14.9
13	32	132	76	240	11.5
14	29	6	58	93	5.5
15	7	38	59	104	6.8
16	52	52	67	171	8.9
17	59	72	92	223	12.1
18	3	18	24	45	2.6
19	16	46	29	91	5.8
20	53	58	28	139	9.0
21	33	60	22	115	8.6
22	7	79	21	107	6.4
23	21	34	32	87	5.1
24	3	14	13	30	1.6
25	4	15	17	36	2.6
26	14	56	32	102	5.8
27	-	3	7	10	1.5
28	6	29	18	53	3.7
29	1	15	5	21	1.6
30	5	23	11	39	3.3
31	3	27	19	49	3.8
32	6	12	18	36	2.8
33	-	15	7	22	1.9
34	47	30	14	91	6.6
35	2	4	11	17	1.7

TABLE XXVI

CONTROL SECTIONS

MEANINGFUL ARM AND HAND GESTURES

Student Number	Speech Number XII	XIV	XV	Total Number	Number Per Minute
1a	15	21	10	46	3.2
2a	59	52	15	126	7.8
3a	7	1	35	43	2.9
4a	39	43	45	127	9.6
5a	5	30	17	52	4.5
6a	39	27	32	98	6.8
7a	42	67	27	136	6.6
8a	20	5	11	36	2.4
9a	2	0	0	2	0.1
10a	6	35	35	76	4.0
11a	13	30	25	68	4.1
12a	11	41	57	109	5.6
13a	51	60	28	139	7.4
14a	12	22	9	43	2.5
15a	47	60	15	122	8.0
16a	27	40	12	79	6.0
17a	12	24	15	51	3.0
18a	37	52	22	111	10.0
19a	23	27	15	65	3.4
20a	6	79	37	122	8.0
21a	16	84	8	108	8.2
22a	9	27	13	49	3.3
23a	53	108	41	202	15.1
24a	40	51	40	131	9.1
25a	33	77	26	136	9.2
26a	8	--	10	18	2.7
27a	0	19	11	30	2.4
28a	11	23	12	46	3.5
29a	25	13	16	54	4.1
30a	26	64	13	103	7.8
31a	40	97	17	154	9.8
32a	41	60	31	132	10.6
33a	64	123	23	210	13.6
34a	23	35	9	67	5.8

TABLE XXVII

EXPERIMENTAL SECTIONS

MEANINGFUL HEAD MOVEMENTS

Student Number	Speech Number I	II	III	Total Number	Number Per Minute
1	1	6	2	9	2.5
2	7	4	3	14	1.8
3	2	4	3	9	2.0
4	6	4	0	10	2.1
5	0	1	1	2	0.5
6	5	7	2	14	1.5
7	0	2	4	6	1.6
8	3	6	2	11	2.5
9	6	5	5	16	2.8
10	5	3	3	11	2.8
11	11	7	2	20	2.6
12	3	6	3	15	2.4
13	3	5	2	10	1.7
14	1	1	2	4	0.8
15	1	4	4	9	2.0
16	2	3	2	7	1.2
17	6	9	4	19	2.4
18	1	4	3	8	1.5
19	2	4	2	8	1.2
20	1	3	3	7	1.6
21	11	4	10	25	4.6
22	3	6	10	19	4.0
23	12	15	15	42	6.5
24	4	8	8	20	3.1
25	11	11	19	41	8.1
26	22	6	17	45	8.2
27	36	21	18	75	15.4
28	8	14	11	33	8.5
29	10	8	4	22	6.4
30	2	6	2	10	1.8
31	1	1	0	2	0.4
32	7	6	2	15	2.6
33	17	10	3	30	6.0
34	8	-	-	8	2.7
35	16	6	2	24	4.6

TABLE XXVIII

CONTROL SECTIONS

MEANINGFUL HEAD MOVEMENTS

Student Number	Speech Number I	II	III	Total Number	Number Per Minute
1a	12	19	4	35	6.7
2a	2	0	1	3	0.6
3a	1	3	1	5	1.3
4a	3	2	3	8	1.3
5a	0	0	1	1	0.3
6a	0	0	2	2	0.4
7a	0	0	0	0	0.0
8a	5	14	3	22	4.9
9a	0	1	4	5	0.7
10a	9	14	0	23	3.4
11a	1	1	0	2	0.6
12a	0	2	6	8	1.1
13a	6	6	7	19	4.3
14a	3	4	5	12	2.3
15a	3	7	1	11	2.0
16a	13	12	3	28	5.3
17a	1	5	8	14	2.3
18a	36	18	8	62	9.9
19a	33	25	9	67	6.9
20a	28	12	4	44	7.9
21a	24	8	11	43	7.4
22a	27	9	6	42	5.8
23a	16	10	4	30	5.2
24a	15	6	14	35	8.2
25a	11	7	3	21	3.7
26a	-	8	3	11	3.3
27a	39	9	7	55	4.2
28a	10	8	3	21	3.9
29a	38	17	11	66	14.7
30a	26	26	10	62	6.8
31a	34	30	12	76	8.9
32a	16	13	13	42	8.1
33a	21	7	13	41	7.9
34a	64	8	--	72	11.1

TABLE XXIX

EXPERIMENTAL SECTIONS

MEANINGFUL HEAD MOVEMENTS

Student Number	Speech Number XII	XIV	XV	Total Number	Number Per Minute
1	2	29	41	72	6.0
2	13	25	13	51	3.3
3	2	13	5	20	1.2
4	15	29	17	61	4.4
5	4	5	4	13	0.9
6	13	3	26	42	2.5
7	7	26	10	43	3.0
8	3	11	4	18	1.1
9	16	15	7	38	2.7
10	17	16	17	50	3.3
11	11	23	16	50	2.7
12	9	12	12	33	1.7
13	13	19	21	53	2.5
14	7	3	14	24	1.4
15	2	9	22	33	2.2
16	14	47	41	102	5.9
17	32	70	21	123	6.7
18	4	24	9	42	2.4
19	5	15	14	34	2.2
20	8	10	9	27	1.7
21	27	13	11	51	3.8
22	71	5	11	87	5.2
23	16	4	6	26	1.5
24	5	15	9	29	1.6
25	3	15	25	43	3.1
26	17	10	19	46	2.6
27	-	17	23	40	5.9
28	15	13	5	33	2.3
29	5	9	6	20	1.5
30	9	7	5	21	1.8
31	22	2	10	34	2.6
32	12	7	8	27	2.1
33	5	7	4	16	1.4
34	20	14	12	46	3.3
35	3	1	2	6	0.6

TABLE XXX

CONTROL SECTIONS

MEANINGFUL HEAD MOVEMENT

Student Number	Speech Number XII	XIV	XV	Total Number	Number Per Minute
1a	22	16	43	81	5.6
2a	3	2	2	7	0.4
3a	0	0	5	5	0.3
4a	4	16	32	52	4.0
5a	0	0	8	8	0.7
6a	5	0	4	9	0.6
7a	0	20	0	20	1.0
8a	18	40	24	82	5.4
9a	0	1	2	3	0.2
10a	22	10	40	72	3.8
11a	2	1	21	24	1.4
12a	9	0	32	41	2.1
13a	2	38	19	59	3.1
14a	5	24	31	60	3.5
15a	13	25	26	64	4.2
16a	10	12	4	26	2.0
17a	10	4	9	23	1.4
18a	20	23	23	66	1.9
19a	14	32	6	52	2.7
20a	18	72	31	121	7.9
21a	16	24	9	49	3.7
22a	11	23	11	45	3.0
23a	27	39	29	95	7.1
24a	28	37	19	84	5.8
25a	21	58	9	88	5.9
26a	14	--	4	18	2.7
27a	9	11	4	24	1.9
28a	14	20	4	38	2.9
29a	32	80	28	140	10.7
30a	22	37	8	67	5.1
31a	28	55	9	92	5.9
32a	15	38	16	69	5.6
33a	31	48	14	93	6.0
34a	17	32	9	58	5.0

Name_____Section_____

Division_____Class_____Age_____

1. Were you aware that motion pictures were taken of You?
   The first time: Yes_____No_____
   The second time: Yes_____No_____

II. What made you aware of this?

III. If you were aware of it, did the taking of motion pictures disturb you? Yes_____No_____. In what way did it disturb you? Describe reaction.

IV. If such equipment was used, did the addition of extra lights or a background sheet disturb you? Yes_____No____. Describe reaction.

V. Have you ever had motion pictures taken of you before: Yes____ No____. If you have, state the circumstances.

VI. What were your reactions upon seeing yourself when the motion picture of you was projected? Describe in full.

VII. Do you believe the use of motion pictures helped you in respect to public speaking? Yes_____ No_____. In what way did it help you?

VIII. List any suggestions you might have as to the use of motion pictures in the teaching of speech; in the taking of such pictures; or concerning this experiment in general.

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