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# BULLETIN

MASTER'S  
PROJECT  
ABSTRACTS

St. Cloud State College

ST. CLOUD, MINNESOTA

# MASTER'S PROJECT REPORTS

## BULLETIN

St. Cloud State College

St. Cloud, Minnesota



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## Foreword

Candidates for the Master's degree at St. Cloud State College are required to complete a Master's Project. They are given background for this undertaking by satisfactorily completing a course in research methodology, documentation, and reporting. Their work culminates in a Project Report, which frequently has the qualities of a thesis, but which may be more limited in scope and depth than that expected in thesis work.

This publication is the first in a series of bulletins in which abstracts of Master's Project Reports submitted to the Graduate Faculty of St. Cloud State College will be presented. A bound copy of each Project Report is on file in Kiehle Library on this campus; it is available for use on an inter-library loan basis.

Marvin E. Holmgren

*Marvin*  
Coordinator, Graduate Studies

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# BUSINESS EDUCATION

## A COMPARATIVE STUDY OF TYPEWRITING CLASSES TO DETERMINE THE EFFECTIVENESS OF INTEGRATING THE TEACHING OF GRAMMAR WITH THE TEACHING OF TYPEWRITING IN A HIGH SCHOOL

by Austin Arnold Anderson

**PROBLEM:** The purpose of this study is to determine whether the integration of the teaching of grammar with the teaching of typewriting will result in a more effective learning of grammar in the English course. The problem basically is this: Will teaching the proper usage of words in the typewriting class, in which the student is developing the tool for recording his ideas, have a beneficial carry-over effect to the English class, in which he is trying to master the science by which he may express those ideas?

**PROCEDURE:** In order to learn what had been done in other schools concerning the integration of grammar with typewriting, the examination of related publications was necessary. The literature that seemed applicable to this study was summarized. The authors whose writings were reviewed felt generally that the basic courses of grammar and typewriting could be correlated with each other.

An experiment based on grammar usage was established and consisted of four tests: (1) a dictated spelling test, (2) a multiple-choice spelling test, (3) a punctuation insertion test, and (4) a word study test. These tests were administered to comparable groups of typewriting students. Students were selected to be in a comparable group on the basis of ten points of similarity. Two of these points were determined by a statistical comparison of intelligence quotient scores and of scores on the final ninth-grade grammar test. Based on the results of these comparisons and the other points of similarity, an experimental group and a control group were established.

So that there might be a basis for the comparison of the results of the usage tests, the material covered by these tests was presented to the experimental group in their typewriting classes prior to the time that the tests were given. The students in the control group had no prior instruction on this material.

**FINDINGS:** The results of the analysis of the statistics prepared from the comparative scores achieved on the experimental tests by the two groups of students who were selected to be the subjects of the experiment indicated that there was no significant difference between the two groups insofar as the result of this testing was concerned. A variance of a considerable amount existed between the two groups based on comparative results on the dictated spelling test, but there was only a slight difference shown in the results of the other tests.

**SUMMARY AND CONCLUSION:** The results of the tests showed no significant difference between the two groups as far as their achievement on these tests was concerned. Although they had typed and studied the material in their typewriting classes earlier, the experimental group was unable to score appreciably higher than the control group on the tests covering that same material when the tests were given in their English classes. This would seem to indicate that the presentation of material dealing with grammar to students in the typewriting class would not increase to any degree the ability of those students to answer correctly questions based on those same materials in the English class.

**PROJECT COMMITTEE:** Dr. Edwin A. Nash, Chairman; Dr. Charles L. Balcer  
**DATE OF COMPLETION:** July 1958

## **A STUDY OF ELECTRIC VERSUS MANUAL TYPEWRITING AT CHISHOLM HIGH SCHOOL**

by George Francis Miskulin

**PROBLEM:** Will it be beneficial for Chisholm High School to convert their typewriting department to electric typewriters, and will the results be worthwhile insofar as the progress of the students is concerned? It was the purpose of the study (1) to find out whether the typing achievements on the electric were much greater than they were on the manuals; and (2) to determine whether students were better typists on the electrics than they were on the manuals.

**PROCEDURE:** The group used in this study consisted of thirty students. The students were grouped into four groups of five students each and into one group consisting of ten students. The first four groups were the experimental groups and the group of ten students was the control group.

The school year was divided into four, nine-week periods. The students in the first four groups were instructed on the electric typewriter in four different nine-week periods and the group of ten students worked solely on the manual typewriters.

Beginning with the seventh week and ending with the ninth week, the students were given three-minute timed writings. Beginning with the tenth week and continuing through the thirty-sixth week, the students were given five-minute timed writings. The timed writings were given every Friday during the foregoing period of time.

The timed writings used in this study were computed on the basis of gross-words-per-minute.

The timed writings were taken from the typing textbook used in the typewriting course.

**FINDINGS:** From the results obtained in the t-test of significance, the writer comes to the conclusion that there was no significant difference in gain between the experimental groups which spent nine weeks of the school year on the electric typewriters and the control group which did not spend time on the electric typewriter.

**SUMMARY AND CONCLUSIONS:** In the study of electric versus manual typewriting done at Chisholm High School, Chisholm, Minnesota, the significance of the difference in the speed attained on the electric typewriter as opposed to the manual typewriter was negligible. One of many reasons could have been that the group tested was too small to produce any significant difference.

The study did not show any significant speed gains on the electrics as compared to the manuals, but the electrics proved to be a very superior teaching instrument.

**PROJECT COMMITTEE:** Dr. Clair E. Daggett, Chairman; Dr. Lyle E. Ball

**DATE OF COMPLETION:** August 1960

## **A STUDY OF THE PROGNOSTIC PROCEDURES USED FOR SHORTHAND AT TECHNICAL HIGH SCHOOL, ST. CLOUD, MINNESOTA**

by Lois Ruth Seipp

**PROBLEM:** Is the relationship between the prognostic factors (Turse Shorthand Aptitude Test, first semester sophomore English grade, and first semester typing grade) and the criteria (shorthand speed and transcription ability) sufficiently significant to warrant use of these prognostic factors in predicting success in shorthand when related as follows:

1. Dictation speed, end of one year's training, to English grade.
2. Dictation speed, end second year, to English grade.
3. Transcription ability, end second year, to English grade.
4. Transcription ability to typing grade.
5. Dictation speed, one year, to Turse Test.
6. Dictation speed, second year, to Turse Test.
7. Transcription ability to Turse Test.

**PROCEDURE:** The Turse Shorthand Aptitude Test was administered to prospective shorthand students in February, 1958. The English and typing grades were secured from school permanent records. On the basis of these factors, out of 80 prospects, 43 were determined "satisfactory," 14 "doubtful," and 23 "unsatisfactory." The results were discussed with prospects by their counselor.

Beginning in March, 1959, Gregg five-minute dictation speed tests were administered each month to the first-year students. The test rate began at 60 words per minute.

Gregg five-minute dictation speed tests were continued throughout the second year. In October of the second year, Gregg transcription speed test administration was begun. The lowest rate on the transcription speed test was 60 words per minute.

After June, 1960, the coefficients of correlation for the relationships listed above were calculated.

**FINDINGS:** Correlations were found as shown in the chart below. These relationships are expressed in terms of coefficients.

Relationship	One Year	Two Years
Dictation Speed to English Grade	.29	.50
Transcription Ability to English Grade		.47
Dictation Speed to Turse Test	.04	.04
Transcription Ability to Turse Test		.06
Transcription Ability to Typing Grade		.39

The dropout rate decreased from 41.9 per cent with the 1957-59 class to 21.6 per cent with the 1958-60 control class.

**SUMMARY AND CONCLUSIONS:** There is not sufficient correlation between the Turse Shorthand Aptitude Test score and dictation-transcription skill to warrant the test's use as a single predictive factor.

The relationship between sophomore English grade and second year dictation-transcription skill appears sufficiently substantial to indicate that English language proficiency is a prime factor in the production of mailable letters.

A definite, though small, relationship of typing grade to transcription ability points toward the use of the typing skill factor as one device in counseling with prospective shorthand students.

Counseling with students using aptitude test results, English grades, and typing grades would appear wise since this type of counseling tends to substantially decrease the number of students dropping from shorthand training.

Other factors should probably be used in counseling shorthand enrollees. These might be: academic course grades, other than English; personality trait records; work habits; character evaluations made by teachers; health records; interest and preference test results; and intelligence test scores.

It is the applied ability, not the innate ability, which pays off toward success in shorthand.

Further research is needed toward the development of more valid and reliable prediction devices for shorthand.

**PROJECT COMMITTEE:** Dr. Clair E. Daggett, Chairman; Dr. Paul E. Ingwell  
**DATE OF COMPLETION:** August 1960

# A COMPARATIVE SURVEY OF TYPEWRITING STANDARDS IN THE BEGINNING TYPEWRITING COURSE IN COLLEGES AND UNIVERSITIES IN THE UPPER MIDWEST

by James Frank Wenner

**PROBLEM:** It was the purpose of this study to (1) determine if students majoring in Business Administration, Business Education with Shorthand, Business Education without Shorthand and Secretarial Science are required to take a course in typewriting or pass a proficiency test; (2) determine the standards in terms of words per minute for production typewriting for the beginning course in typewriting; (3) determine the standards in terms of words per minute for straight copy typewriting in the beginning typewriting course.

**PROCEDURE:** The questionnaire survey was sent to 102 colleges and universities in the states of Illinois, Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin. Of these, 65 (63.72%) responded. The largest percentage of responses came from private colleges. Of the 56 private colleges surveyed, 40 of these schools (71.42%) replied. Twenty-seven state colleges were asked to answer the questionnaire; only 15 schools (55.55%) did so. Of the 19 universities questioned, 10 (52.63%) returned their questionnaires.

Next, a survey of the current literature was completed. This included a review of articles concerning typewriting and typewriting standards in Business Education periodicals during the past 10 years. This was followed by the compilation of the results of the questionnaire survey. Finally, conclusions were drawn and recommendations made for the typewriting program at St. Cloud State College.

**FINDINGS:** Eighty-six percent to 90% of the colleges and universities reporting require students majoring in Business Education without Shorthand, Business Education with Shorthand, and Secretarial Science to take a course in typewriting, while only 22% of the colleges and universities reporting require students majoring in Business Administration to take a course in typewriting. One-third of the colleges and universities reporting will grant college credit for the beginning typewriting course to students who pass a typewriting proficiency test. There is a wide variation and no consistency in the standards in terms of words per minute for straight copy timed writings that the colleges and universities reporting require for a particular grade in the beginning typewriting course. There is a wide variation and no consistency in the standards in terms of words per minute for production timed writings that colleges and universities reporting require to obtain a particular grade in the beginning typewriting course.

**CONCLUSIONS:** A course in typewriting should continue to be required of all business students who are majoring in Business Education without Shorthand, Business Education with Shorthand, and Secretarial Science.

Students who are majoring in Business Administration should be required to demonstrate proficiency in typing. They should not be required to take a typewriting course but only to pass a typewriting proficiency test meeting standards established by the Business Division. If the student cannot pass the proficiency test, he should be required to take a non-credit typewriting course or a typewriting course in which the credits earned would not count toward a degree.

This study indicates there is a need for standardization of typewriting standards in terms of words per minute for both straight copy typewriting and production typewriting among the various colleges and universities.

**PROJECT COMMITTEE:** Dr. Lyle E. Ball, Chairman; A. Donald Beattie  
**DATE OF COMPLETION:** August 1959

# ENGLISH

## AN INVESTIGATION OF THE ELEMENTS OF SELF-RELIANCE AND INDIVIDUALISM IN THE WORKS OF MARK TWAIN

by Raymond L. Frisch

**PROBLEM:** The purpose of this investigation is to determine whether or not the elements of self-reliance and individualism can be found in the works and in the life of Mark Twain. The presence of these elements, characteristic of the frontier, helps determine Mark Twain as a representative of that frontier. This study attempts to locate and identify these two elements in support of the thesis that Mark Twain's works are characterized by self-reliance and individualism and, therefore, are representative of the frontier.

**PROCEDURE:** The investigation began with a study of the background and significance of the frontier West of Twain's day in order to establish criteria for determining the influence of this frontier on the attitudes, opinions, and philosophy of Twain as found in his works. A consideration of biographies, criticisms, reviews, and notes on Twain by critics and specialists, and a study of specific works and letters by Mark Twain was followed by a critical analysis of four of his works. This analysis afforded evidence of the presence of self-reliance and individualism in these works.

**FINDINGS:** The critical analysis established a correlation between Twain's attitudes, opinions, and philosophy as expressed in his works and those of the frontiersmen of his day. In four of Twain's works, *The Adventures of Huckleberry Finn*, *The Adventures of Tom Sawyer*, *Saint Joan of Arc*, and *The Prince and the Pauper*, two elements traceable to the frontier in their origin and nature are found. These elements are self-reliance and individualism, influences from the frontier environment which Twain experienced in his life and recorded in his works. In holding these attitudes and opinions Mark Twain is comparable to the frontiersmen. In Twain's life several conflicts are noted, calling forth these two elements in the attempt to meet and overcome the conflicts; in the four works analyzed the same conflicts are experienced in the lives of the characters and the same two elements are brought forth to cope with the conflicts. In respect to the elements of self-reliance and individualism in these works and in his life, Mark Twain is representative of the frontier West.

**SUMMARY AND CONCLUSIONS:** In an attempt to place Mark Twain in American literature as a representative of the frontier West the following should be considered: by presenting various forces—society, tradition, religion, and government—in conflict with the attitudes and opinions of the individual, Mark Twain admits an indebtedness to the frontier; self-reliance and individualism are exerted in Twain's life and in the lives of his characters as a means of alleviating these conflicts; and these elements are frontier in origin, nature, and composition. Twain does not advocate eliminating the forces causing the conflicts; he is a builder not a revolutionary. His concern is for establishing a more secure place for the individual within the framework of the various institutions responsible for the conflicts. This is the individualism he maintains and records. His self-reliance is a reliance on one's conscience as the guide to human action in maintaining this individualism. Mark Twain believes in self-reliance and individualism, practices it in his life, and records it in his writings. By so doing he reveals the influence of the frontier in his work, and in this respect he is its representative.

**PROJECT COMMITTEE:** Dr. Lewis C. Smith, Jr., Chairman; Dr. Robert H. Wick

**DATE OF COMPLETION:** August 1958

## **TENSION IN POETRY: A REVIEW OF THE CRITICAL POSITION OF ALLEN TATE**

by Melvin R. George

**PROBLEM:** The problem of this project was to investigate the literary theory of Allen Tate in order to systematize it and to determine its practicability in judging and understanding literature, particularly poetry.

**PROCEDURE:** The materials for the investigation were chosen from a wide range of articles written about Tate's theory, but the primary source of information was Tate's own writings. Particular emphasis was laid upon essays appearing in a recent (1959) collection of his essays which Tate selected for republication himself. Since Tate has not expressed his theories in a systematic, point by point explanation, the primary object of this project was to arrange Tate's theory in a clear and orderly fashion, emphasizing and discussing the major issues necessary to an understanding of his literary theory and criticism.

**FINDINGS:** The literary theory and critical position of Allen Tate was found to be expressed in a concept of the nature of poetry which Tate terms tension. The good poem is the product of a balance between extension (a concrete, consistent literal image) and intension (a consistent idea, thought or argument which arises out of and is at one with the literal image). The balance of extension and intension Tate calls simply, tension. This tension is the product of the symbolic imagination and reveals the full knowledge of the world. It is therefore, according to Tate, the completest mode of utterance. The chief function of the poet in any society is to organize this complete and reliable knowledge of human experience into the structured expression of the full human experience which is poetry. To aid the poet in his expression of the world and to insure the validity of his insight, Tate relies upon tradition which contains the truth as discerned and preserved by former generations and enables the poet to see his experience objectively and accurately.

**SUMMARY AND CONCLUSIONS:** Through assessments of other authors and through original application of the doctrine of tension to three specific poems, the theory was found practical and applicable. The theory of tension was found, also to be ultimately an aesthetic judgment which offers a means by which to understand and judge not only poetry but all forms of fiction: drama, short story and novel. This increased practicability of the doctrine of tension makes it a useful and dependable tool for the study and criticism of literature.

**PROJECT COMMITTEE:** Dr. Marvin Thompson, Chairman; Dr. Charles L. Balcer.

**DATE OF COMPLETION:** August 1960.

## **POE'S CONSISTENCY OF PRACTICE IN THE SHORT STORY**

by Clayton D. Highum

**PROBLEM:** Edgar Allen Poe developed a literary theory concerned with the writing of the short narrative. It is the purpose of this project report to examine the literary theories of Poe and, in the light of these theories, to show the extent to which Poe was consistent to them in the development of his short stories.

**PROCEDURE:** The short stories and the literary criticisms, written by Poe, were read to give the necessary background of the primary sources. The comments and criticisms of authors and specialists in the field of American literature were also utilized. Through the application of Poe's literary theory to his practice in the short story, the extent of the consistency was revealed.



**FINDINGS:** Poe developed a very definite theory concerning the writing of literature. His critical theory is based upon the concepts of phrenology that he accepts. Poe's concept of phrenology divides the mind into three distinct parts: (1) intellect, (2) taste and (3) moral sense. Out of these three parts, Poe sees two as being fundamental to his literary concepts. To the writing of poetry he associates the division of taste, which is concerned with beauty. To the writing of prose he associates the division of pure intellect, which concerns itself with truth.

Also basic to Poe's literary theory is the effect or impression that literature should give the reader. Poe does not define the term effect but he is very definite in reminding the writer that a story must be preconceived and achieve a unity that leaves a total impression of the effect. To the author is left the responsibility of choosing the appropriate effect and the means to achieve this effect.

Poe believed the short story or tale, as he called it, provided the best prose opportunity for a writer. The development of truth as the objective of the tale is Poe's attempt to appeal to the rational elements in his readers and in himself. Truth deals with reason to Poe but not the universal truth or moral. Poe had no use for the moral or didactic as an objective or literature, either in poetry or prose.

Poe's tales were designed to express the carefully preconceived effect. In accomplishing this objective, economy of means must be practiced. Any word or sentence which does not aid in the development of the effect must be eliminated, thus the necessity for complete planning before any writing is attempted.

Attention must also be given to the space in which the effect is to be developed in the tale. Poe believed that a story must be written to achieve its effect during a relatively short period of time. He sets the duration for the tale at a "single sitting." During this time the author must have his materials developed so that the desired impression is made and the reader receives a sense of satisfaction from the story.

Poe follows two general patterns through the majority of his work, the impressionistic and the rational. One major group has as the primary objective the creation of a conscious emotional response in the reader. These are the impressionistic tales. In these stories the emotional elements or the "passion or the excitement of the heart" count the most. Such stories as "The Cask of Amontillado," "Ligeia," and "The Fall of the House of Usher" would be included in this group.

The second major classification is the rational, which Poe defines with the term ratiocination. In his rational tales the incidents are the most important. The method of solving the mystery is emphasized. It becomes clear that Poe was attempting to achieve his effects in the rational tale by emphasizing the powers of reason rather than emotion as he did in his impressionistic tales. The following stories are examples of this category: "The Murders in the Rue Morgue," "The Goldbug," and "The Purloined Letter."

Poe also developed a group of rational tales with a dual purpose. These tales adhere to his philosophy of satisfying the intellect but they also have a definite satiric quality. In these tales Poe is satirizing the practices of some of his contemporary short story writers. Poe uses his rational approach to demonstrate how poorly done the stories by these authors really are. Poe's rational procedures in these tales are not designed to give the reader a logical solution to some mystery. Rather, when logic is applied to these tales, their true ineffectiveness is exposed. Representative of the satiric stories are "X-ing a Paragrab," "Loss of Breath," and "Never Bet the Devil Your Head."

**SUMMARY AND CONCLUSIONS:** Edgar Allan Poe is an example of the conscious artist at work. He developed a theory for writing the short story and consistently carried out this theory in actual practice. His stories become the carefully planned and executed problems that his theory advocated for these tales. At first reading, the stories may seem to be a confusion of horror and mystery but upon careful analysis a very definite procedure can be seen at work. Poe is certainly among the foremost writers of the short narrative.

His criticism and practice have done much toward giving this prose form a place in American literature.

**PROJECT COMMITTEE:** Dr. Lewis C. Smith, Jr., Chairman; Dr. John H. Wills  
**DATE OF COMPLETION:** July 1960

## **ATTITUDES ON LANGUAGE IN THE COMEDIES OF SHAKESPEARE AND JONSON**

by Leigh Homstad

**PROBLEM:** The purpose of the study was to determine the nature and variety of popular attitudes toward language during the decades immediately before and after 1600, as expressed in the comedies of William Shakespeare and Ben Jonson.

**PROCEDURE:** Selection of the general area of the study was followed by a reading of the comedies of Shakespeare and Jonson to locate the comments on language. The plays which contained comments were re-read and the pertinent quotations selected. The quotations were examined for the significance of the attitudes toward language which they represented. The framework of the study was based on the patterns indicated by the attitudes expressed in the data.

**FINDINGS:** Attitudes toward language usage were broadly divided into those which were favorable and those which were unfavorable. Within these groups, interest in language took a wide variety of forms. Attitudes were expressed by characters representing all walks of life and various levels of education.

**SUMMARY AND CONCLUSION:** The comedies of Shakespeare and Jonson show that the people of their time, whatever their social standing or education, took a tremendous and lively interest in language.

**PROJECT COMMITTEE:** Dr. Martha Worthington, Chairman; Dr. Paul Cairns  
**DATE OF COMPLETION:** August 1958

## **AN INQUIRY INTO THE BODY-SOUL RELATIONSHIP IN THE POETRY OF JOHN DONNE**

by Donald Norman Nelson

**PROBLEM:** The purpose of this study has been (1) to show that body and soul were dominant topics in Donne's poetry because his subject matter was mainly love and religion, (2) to compare Donne's unorthodox ideas and metaphysical poetry with the Elizabethan conventions and pastoral poetry, (3) to present Donne's views of spiritual and physical love as a unity (4) to show Donne's concept of the interrelation of body and soul and his rejection of the body-soul dualism of his contemporaries, and (5) to present Donne's idea of body-soul unity and interdependence.

**PROCEDURE:** Primary and secondary research have provided the material for this project. Initial secondary research viewed the conventions and literature, especially poetry, of the seventeenth century. The study of works by Donne scholars was followed by primary research.

In the primary research the most valuable aids in verifying or reinforcing have been the notes and commentaries of Herbert J. C. Grierson and Clay Hunt.

Selections used to illustrate literary and historical findings have been chosen because they were representative of Donne's development and they offered opportunities for analysis by primary research.

Quotations from Donne's poems have been taken from Charles M. Coffin's edition, which utilized modern letter equivalents and expanded abbreviations.

**FINDINGS:** John Donne's major concern was body and soul; his dominant topic was love and religion. His early defense of physical love grew to a realization of a new philosophy of love which reconciled the physical and spiritual in a unified justification and an understanding of body and soul.

Noting some truth in physical or spiritual love, Donne saw each as incomplete and unified expression of body and soul in fulfillment as truth. Sensuality alone led to licentiousness, but stimulation of the flesh brought understanding to the spirit for without love man became a soulless carcass.

Rejecting the Elizabethan dualism of pure soul and earthy body, Donne recognized their interrelation. In man each was the highest form on earth and would suffer at the other's excess. The body was a channel of communication for the soul; the earthly experiences of the body prepared the soul to act as intercessor for the body after death, which brought separation but not divorce.

Donne recognized unities of physical-spiritual love, body-soul, and life-death wherein each part was mutually dependent and the unities interdependent. He concluded the body was able to be a body only because it had a soul and the soul was able to find realization only by having a body.

**SUMMARY AND CONCLUSIONS:** Donne showed the relationship between body and soul by giving to conventional love a true spirituality. In men at the moment of death and in lovers at the moment of climax there was the ultimate experience. The experience of the body was magnificent, but the soul was the highest form to find realization. Body and soul, though different, were mutually dependent, the body being what it was because of the soul, and the soul capable of its realization only through having a material substance in which to express itself.

**PROJECT COMMITTEE:** Dr. T. A. Barnhart, Chairman; Dr. Lewis C. Smith, Jr.  
**DATE OF COMPLETION:** May 1961

## **A STUDY OF THE EFFECTIVENESS OF TEACHING LISTENING TO ELEVENTH GRADE STUDENTS AT FOLEY HIGH SCHOOL**

by Francis H. Voelker

**PROBLEM:** In the twentieth century efficient listening is becoming increasingly the most important skill of communication in the daily lives of Americans. English teachers face the problem of teaching their students the skills necessary for efficient listening. This study attempts to find out if listening can be taught and which method of instruction is the best method of teaching listening.

**PROCEDURE:** Three groups of eleventh grade students are used in this study. Group A received no listening instruction. Group B was taught a unit on listening, and Group C studied the same unit with follow-up activities.

A pre-test, the Brown-Carlsen Listening Comprehension Test, Form AM, was administered to all groups before the unit, and a post-test, Form BM of the same test, was administered at the end of the year. Minnesota Scholastic Aptitude Test scores of these students were obtained. These three scores were used as variables held constant in analysis of covariance to determine whether there was any significant difference in achievement (grade point average for the last twelve weeks of the school year) between the three groups.

In addition, a t-test of the difference between the mean scores of the total group in the pre-test and the post-test was made to determine whether there was a significant difference between the mean scores.

**FINDINGS:** Analysis of covariance showed no significant difference in achievement between the groups. The t-test showed that there was a significant difference between the mean scores of the pre-test and the post-test of the total group.

**SUMMARY AND CONCLUSIONS:** This study indicates the need for further research of the problem at the high school level. In the cases studied, no significant improvement was made in achievement due to the different listening experiences. That the listening ability of the total group showed significant improvement seems to indicate that listening can be improved. However, what factor or factors influenced this improvement is not known.

Studies employing other methods of instruction and experimental control with larger samples may yield more significant results.

**PROJECT COMMITTEE:** Dr. Charles L. Balcer, Chairman; Dr. Robert H. Wick

**DATE OF COMPLETION:** July, 1959

## ENGLISH: CREATIVE WRITING

### THE HILL

by John Coyle

**PURPOSE:** Man is sometimes the victim of other men — unscrupulous men. It has always been so. It will always be so. As the parade of life continues over the years, selfish men in all parts of the world, in every level of society and in every manner imaginable, continue to victimize their fellow men. This unpleasant truism is balanced by the consoling knowledge that the great bulk of humanity shows an honest and considerate approach to their fellow men.

This play is the story of one unscrupulous man rampant in today's world. He cleverly harnesses the modern propaganda weapons to victimize his fellow men. A city, even an entire area, falls under the grasping power of this man. But the greatest victim is the exploiter himself. He has in the end become a victim of his own lust for power.

In telling the story of one modern renegade, the play also attempts to tell the story of his kind. It calls attention to the ruthless ones of our world in an attempt to make us more alert. For man must be alert or become the victim of the unscrupulous.

**THE PLOT:** A. Act 1.

J. L. Craftman has come to Stacey City. He has brought to this pedestrian Midwestern community an air of excitement. For Craftman has promised to make the modest city an industrial giant. Craftman and his crew are high-pressuring the citizenry into buying stock in the fledgling company. The town is split in its opinion of Craftman and his venture until shrewd, rich Mrs. Raring indicates an interest in the project. At the act's end, Craftman is exuberant and optimistic as he plans an extension of his already high-moving selling campaign.

B. Act 2.

The smooth-running sales campaign is threatened. In fact, the future of the company is endangered as a formal complaint is registered against promoter Craftman. He is charged with using the mails to defraud. Max Javits, the inventive genius behind the new concern, discovers that his employer, Craftman, actually does not intend to follow through completely on production. Instead the promoter plans to profit quickly and withdraw from the enterprise. This will leave much of Max's work unfulfilled. At the act's end, Craftman fires Max, the man who made his entire scheme possible.

C. Act 3.

The news of a looming law suit spreads quickly. Soon Mrs. Raring, the shrewd, rich investor, confronts Craftman and withdraws her promised support. Her move is crucial. For the people of the area regard her actions as almost infallible. Max Javits, disillusioned by Craftman's cruelty, kills himself. This action causes Jeff to break with Craftman. Thus Craftman is left alone and unsupported at the end of the play.

**PROJECT COMMITTEE:** Dr. Paul E. Cairns, Chairman; Dr. Arthur L. Housman  
**DATE OF COMPLETION:** July, 1960

## **THE TONGUES OF DYING MEN**

by Donald Elwin Malmgren

**PLOT:** ACT I. It is early evening in the Michael Dobbs' home. Mich has just returned home from work to find that his wife is expecting company, some old friends: Geroy Williams (a political promoter), his wife Alice, and Whitney Brooks, a young politician, who are intent on asking Mich to run for senator. This is also a surprise anniversary party for Mich. Arny Russell, a newspaperman, arrives and then Geroy asks Mich to run. Michael reminds them that he is not of the same political philosophy and therefore cannot represent them. Just as they are ready to leave for dinner, Will Sloane, a union lawyer arrives to talk to Michael about something confidential. He agrees to meet Mich the next morning and then leaves as do the others for dinner.

It is the next day in the Sloane office. Barny Bannister, a union official informs Will that they need Mich if they hope to win the election. Michael arrives and Barny retires to a nearby room. Will and Mich soon discuss the possibility of Mich's running on their ticket. Mich is reluctant but when Pat McGavin, an old college friend of Mich's is ushered in Mich succumbs and decides to give it a try. Mich and Pat leave to tie together the loose ends. Barny returns accompanied by Kallen and Smith, two other union officials who act as Barny's flunkies. Will tells them that Mich is theirs and Barny unctuously congratulates him as Kallen and Smith bring liquor in for a party.

ACT II. Will and Mich are planning the campaign in Mich's home. McGavin drops in to see how everything is going and is followed by Bannister who wonders why he hasn't been informed of the meeting. There evolves a slight disagreement over whether Mich should campaign in some farming communities over a weekend or should attend a banquet for union members. Barny expresses his opinion and then leaves with the supposition that he and Mich and Will will get together at eight o'clock that evening. Arny Russell mentions that Fontaine is delivering a speech that afternoon concerned with this topic, which will involve Mich in what appears to be a racket. Eleanor comes home with the newspaper which has blaring headlines to this effect. Mich is concerned about this as is Bannister who returns shortly to tell Mich that there is nothing to worry about since Will is taking care of everything. Mich is tired of being told what to do and asks Barny to leave. Barny is irritated and since he engineered Mich's getting into the campaign he tells Mich to either be at the meeting of Will Sloane and himself or Will Sloane will become very, very ill.

A short time later, Mich, confused and upset by Barny's statement, is surprised to find Will at his door. Will asks Mich to stay away from the meeting if he wishes to continue in clean politics. Dr. Rattekliffe, a city doctor interested in clean government arrives and asks Mich if he would be willing to be backed by the other wing of the party which is tired of Bannister's domination. They plan to meet at eight o'clock also. The Doctor and Will leave and Mich doesn't know what to do: stay and be with the group he believes in, or go to Bannister's meeting and perhaps save Will's life. Will decides he must go to Bannister's meeting. Rattekliffe returns to find Michael gone. Michael returns believing that if he sticks with Rattekliffe he will be better able to do more for the people than if he succumbs to Bannister.

At the union office, Barny is impatiently waiting for the arrival of Will and Mich. Will arrives alone and Barny wants to know why Mich did not come, suspecting that Will had something to do with it. Will states that Mich is meeting with Rattekliffe for the planning of a new campaign. Barny becomes worried and decides that Mich must go. He informs Will that he

wants something on Mich to get him out of the election, as he goes home to check his sewer and then on to Washington to secure a new candidate.

**ACT III.** A parade is in the making. Mich is to take part in and then deliver an address at it. Rattekliffe arrives to take them and Pat and Army come to see how they are bearing up under the pressure. Mich and Eleanor leave and Pat and Army are about to leave when they find out via television that Mich is being sued for embezzlement and that Will Sloane is dead.

Dulaney, a police investigator, is at the Dobbs home to ask Michael a few questions about Will Sloane. Mich is under considerable strain because of the election going badly, the old woman suing, and Will Sloane's death.

Rattekliffe comes to take Mich and Eleanor to the polls to vote. Pat arrives and stays to talk with Dulaney when Mich leaves. Dulaney leaves and Army Russell enters, looking for Dulaney. Pat and Army talk and speculate about the turn of events. Mich and Eleanor return. Rattekliffe goes to the campaign headquarters and Army goes to the police station. Mich receives telephone calls concerning the old woman's money so that by now he is dejected. The calls are climaxed when Mich receives a call from the minister and from the Lawyer's Ethics Board asking Mich to appear before them, facing possible disbarment. A riot breaks at headquarters and Pat leaves. Mich and Eleanor are left alone with the telephone calls, and the television set describing the fall of Michael Dobbs.

**PROJECT COMMITTEE:** Dr. Arthur L. Housman, Chairman; Dr. Paul E. Cairns

**DATE OF COMPLETION:** August 1959

## FINE ARTS

### A COLLECTION OF THE EXPRESSED THEORIES ABOUT ART AND LIFE OF THE LEADING ABSTRACT EXPRESSIONISTIC ARTISTS IN THE UNITED STATES OF AMERICA

by Walter G. Nottingham

**PROBLEM:** It is the purpose of this investigation to assemble the expressed theories about art and life of the leading abstract expressionistic artists of the United States of America.

**PROCEDURE:** **Review of literature.** Much has been written on the meaning and value of abstract expressionism and in a few of these writings the authors quoted the artists involved in this movement to explain a particular belief about painting. In reviewing these writings I collected the ideas and beliefs as stated by the artists themselves and never those of art historians and critics who paraphrased the artists' theories.

**Review of exhibition catalogues.** Galleries and museums publish catalogues for the opening of their current art exhibition. These catalogues present illustrated reproductions of the prize winning paintings and sometimes statements by the winning artists on certain aspects of their painting are included. The main problem was obtaining these catalogues because only a limited number are published for each exhibition.

**Selection of artists.** The artists selected for this investigation exhibit their paintings frequently in the international art world and are winners of national and international awards for their creations. These artists are considered by the majority of art historians and museum directors and curators as leaders in America of the abstract expressionism movement and comprise the central core as well as the major marginal talent in this movement.

**FINDINGS:** A considerable number of quotes by the leading action painters in the United States were found during the investigation for this report but

there was an obvious lack of expressed ideas by the artists of the abstract expressionism movement on many aspects of their painting.

**SUMMARY AND CONCLUSIONS:** Abstract expressionism as a movement is a little misleading because its members are not bound together by the same sense of kinship that one finds among the painters of impressionism, cubism, or surrealism. Artists of the past could be classified into certain schools of painting because they had common characteristic styles, techniques, or were preoccupied with a particular subject matter or theme. In contrast, the action painters have in common only the fact that they use free distortion for expressive effect—but the degree and nature of their distortions vary immensely. In attitude they are generally romantic, but in subject matter they have no common theme whatever and range over the whole of life and death, war and peace, nature and religion. Probably few of these men ever think of themselves as expressionists but only as artists who are using both modern and conventional means to paint, with the utmost skill at their command, those things that matter most deeply to them.

**PROJECT COMMITTEE:** Charles L. Crane, Chairman; Dr. Lewis C. Smith, Jr.  
**DATE OF COMPLETION:** August 1960

## HISTORY

### A HISTORICAL STUDY IN WHICH FINDINGS IN SEMANTICS WERE EMPLOYED TO EXPLAIN THE ACTIONS OF FRANK BILLINGS KELLOGG DURING THE NEGOTIATIONS OF THE PARIS PACT

by Gordon Breckenridge

**PROBLEM:** The problem of this thesis was to relate some of the words used by Frank Billings Kellogg to explain his views of politics to his actions during the negotiations leading to the Pact of Paris on the theory that the language men use tends to control their thinking and hence their actions.

**PROCEDURE:** The procedure used to attempt the solution of the above problem was to read as much as possible of the personal writings of Frank B. Kellogg and note various words which he most often used to describe what he believed to be the nature of the political world. The various meanings of these words and their various implicit corollaries were related to Kellogg's actions during the negotiations. To place the problem in an understandable framework, a summary biography of Frank Kellogg and a brief outline of various previous attempts toward world peace were included.

**FINDINGS:** The most important words Kellogg used to describe politics were **principles, progress, nationalism and sovereignty**. The principles were a sort of Platonic essence, the wisdom of the ages, found in the Constitution. They were not the written, codified part but some obscure quality behind the words. In interpreting international law, Kellogg again referred indirectly to vague principles. To him the direction and manner of political actions were to be found in these principles, e.g., self-defense was an "inherent right" of nations.

Kellogg's belief in the absolutes, **nationalism and sovereignty**, precluded any restriction on United States' action in regard to interests, honor, or independence, all three of which he believed were integral parts of the definition of **sovereignty**. Such a belief caused him to draw up arbitration treaties of little practical value for reducing the possibility of war. The same belief made the Paris Pact of little effect by allowing nearly all reservations submitted by foreign countries and his own reservations to be included in the Pact by interpretation as "principles" inherent in all treaties.

The word **progress**, because it implied a certain "rightness" to and direction by any sustained public view, gave Kellogg the impetus to strive for and conclude the Paris Pact, to which he was initially ill disposed.

This writer concludes the assertions above to be a valid, if partial, explanation of Frank B. Kellogg's diplomatic actions during the negotiations of the Paris Pact.

**PROJECT COMMITTEE:** Dr. James C. Harris, Chairman; Dr. Calvin W. Gower  
**DATE OF COMPLETION:** June 1960

## **SAUK CENTRE — A STUDY OF THE GROWTH OF A FRONTIER TOWN**

by Ivy L. Hildebrand

**PROBLEM:** The study presents a chronological survey of the growth of Sauk Centre to approximately 1900. Various features of frontier life of the Middle West are presented as they are exemplified by the experience of Sauk Centre.

**PROCEDURE:** Extensive use has been made of newspapers of the period, especially the **Sauk Centre Herald**. Interviews with descendants of the pioneers, original documents and letters, secretaries' minutes of various civic institutions, the **Minnesota History** magazine, and many books were valuable sources of information.

**FINDINGS:** The survey showed that the community of Sauk Centre had such attractions for settlers as prairie land suitable for farming, forests of pine and hardwood, excellent water power, location on an important trail from the Red River country to St. Paul, and aggressive leadership.

After the Sioux Outbreak and Civil War had ended, the town began to develop manufacturing, business, and trade, and to work for railroad connections with the outside world. When the railroad finally came, it improved transportation but caused the gradual decline of industry because it was easier and cheaper to get manufactured goods from the large cities. Sauk Centre gave up its dreams of industrial greatness and became a trading center for the surrounding farming region.

The influence of New England was present to a marked degree in the settlement of Sauk Centre. Many of its settlers and most of its leaders were Yankees. Their thrift and shrewdness in economic enterprises were matched by their love of learning, respect for law and order, high regard for religion, and talent for organization. The professional men of the town took an active part in all phases of community life. The cultural and social activities of the town reflected the New England background of the settlers, as did their support of temperance societies, Sunday Blue Laws, and other reform movements.

The survey of the development of Sauk Centre has provided an insight into the life and times of pioneers and the frontier in general. In a small segment of pioneer life, it has been possible to find concrete examples of how that life was lived, and what its problems and achievements were. It is the story of the ordinary day-by-day activities of a people who worked and sacrificed to turn a wilderness into a home for themselves and their children.

**SUMMARY AND CONCLUSIONS:** Much work can still be done on the history of Sauk Centre so broadly covered in this study. Any one aspect of community life during the nineteenth century could be explored more deeply. The twentieth century development of the town has not been considered. The importance of a continuing interest in the history of Sauk Centre or any other town is illustrated by the words of George Vincent who wrote that "without an ever-alert sense of the past and its significance, a



people cannot maintain its solidarity and translate the experiences of yesterday into the purpose of tomorrow."<sup>1</sup>

**PROJECT COMMITTEE:** Dr. Marjorie J. Morse, Chairman; Dr. Edwin H. Cates

**DATE OF COMPLETION:** June 1960

## **GERMAN REARMAMENT UNDER THE TREATY OF VERSAILLES**

by Norbert Benjamin Klein

**PROBLEMS:** Many theories of disarmament have been tried in the past, but all, thus far, have failed to succeed for any length of time. One of these theories was embodied in the military, naval, and air clauses of the Treaty of Versailles, signed in 1919. The thought behind these clauses was that general disarmament would be made possible if Germany could be disarmed and be made to stay in that condition.

Therefore, Germany, who was in no condition to resist, was forced to disarm. Though this much was accomplished, the treaty failed when Germany, while under the control of this document, had rearmed to the extent that she was able to throw off the military, naval, and air clauses of the treaty with comparative impunity.

The purpose of this paper is to show how this fleet of rearmament was accomplished while under the treaty.

**PROCEDURE:** The material for this paper has been gathered, intermittently, over a period of eighteen months. The resources of the St. Cloud State College Library, the St. Cloud Public Library, and the library of the University of Minnesota were used to gather the material.

Of particular value were the magazines and books written during the time in question which gave the impressions and facts prevalent at the time and the great number of books that have been written by German, English, and American authors since the end of World War II.

**FINDINGS:** The Treaty of Versailles is an amazingly complete document written by some of the most prominent men of its time, Woodrow Wilson, David Lloyd George, and Georges Clemenceau, but it failed in its appointed task.

Probably the main reason for its failure lies in the fact that Germany had available men who were equal to the almost Herculean task of illegally and secretly rearming under the treaty. Men like Hans von Seeckt who did a remarkable job in the forming of a cadre army; Hugo Junkers and other aeronautical pioneers who helped put Germany ahead in the field of aviation; Gustov Krupp and other industrialists who were able to give Germany the munitions she so vitally needed; and the designers and builders of the pocket battleship that helped give Germany dominance in the Baltic Sea. These men had put Germany well on the road to rearmament by 1933 when Adolf Hitler took over with his own crew made up of men like Hermann Goering who formed the Luftwaffe; Heinrich Himmler who built up the dreaded S.S. corps; and the men in Hitler's new undersea fleet. Through the efforts of these men Germany was able to rearm.

**SUMMARY:** The most outstanding aspect of the rearmament was the ability of Germany to cope successfully with a difficult situation. Whether Germany was justified in rearming was not clear even to the Germans since many of their own people spoke and wrote publicly for adherence to the treaty. The facts cannot be denied, however, that, justified or not, Germany did

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<sup>1</sup> George E. Vincent, "The Social Memory," *Minnesota History*, I (February, 1916), 250-59.

rearm and that she accomplished this under the most adverse conditions ever devised by man.

**PROJECT COMMITTEE:** Dr. Edwin H. Cates, Chairman; Dr. James G. Harris  
**DATE OF COMPLETION:** August 1958

## **SIoux AND WHITE MAN : MINNESOTA 1862**

by Edward Walter Krautkremer

**PROBLEM:** In 1862 the Santee Sioux of Minnesota revolted against the white man spreading death and destruction over southern Minnesota. Since then many questions have been asked concerning the reasons which caused the Sioux to rebel against the whites with whom they had been associating for many years. It is the intention of this project to delve into the various causes of the uprising.

**PROCEDURE:** Research for this project was conducted over a period of six months in the St. Cloud State College and St. Cloud Public Libraries. Additional information was sought in the vicinity of the uprising in the Mankato Public Library and the Blue Earth County Museum as well as the Minnesota Historical Society Museum in St. Paul. Mankato newspapers dating back to the period before, during and after the outbreak were available and offered a glimpse of the feeling of the time.

**FINDINGS:** The first relationship between the Minnesota Sioux and the white man (trappers and traders) appeared to be friendly as well as mutually profitable. However, as the white man migrated west the Sioux and their possession of the land were seen as an obstacle. The United States government purchased by treaty most of the southern Minnesota area from the Sioux restricting the Santee to a narrow strip of reservation land along the Minnesota River. In the treaty-making and under these treaties, the Sioux were promised money and supplies to keep them comfortable and secure for years; however, they found that their one time friends, the traders, were now taking advantage of their relationship by claiming for Indian debts the annuities due under the treaties, leaving the Sioux little or nothing to show for the sale. All of this resulted in bitter distrust of the government and its treaties and all white men in general.

In addition to bitterness over the mishandling of these treaties by authorities, the Sioux were made more dissatisfied with and distrustful of the white man through their dealings with the incompetent and corrupt Indian agents. Many minor abuses nettled the Sioux but none so much as the civilization plan forced upon them by the Indian department.

Of more immediate effect was the refusal of the Indian agent to distribute the annuity supplies to the Sioux after the long 1861-62 winter of near starvation. The Upper Sioux broke into the supply warehouse and took the needed food only to be stopped by the military; the Lower Sioux, also desperate for food, asked the traders for credit and were told to "Eat grass!"

**CONCLUSIONS:** The project concludes that, after many years of the Sioux hating and desiring to be rid of the white man, the outbreak was precipitated by the Acton Massacre. The Sioux knew the Acton Massacre, although unplanned and involving only four braves, would nonetheless bring the vengeance of the white man upon all the Minnesota Sioux. Their only chance was to strike before reprisal and perhaps drive the white man from west of the Mississippi River. At dawn on August 18, 1862, the Santee Sioux of Minnesota spread over the plains of southern Minnesota to the agencies, farms, villages, settlements and to Fort Ridgely killing, destroying and burning anything related to the hated white man.

It is not intended that this project should justify the Uprising of 1862 but it is important that it be clear that the Sioux, under their culture, could see no other recourse.

**PROJECT COMMITTEE:** Dr. James G. Harris, Chairman; Dr. Harold Lieberman  
**DATE OF COMPLETION:** May 1958

# INDUSTRIAL ARTS

## TEACHING CONSUMER EDUCATION IN INDUSTRIAL ARTS

by Thomas R. Braun

**PROBLEM:** In an age of dynamic advertising designed to sell the products of industry to unwary consumers, some kind of check-and-balance must be had to educate consumers in an attempt to cause them to buy wisely. It has been the intent of this project to help identify areas of purchasing, such as the buying of a house, where unwary consumers could be led astray through biased advertising and emotional desires. After identification has been made, certain checks have been suggested to aid the consumer in making a wiser purchase. In each case, the areas and checks presented have been slanted toward the industrial arts teacher who is encouraged to teach consumer education in his classroom.

**PROCEDURE:** For the most part library-type research was conducted and the data collected were presented in compositional and table form. Up-to-date, free and inexpensive literature was acquired from industry which assisted in making the determinations. A listing of this literature, its place of procurement, and price, if any, has been contained in this paper.

**FINDINGS:** It was found that, as a whole, industrial arts teachers have done a hit-or-miss job of teaching consumer education. It was further determined that a definite need exists for this type of teaching being planned into the curriculum.

**SUMMARY AND CONCLUSIONS:** The average industrial arts teacher is prone to use generalized statements and personalized comments which are too broad in scope to do a good job of teaching consumer education. To help prevent this, he should be in possession of up-to-date, reliable information. Since most instructors maintain a very crowded time schedule and perhaps do not have time to ferret out this information, data and suggestions have been presented which will assist him in his dilemma. After studying the objectives of industrial arts and consumer education it is believed the two areas complement one another and the role of consumer education in industrial arts is a very real and worthwhile one.

**PROJECT COMMITTEE:** Dr. Raymond H. Larson, Chairman; Dr. Edwin A. Nash

**DATE OF COMPLETION:** July 1958

## THE ROLE OF INDUSTRIAL ARTS IN AN AUTOMATED SOCIETY

by Alfred Arnold Lease

**PROBLEM:** Automation has become a common word among industry and labor. Whether it will prove to be the answer to providing the material wants of a swiftly populating America, or whether it will become a curse in the guise of unemployment and overproduction is a moot point. Education will necessarily play an increasingly important role in automation. Since the field of industrial arts is directly related to a personal understanding and a personal adaptability to industry, this part of the educational curriculum has been investigated along with the implications of automation.

**PROCEDURE:** Library research has constituted the major portion of this project report. Inquiries have been made from persons dealing directly with the educational, economic, and sociological problems in automation; these have included leaders in industry, labor, and government.

**FINDINGS:** It was found that automation is giving rise to many problems regarding technological displacement of labor, an increasing need for a broader educational background, among persons both directly and indirectly affected by automation, and economic problems relating to the manufacturing and distributing of products pouring from automated factories.

**SUMMARY AND CONCLUSIONS:** In view of the multiplicity of problems which are almost certain to arise with the advent of automation, it seemed plausible that no conclusive evidence could be admitted at this time, nor that any conclusions could be drawn regarding either the outcomes of the problems presented or the solutions to these problems. An opinion has been expressed that more study will have to be made, and that more persons in the American society should be made aware of the problems posed.

**PROJECT COMMITTEE:** Dr. Raymond H. Larson, Chairman; Dr. Edwin A. Nash

**DATE OF COMPLETION:** July 1958

## MATHEMATICS EDUCATION

### A COMPARISON BETWEEN TEACHING THE UNIT ON AREAS OF GEOMETRIC FIGURES WITH VISUAL AIDS AND THE TEACHING OF THE UNIT ON AREAS OF GEOMETRIC FIGURES BY THE TRADITIONAL METHOD

by Phurney Mortenson

**PROBLEM:** It was the purpose of this study to make a comparison of the test results between the visual aids method and the traditional method of teaching the areas of geometric figures.

**PROCEDURE:** Pretests on vocabulary, formulas and problem solving were used to measure the product of the visual aids method of teaching a unit on finding the areas of geometric figures and the traditional method of teaching the same unit.

To measure the statistical significance of the difference between the Visual Aids Group and the Control Group, tests were administered following the completion of the unit. In the spring, a final test was given to determine if either group showed any statistical significant difference in the amount of retention.

A frequency distribution of the data of a variable were recorded in such a manner that the mean, the standard deviation, the standard error of the mean, the standard error of the difference between the means, and the t-ratio could be computed.

Analysis were made of the pretests, the unit tests, and the final tests given on formulas, on vocabulary, on problem solving, and a combination of the three, i. e., the sum of the scores on the formula, the vocabulary, and the problem solving tests. Additional analyses were made on the gains and losses between the pretest and the unit test, between the pretest and the final test, and between the unit test and the final test.

**FINDINGS:** The results obtained indicate that there was no significant differences in the t-ratio at either the .01 level or the .05 level on the pretest, the unit test, and the final test.

There was a significant difference at the .01 level on three gains only. These differences were from the unit test to the final test on vocabulary, from the pretest to the unit test on problem solving, and from the unit test to the final test on the combination of the tests.

**SUMMARY AND CONCLUSIONS:** The subjects of this experiment were pupils in the ninth grade mathematics classes and these subjects were assigned to the same instructor. The California Algebra Aptitude Test was administered to aid in selecting those pupils who should take algebra and those who should take general mathematics. These groups were fairly well matched since no statistical significant difference was found on the t-test of I.Q.'s. These groups met at different hours during the day. The Control Group met the first hour and the Visual Aids Group met the last hour.

On the bases of this study, it was valid to conclude that neither the traditional method nor the visual aids method was significantly superior; therefore it might be desirable to use a combination of the two methods. More studies of a similar nature should be made to obtain more adequate research from which to generalize.

Standardized tests on units, such as areas of geometric figures, would be a help in a study such as this.

**PROJECT COMMITTEE:** C. O. Bemis, Chairman; Dr. R. C. Anderson

**DATE OF COMPLETION:** July 1958

## **AN INVESTIGATION OF THE IMPORTANCE OF MATHEMATICS IN PRESENT-DAY LIVING**

by Annie Vimla Seymour

**PROBLEM:** The uncompromising intolerance towards a traditional educational program as seen in the extreme form of the "progressive" and other recent movements has declared mathematics as a useless subject for the average student and has threatened the removal of mathematics from the high school curriculum or restricting it to be pursued by the selected few—the future mathematicians and scientists. Those who see mathematics in its true perspective have to face this problem and present the importance of mathematics for the ordinary man in the ordinary phases of life.

**PROCEDURE:** Since the purpose of the paper is to illustrate the importance of mathematics in the most practical affairs of life, only those people are taken into account whose formal education ends in high school. Hence it is felt necessary to deal with three important phases of life; namely, vocational, personal, and for citizenship. The method of collecting information has been mainly research from all possible written sources. These include books and journals written by educational mathematicians, learned mathematical societies and pamphlets issued by big industrial firms illustrating in a practical way the growing need for mathematical efficiency.

**FINDINGS:** Teachers and employers are more and more coming to the common belief that thorough mathematical training is essential to success and advancement in a wide field of occupations and professions. Hence their main concern is to meet the need of the large percentage of students who do not go to college. While it is necessary to see a complete picture of the way mathematics has contributed towards the present civilization, it is fully realized that our high schools are not going to make mathematicians of the boys and girls but to give them sufficient idea of the subject so that not only will an educated person be able to perform his job efficiently but also have the basis of human knowledge. Technological changes in our society create greater demands for technically trained men and women employed in large numbers for sub-professional, skilled and unskilled work. The technically trained are responsible for adjusting society to technical changes. They should, therefore, have mathematical preparation to be competent in their work which directly affects our general welfare in the major areas of modern life. This would also make better citizens of them who would realize their duties to society.

**SUMMARY AND CONCLUSIONS:** The high school has a dual responsibility: One is to provide sound mathematical training for the future leaders.

And the second equally important is to insure mathematical competence for the ordinary affairs of life to the extent that this can be done for all citizens as a part of a general education program appropriate for the major fraction of the high school population. What is needed, however, is the essential continuity of mathematical instruction so that none of the students are handicapped due to mathematical incompetence. A revision in high school mathematics programs may involve some changes in sequential arrangement and raising the standard.

**PROJECT COMMITTEE:** C. O. Bemis, Chairman; Dr. R. C. Anderson  
**DATE OF COMPLETION:** December 1957

## **A SURVEY OF FRESHMEN MATHEMATICS IN THE JUNIOR COLLEGES OF IOWA**

by Arthur W. Strand

**PROBLEM:** To learn what satisfactory method(s), if any, are being employed to assist college freshmen who do not have adequate mathematics preparation from high school, to take mathematics courses designed for engineering (or mathematically equivalent) training without loss of time.

**PROCEDURE:** A search of periodical literature revealed little had been written on this subject, and that no real study of possibilities had been made.

Consultation with Mr. Clifford Bemis, the writer's graduate advisor, resulted in a proposal to study the situation in the junior colleges of Iowa.

Armed with a sample questionnaire, the writer spent a day visiting six junior colleges of Iowa to obtain reactions of deans and mathematics instructors toward assisting in a study of college freshmen mathematics in the junior colleges of Iowa.

The questionnaire was revised and completed in accordance with suggestions obtained during the visits mentioned above.

The questionnaire was mailed to every junior college in Iowa whose name appeared in The Junior College Journal of January, 1958.

The returned questionnaires were used as a basis for Chapter III, where the findings are given in some detail.

For background and comparison purposes, catalogs of a variety of senior colleges and universities were studied to learn whether they had to meet a similar problem, and how they did so, if they had the problem.

Some new texts were examined and reviews of others noted, to learn what influence the problem had produced upon authors.

**FINDINGS:** The problem of meeting the needs of unprepared-for-mathematics college freshmen was prevalent. No plan for meeting the problem, except that of sending the student somewhere to make up his deficiencies, was rated successful by junior college deans or mathematics teachers of Iowa. There seems to be no short cut, no "royal road" to mathematics learning.

Senior colleges have the problem as well as junior colleges.

Some college teachers decry the practice of doing preparatory work in mathematics at college, while other write texts to assist in the preparatory training.

**SUMMARY AND CONCLUSION:** The problem of what to do with the unprepared college freshmen in mathematics is quite general.

Colleges are trying to make provision for their preparation after college-entrance.

No very successful solution has been offered, and none that was offered proved entirely successful.

Because so many colleges provide preparation after the unprepared student enrolls at college, most colleges will be forced to continue the practice.

**PROJECT COMMITTEE:** C. O. Bemis, Chairman; Dr. R. C. Anderson  
**DATE OF COMPLETION:** August 1958

# AN INVESTIGATION TO DETERMINE THE GRADE LEVEL AT WHICH SOME CHILDREN ARE MOST LIKELY TO BEGIN A DISLIKE OF ARITHMETIC IN THE PUBLIC SCHOOLS OF CHATFIELD, MINNESOTA

by Anna Vegdahl

**PROBLEM:** The investigation was made to determine at what grade level some children of Chatfield are likely to begin a dislike of arithmetic. It was the purpose of this study (1) to determine at what grade level such dislikes begin, and (2) to be able to suggest possible methods by which such dislikes might be prevented or corrected.

**PROCEDURE:** The study was made by the use of questionnaires, interviews, and a review of literature.

The questionnaire was prepared and administered personally by the investigator to 119 juniors and seniors of the Chatfield High School.

Interviews were carried on with teachers, high school students, and grade children. These interviews were made to find whether or not the feelings held by the Chatfield students were common to others.

Literature on attitudes to school subjects, especially arithmetic, was read to compare these attitudes with those held by the Chatfield students.

**FINDINGS:** The study seemed to reveal that the problem of dislike of arithmetic is not as great as one might have been made to believe. The fact remains, however, that some dislike the subject.

Of 119 students who were questioned in the Chatfield school, fifteen stated that they dislike mathematics (arithmetic) as compared to sixty-three who gave evidence that they liked it. The interviews made and the articles read seem to indicate similar results.

The students of Chatfield who disliked arithmetic did not dislike all parts of it; likewise, students who indicated that they liked arithmetic, disliked certain parts of it.

The dislike of arithmetic seemed to begin in grades five and seven more frequently than in any other grades. From the reading of literature on attitudes toward arithmetic, it was found that other students also seem to develop unfavorable attitudes in grades five and seven.

Where dislikes existed, the most obvious causes seem to be: (1) the lack of understanding of parts of arithmetic, and (2) the lack of success in performance of the work required. From the interviews held and from articles read, the above mentioned causes appear to be common to most of those who dislike arithmetic.

**SUMMARY AND CONCLUSIONS:** The dislike of arithmetic which exists seems to be caused by a lack of understanding of the materials taught and appears to begin in grades five and seven more often than in other grades.

The possible reason for dislike of arithmetic beginning in grade five is that fractions are taught at that time. It has been the observation of the investigator that many short cuts are taught in connection with fractions without the students' knowing the reasons which govern these short cuts.

The seventh grade students have so many new adjustments to make upon entering junior high school that it might be a cause for dislike of subjects.

Teaching for understanding by well qualified teachers who are able to use concrete materials to make arithmetic meaningful appears to be the answer to the problem.

Further investigation by questioning several groups would make it possible to draw more definite conclusions with respect to dislikes of arithmetic by students in general.

**PROJECT COMMITTEE:** C. O. Bemis, Chairman; Dr. Paul Ingwell

**DATE OF COMPLETION:** August 1958

# PHYSICAL EDUCATION

## AN INVESTIGATION OF THE ACADEMIC STATUS OF ATHLETES AT ST. CLOUD STATE COLLEGE

by Rodney Edward Anfenson

**PROBLEM:** This investigation was made so as to be able to present the facts concerning the academic status of athletes at St. Cloud State College.

It was the purpose of this study (1) to compare the academic achievement of athletes with non-athletes; (2) to show the academic achievement relationships among the various sports; (3) to determine if participation in athletics affects the academic achievement of athletes; and (4) to present the scholarship trend of athletes.

**METHODS AND PROCEDURES:** The study was made of male graduates from 1953 through 1958. All athlete graduates and a near number of non-athlete graduates, chosen by random sample, were included in this study. An individual was not considered as a graduate if more than sixteen credits had been accepted in transfer to St. Cloud State College. There were seventy-eight athlete graduates and ninety non-athlete graduates used in this investigation.

A comparison of the academic achievement of athletes and non-athletes was made on (1) results of the American Council on Education Psychological Examination; (2) total honor point ratios; (3) general constant requirement honor point ratio; and (4) professional education honor point ratios.

Percentile ranks were used as the unit of measure on the American Council on Education Psychological Examination. Fisher's *t* was the statistical method used in the treatment of data concerning the honor point ratios of the athletes and non-athletes.

The participating quarters of the one sport athletes were compared to their non-participating quarters in total honor point ratios. The members of the various athletic teams were compared to each other by (1) total honor point ratios; (2) general constant requirement honor point ratios; and (3) professional education honor point ratios.

**CONCLUSIONS:** The following conclusions have been based upon the results and findings of this study:

1. The non-athletes ranked slightly higher than the athletes in their results on the American Council on Education Psychological Examination.

2. There was no statistically significant difference between the athlete and non-athlete in total honor point ratios and general constant requirement honor point ratios. The non-athletes performed slightly higher in these two areas.

3. There was a statistically significant difference at the .01 level of confidence in favor of the non-athletes in the professional education honor point ratios.

4. Within the general constant requirement area (communications, humanities, mathematics and science, and social science) the non-athlete achieved higher than the athlete. The differences were slight and were not statistically significant.

5. There was a statistically significant difference at the .01 level of confidence in favor of the athletes in the health and physical education general constant requirements.

The last five conclusions were based on the comparisons made between the athletes themselves.

6. There was no statistically significant difference between the participating quarters and the non-participating quarters of the athletes in total honor point ratios. The athletes performed slightly higher in their non-participating quarters.



7. The three sport men ranked lowest in the three major areas of comparison. This concurs with conclusion number six.

8. Golf letter award winners ranked highest in two of the three major areas of comparison and next to the highest in the third major area of comparison.

9. Of the athletes competing in only one sport the basketball letter award winners ranked lowest in two of the major areas of comparison and next to the lowest in the third major area of comparison.

10. There was no discernible trend in scholastic attainment in considering the athlete graduates by year.

**PROJECT COMMITTEE:** Dr. John Kasper, Chairman; Dr. A. F. Brainard

**DATE OF COMPLETION:** October 1959

## **A COMPARISON OF ELIGIBILITY RULES FOR JUNIOR AND SENIOR HIGH SCHOOL INTERSCHOLASTIC ACTIVITIES IN THE CENTRAL AND MIDWEST STATES**

by Rudolph Kne

**PROBLEM:** The problem, as treated in this study, was a comparison of eligibility rules for junior and senior high school interscholastic activities in the Central and Midwest state. This study provides an analysis of the various rules and regulations of the agencies that control and supervise interscholastic activities.

**PROCEDURE:** The major portion of this study was the analysis, interpretation, and comparison of the constitutions, by-laws, rules, and regulations of the state associations as recorded in the official publication of the organizations governing interscholastic activities. This study also included an examination of the current literature pertaining to the development and evaluation of rules eligibility. The results of these comparisons were recorded and conclusions and recommendations were presented.

**FINDINGS:** The history of interscholastic activities indicated the need for eligibility regulations was the direct result of the excesses and abuses which were evident in the formative years of the program. The formation of state and national associations have played a major role in developing uniform regulations for the control of interscholastic activities. An analysis of the official publications of the various associations surveyed in this study, indicated considerable variations in the control exercised by the associations. Although considerable uniformity was indicated in many of the rules and regulations, it was evident that continued study is needed on regulations pertaining to the individual participant and the length of the athletic seasons. The uncertain philosophy of eligibility regulations and the lack of sufficient rules governing non-athletic activities and junior high school activities was evident.

**SUMMARY AND CONCLUSIONS:** The need for rigid control in interscholastic athletics was a direct result of the abuses and excesses which were evident in the early phases of the program. Much of the criticism lodged against interscholastic athletics could be traced to the lack of efficient and qualified leadership.

The uncertain philosophy of eligibility regulations indicated the need for constant evaluation of the interscholastic activities program.

An analysis of the data presented in this study indicated: (1) considerable variation in policies pertaining to granting awards for participants in the interscholastic activities programs, (2) nearly one-half of the states did not directly limit the number of football games a team could play in one season, (3) few states limited contests in sports other than football and basketball, (4) considerable variations existed in the transfer rules, (5) the lack of uniformity in regulating the upper age limits of the participants was evident, and (6) uni-

formity existed in rules pertaining to conduct of participants, certification of coaches, sanctioning contests, amateur rules, non-school participation, all-star games, physical examinations, undergraduates, semesters of participation, and academic grades.

**PROJECT COMMITTEE:** Dr. George Serdula, Chairman; Dr. John Kasper  
**DATE OF COMPLETION:** July 1960

## **AN INVESTIGATION OF THE BOYS' PHYSICAL EDUCATION PROGRAMS IN MINNESOTA SECONDARY SCHOOLS**

by Charles Alois Pfannenstien

**PROBLEM:** This study of the boys' secondary school physical education programs in Minnesota was conducted (1) to get an indication of the kinds of physical activities that are being offered in the programs throughout the state, (2) to see if the programs differed in the three geographical areas, i.e., North, Central, and South, (3) to detect program differences of large, medium, and small enrollment schools, (4) to find out if the programs of accredited and non-accredited schools differed, and (5) to determine what is being done in the area of outdoor individual and dual activities.

**PROCEDURE:** The method used to gather data for this study was the questionnaire. A random sampling of thirty schools received questionnaires. Ten of the schools were in the 0-200 enrollment group, twelve in the 201-400 group, and eight in the 401 and above group.

**FINDINGS:** 1. The schools followed the Minnesota State Department of Education's requirements for grades seven through ten to participate in the program, and the minimum of two periods of physical education per week.

2. The schools used a variety of physical education plans for their programs, e.g., 5 days of physical education; 3 days of physical education, 2 days of health education; 2 days of physical education; etc.

3. The location of the school in the town or city did not affect the school's number of teaching stations.

4. Schools of equal enrollment generally had equal physical education teaching stations.

5. Schools of 401 and above students tended to have a wider variety of physical education teaching stations and physical education activities than did the 0-200 or 201-400 groups.

6. Geographical location did not have any effect on the number and type of physical education activities included in the programs.

7. Individual and dual activities were included less often in the programs than were group physical activities.

8. Schools with 401 and above students included more individual and dual activities than did the 0-200 or 201-400 groups.

**SUMMARY AND CONCLUSIONS:** 1. The schools involved in this survey followed the requirements set up by the Minnesota State Department of Education in the number of class periods per week and the grades required to participate in the program.

2. More group physical activities were included in the programs than were individual and dual physical activities.

3. Geographical location in the State did not seem to have any effect on the number of teaching stations, or activities included in the boys' physical education programs.

4. Schools with large enrollments (401 and above) tended to have a greater variety of teaching stations and physical activities than did the schools with enrollments of 400 and below.

5. Accredited and non-accredited schools of the same enrollment tended to have similar programs in the number of teaching stations and activities included.

**PROJECT COMMITTEE:** Dr. John Kasper, Chairman; Dr. George Serdula  
**DATE OF COMPLETION:** August 1960

## **A RECREATION PROGRAM FOR ALBANY, MINNESOTA**

by Kenneth H. Zirbes

**PROBLEM:** The purpose of this study is (1) to analyze the recreational needs and interests of the citizens of Albany; (2) to determine the adequacy of Albany's existing summer recreation program; (3) to determine areas and facilities necessary for a summer recreation program in the village of Albany; (4) to study local and state legislation governing recreation programs in the State of Minnesota; (5) to find acceptable means of financing a community recreation program; and (6) to formulate an acceptable ten-week summer recreation program from the findings of the study.

**PROCEDURES:** A recreation interest questionnaire presenting eighty-nine recreation activities was formulated and distributed to the citizens of Albany. Seven hundred eighty-nine individuals received the questionnaire and 660 returned them for an 89 per cent return. Participants were to check any of the recreation activities that they felt they would like to participate in. Senior high school students and adults were asked to check in columns two and three of the questionnaire if they were willing to volunteer their services to carry out a successful program.

In addition to the interest questionnaire adults were also asked to complete an opinion poll which presented ten questions concerning organization of recreation programs.

**FINDINGS:** The recreational needs and interests of the citizens of Albany are not being adequately provided for at the present time. The recreational activities which received the most support were outing activities and athletics and games. The five most popular recreational activities in order of preference were bowling, swimming, ice skating, fishing, and camping.

The recreation program organizational plan that would probably receive the most support in the village of Albany is a coordinated plan between the school district and the village government under the direction of a recreation council. The right to organize a program of this nature is granted by state enabling acts.

The adult citizens of Albany believed that community recreation should be financed as a part of the village, county, and school government. Citizens were not opposed to paying a fee for activities in which they participated.

Recreational areas necessary to carry out a successful recreation program in Albany are adequate but are not being used to the fullest extent at the present time. Citizens were of the opinion that the existing facilities, especially the high school should be used more fully before any plans for new facilities be contemplated.

**SUMMARY AND CONCLUSIONS:** 1. The citizens of Albany are aware of the values of recreation as evidenced by their positive vote favoring a recreation program for the community.

2. The existing summer recreation program in Albany is not adequately meeting the needs of the majority of the citizens as evidenced by the results of the interest questionnaire.

3. Legislation governing recreation facilities, finance, and program organization permits communities in Minnesota to conduct public recreation on a cooperative basis.

4. Available recreation areas in Albany seem to be adequate for the number of people they are to serve as evidenced by a comparison of existing facilities with those recommended by the National Recreation Association.

5. The adult opinion poll indicated that the people of the community favored some form of taxation for recreation.

**PROJECT COMMITTEE:** Dr. John Kasper, Chairman; Dr. A. F. Brainard  
**DATE OF COMPLETION:** August 1960

## SCIENCE

### AN ECOLOGICAL STUDY OF THE DECIDUOUS PENINSULA OF DOUGLAS COUNTY

by Vernance Dolores Beste

**PROBLEM:** The purposes are: (1) to examine the composition of various stands of deciduous trees with emphasis on distribution in space, recent changes pertinent to expansion and correlation with environmental factors, (2) to compare the vegetation with studies in the prairie-forest border region within Minnesota and the Lake States region and (3) to obtain information relevant to biological resources of the community which can and should be utilized for course enrichment and supplementation wherever such correlation can practically be made.

**PROCEDURE:** Thirteen stands exemplifying four stages along the continuum were studied using the Point-Centered Quarter Method. The number and direction of compass lines varied according to the size and location of the stand. In each stand forty sampling points were used for trees and saplings. The circumference was recorded for the four trees nearest the point. Four saplings nearest the point were recorded by species. Twenty 2 x 2 meter quadrats were used for recording the number of shrubs and seedlings. Within the 2 x 2 meter quadrat a 1 x 1 meter quadrat was placed for determining the per cent of relative cover of each herb. Quadrat studies were made at alternating points used for the trees.

**SUMMARY:** Pioneer bur oaks are located along the outer edge of the peninsula where they are relatively free from competition and can receive ample sunlight. In the center of the peninsula the climax sugar maple-basswood association forms a closed canopy. Sugar maple is found completely disconnected from the main body of sugar maple in the southeastern section of the state.

The forested area is either very pioneer or rapidly approaching the climax. After the glaciation period the forest migrated from the east. The xerothermic period followed which brought about considerable vegetational readjustment. The long term increase in the mean westerlies helped fires. The oak element increased to a maximum, because its bark is quite fire-resistant and it was free from competition. Relics of sugar maple were protected near the lakes, on the northeastern slope of the moraine and on the eastern side of the outwash area. The prairie encroached upon the forest. The long term westerlies decreased, fires ceased and the climate became more mesic.

The forest migrated outward from these relics. Cessation of fire is believed to be the principal factor causing the eastern expansion of the forest because climatic change would have taken longer.

Factors favoring the theory of rapid invasion of the forest onto the prairie include: (a) topography - the center of the present deciduous area seems correlated with the northeastern side of a moraine in an area with many lakes, (b) soil - the soils now supporting deciduous forest possess a prairie profile and (c) vegetation - the presence of prairie false solomon's seal in the climax stands.

Sapling, seedling and shrub data correlated well with the trees. Ninety species of herbs were found, the majority being typical of pioneer stands. Perhaps the invasion of the forest onto the prairie took place so completely that most prairie herbs have been eliminated.

**PROJECT COMMITTEE:** Dr. Max L. Partch, Chairman; Dr. Harold Hopkins  
**DATE OF COMPLETION:** June 1959

## **WINTER SURVIVAL OF DESCALED LILAC BUDS IN CENTRAL MINNESOTA**

by Milton Froehlich

**PROBLEM:** The purposes of this problem were to determine: (1) the winter survival of descaled buds of lilac (*Syringa vulgaris* L.) when exposed to natural environmental conditions, (2) the effectiveness of polyethylene as a substitute for bud scales, and (3) the affect of desiccation on survival in both field and laboratory.

**PROCEDURE:** Mature lilac plants located in the vicinity of St. Cloud, Minnesota, were selected as a source of material for this study. A series of buds was descaled 4 to 6 weeks apart on predetermined dates from October 31, 1959 to March 5, 1960. Half were covered with polyethylene bags. A similar series was used as a control. Beginning on November 28 and continuing at predetermined intervals until April 2, these buds were removed from the plant and placed in a growing chamber to determine their vitality.

The affect of desiccation on survival in the field was determined from a series of 190 buds descaled January 9, 1960. Buds were then collected after 3, 6, 10, and 14 days and at weekly intervals for the next 6 weeks. Their moisture content was computed on the basis of dry weight after being in an oven at a temperature of 105°C. for 10 hours. The buds were then placed in the growing chamber to determine their vitality.

The affect of desiccation on survival in the laboratory was determined from a series of 90 descaled and control buds placed in an oven at a temperature of 35°C. The buds were removed at hourly intervals for 9 hours, and their moisture content computed as a percentage of the original weight. Their vitality was determined by placing the buds in the growing chamber.

**FINDINGS:** All descaled buds, whether or not they were covered with polyethylene, had a higher rate of winter survival during the first 2 to 3 months of the experiment than during the latter part. None of the buds descaled on October 31, November 28, and March 5 were alive April 2. Covering the buds with polyethylene provided no distinct advantage in respect to survival. Buds covered during the first part of the experiment were also dead April 2. In some cases, the polyethylene-covered buds had a higher mortality than the exposed buds. It is possible that the polyethylene acted as a miniature greenhouse causing an increase in temperature inside the bag long enough to bring about enzymatic changes responsible for breaking dormancy. The buds covered with polyethylene grew more rapidly than exposed buds when placed in the growing chamber.

Moisture was lost more rapidly from the descaled buds than from the control buds in the field. The greatest loss occurred during the first 35 days following descaling. During the next 21 days the moisture content was relatively constant. With 1 exception, all buds remained alive during the entire experimental period.

Also in the laboratory moisture was lost more rapidly from the descaled buds than from control buds. The greatest loss was during the first few hours following descaling. At the end of 9 hours, the descaled buds had lost 46% of their original weight, and the normal buds had lost 36%. The descaled buds began to die after losing approximately 42% of their original weight.

**SUMMARY AND CONCLUSION:** 1. Bud scales are essential for the successful winter survival of apical meristematic tissue.

2. Bud scales are of greatest importance for survival near the end of the dormant period.

3. Polyethylene is not an adequate substitute for bud scales.

4. The essential role of bud scales seems to be in the prevention of desiccation.

**PROJECT COMMITTEE:** Dr. Harold Hopkins, Chairman; Dr. Merle E. Michaelson

**DATE OF COMPLETION:** August 1960

## **AN INVESTIGATION INTO THE PREPARATION OF GENERAL SCIENCE TEACHERS IN GRADES SEVEN TO NINE IN MINNESOTA**

by Don Kent Gibson

**PROBLEM:** "An Investigation Into the Preparation of General Science Teachers in Grades Seven to Nine in Minnesota" was a study undertaken in 1959. The chief purpose of this investigation was to gather information concerning the educational background of general science teachers so that recommendations could be made for the improvement of preparation of general science teachers in Minnesota.

**METHOD OF STUDY:** A questionnaire consisting of three parts (The School, The Teacher, and the Teacher's Future) was sent to three hundred teachers throughout Minnesota in October, 1959. One hundred forty-six of the 300 questionnaires were returned and tabulated.

**SUMMARY OF RESULTS OF QUESTIONNAIRE:** 1. Questionnaires obtained represented 113 different schools.

2. The teaching experience of the teachers varied from 0 to 36 years with the median being 5.63 years.

3. Years teaching general science varied from 0 to 36 years with the median being 4.44 years.

4. The majority of the teachers are Minnesota trained.

5. The majority of the teachers have majors or minors in biology.

6. Mathematics, social studies, and physical education are the chief classes taught along with general science.

7. The average number of science classes taught by each teacher is five classes a day.

8. Fifty-three teachers taught general science full time.

9. Ninety teachers taught general science part-time.

10. Seventy-five of the 146 teachers taught science full time.

11. The undergraduate credits arranged according to descending total median strengths in quarter hours are: professional courses (29.6), biological science (26.41), chemistry (13.75), physics (10.50), geology (0.754), astronomy (0.617), and meteorology (0.480).

12. Tabulation of graduate credits showed that the teachers are taking little graduate work in science.

13. A poll of general science teachers in regard to minimum courses they felt a beginning general science teacher needed showed they should have had training in: general science, biology, chemistry, physics, astronomy, meteorology, and geology.

14. *Current Science and Aviation*, *Science Digest*, and *Minnesota Academy of Science Journal* are the chief science publications the most regularly read.

15. The majority of the teachers belong to the Minnesota Education Association, and only thirty-nine of the teachers belong to the Minnesota Academy of Science.

16. The teachers desiring training in astronomy preferred a practical course.
17. The teachers expressed an opinion that the geology course in which they desired training should be general in nature.
18. The majority of the science teachers wanted the courses to be offered first summer session.
19. Ninety-eight teachers desired to take undergraduate science courses.

#### **RECOMMENDATIONS FOR IMPROVEMENT OF THE GENERAL SCIENCE TEACHERS:**

1. Minnesota Department of Education should require a general science major for certification of general science teachers in grades seven to nine.
2. The general science major should require work in general science, biology, physics, chemistry, astronomy, meteorology, and geology.
3. The colleges and universities need to change course offerings to meet the requirements of the new major.
4. The experienced general science teacher should contribute teaching techniques for publication in science periodicals.

**PROJECT COMMITTEE:** Dr. Hugh Barker, Chairman; Dr. H. H. Goehring  
**DATE OF COMPLETION:** June 1960

## **THE FIELD TRIP AND ITS POSSIBILITIES IN GENERAL SCIENCE WITH REFERENCE TO THE ST. CLOUD AREA**

by Lee Larry Kohs

**PROBLEM:** The field trip offers for all types of schools an opportunity to take pupils to the actual source of information. It does not represent an outing or recreational period but is a definite aid in the teaching procedure and has a definite function to perform. The field trip gives contact with actual materials of life and offers a chance for students to gather first-hand information concerning the subject of study.

It was the purpose of this study (1) to set forth suggestions on the organization and procedures to follow in setting up and conducting a successful field trip; (2) to make a survey of St. Cloud and the surrounding area to determine the field trip objectives that are available in the field of general science; and (3) to determine activities that can be carried out at each location.

**PROCEDURE:** The problem was approached by first reviewing the literature that was available on the subject. The next step was to make a general survey of the community for the purpose of discovering the number and variety of opportunities that are offered. After becoming acquainted with the area a preliminary list of field trip objectives was compiled.

After this preliminary list had been completed, a questionnaire was designed to obtain the desired information with the least inconvenience to the person being interviewed. This questionnaire was then presented in person to the individual being questioned. This offered the opportunity to become personally acquainted with the owner or manager and to ask specific questions as the need arose. In many cases the person being interviewed offered many valuable comments and suggestions in addition to answering the questions that were asked. Upon completion of the interview an opportunity was given to tour the prospective site which made it possible to become better acquainted with the individual and the firm, place of business or locality. Sixty-nine places were visited in this survey.

**FINDINGS:** It was found that this area contains many available sources that can contribute greatly to the general science program. The people of this community are willing to contribute their time and services in order to give our school children the type of education they deserve. The majority of them agree that a well organized field trip program in our schools can be

of a high educational value as well as giving the students a better understanding of the community in which they live.

**SUMMARY AND CONCLUSIONS:** It is hoped that in the future we can have in our schools more teachers who are willing to accept the added responsibility placed on them in conducting a successful field trip. If the administration can be assured that field trips are not necessarily a recreational period but an integral part of the subject, greater provisions can be made for their use.

**PROJECT COMMITTEE:** Dr. Arthur F. Nelson, Chairman; Dr. Harold Hopkins  
**DATE OF COMPLETION:** November 1958

## SOCIAL SCIENCE

### THE HISTORICAL DEVELOPMENT OF THE SOCIAL SCIENCES PROGRAM AT ST. CLOUD STATE COLLEGE 1926-1959

by George Otto Erickson

**PROBLEM:** The problem was to present the historical development of the social sciences program of St. Cloud State College during the years the college has granted the four-year degree. It includes curriculum developments, a study of the social sciences majors and minors that had been completed during this period, and the teaching assignment of the graduates for the last ten years who completed these majors and minors.

**FINDINGS:** During the early years of the four-year degree program, the first social sciences majors were established. They were the fore-runners of the present history and social science majors. Geography, as a major, was dominated, to a great extent, by science during the first years of the four-year degree program. The establishment of academic divisions brought together, within the division of social sciences, all of the then existing majors, minors, and courses that are at the present an integral part of the division. The years since 1950 saw the inclusion of majors and minors in economics and political science, a major in sociology, and a minor in recreation.

The tabulations show the number of social sciences majors completed during the last ten years was almost double the number completed during the first ten years. The tabulations also indicate that majors in history and social science were completed with much greater frequency than majors in geography and social studies. In the selection of accompanying minors, the most popular were history and social science. Throughout the past number of years there has been an increase in the number of degrees granted with majors and minors completed solely in the social sciences.

The teaching assignments of the graduates were tabulated according to five possible placements. The tabulations show that of the graduates with social sciences majors 14.10 per cent were placed in their own social sciences field, 18.37 per cent were placed in related social sciences fields, 16.45 per cent were placed in non-social sciences major fields, 12.82 per cent were placed in non-related fields, 25.23 per cent were not placed, and 13.03 per cent completed Bachelor of Arts degrees. Of the graduates who had only social sciences minors, the tabulations indicate that 4.63 per cent were placed in their own social sciences field, 6.86 per cent were placed in related social sciences fields, 57.51 per cent were placed in their major fields, 7.42 per cent were placed in non-related fields, 16.88 per cent were not placed, and 6.67 per cent earned Bachelor of Arts degrees.

**CONCLUSIONS:** From the data presented in the study it appears that the history and social science majors and minors have been and are the heart or core of the social sciences program, for a large majority of the majors



and minors completed by the graduates were in these fields. In contrast, the number of majors and minors completed in the social studies and geography comprised only a small part of the total number.

In the teaching placement of graduates with majors only from the social sciences, the graduates with a geography major had the least success in receiving teaching assignments in the social sciences. Among the graduates who had combination majors from the social sciences and other fields, the majors from the other fields dominated the teaching assignment except for majors in health and physical education.

**PROJECT COMMITTEE:** Dr. H. P. Lohrman, Chairman; Dr. James G. Harris  
**DATE OF COMPLETION:** February 1960

## **A STUDY OF THE RELATIONSHIP BETWEEN THE CONSUMPTION FUNCTION AND CHANGES IN NATIONAL INCOME**

by Jerome J. Hollenhorst

**PROBLEM:** Keynesian economic theory implies that in the long run the consumption level of a capital rich economy is restricted in the rate at which it can increase relative to rising levels of national income. The significance of this problem lies in the fact that if the level of consumption of an industrialized economy is limited in the rate at which it can increase, the economy is faced with the ever increasing problem of finding equivalent expenditures through government spending or private investment outlets in order to maintain full employment of resources.

**PROCEDURE:** The theoretical and statistical analysis employed in this study concentrates upon some of the factors capable of affecting the relationship between aggregate personal consumption and rising income levels within the framework of the economy of the United States from 1929 to 1957. The factors selected for consideration are (1) personal income and income distribution, and (2) specific governmental tax and transfer programs.

**FINDINGS:** The consumption function as defined and used in this study relates disposable personal income to personal consumption expenditures. The statistical computation of the consumption function for the entire period, 1929-1940 and 1946-1957, yields a marginal propensity to consume of .9. The separate functions, computed on the two sets of data from 1929 to 1940 and for 1946 to 1957, result in marginal propensities to consume of .82 and .88, respectively. Since national income experienced a constant rise during this period, the computed functions seem to differ from Keynes' general theory that the rate of consumption declines at higher levels of income. However, the increase in the consumption level is possibly attributable to variance of those factors which Keynes' theory considers capable of only very gradual and slow change. Two of these factors which Keynes' theory practically ignores, income distribution and certain government tax and transfer payment programs, are analyzed in an attempt to determine any significant degree of change within the time period selected.

The investigation of the income distribution indicates that although the economy is characterized by a significant degree of income inequality, there is evidence of a slight shift toward a more equal distribution of income. The evidence of this period also shows that the lowest income groups benefited relatively more from the increase of total income than the upper income groups. The data gathered through various family-budget studies in the United States show that the consumption-income ratio is greater than unity for the very lowest income classes and declines to much less than unity for the highest income classes. However, the position on the income scale where consumption exactly equals income has risen with the over-all increase of incomes and has remained approximately equal to median income. When the individual

consumption-income ratios of the various income classes are compared for the different years of the family-budget studies, there appears to be no significant change within specific income classes. However, the fact that the relatively higher consuming groups received an increasing proportion of the total national income during this period of years, contributed to the maintenance of a high average and marginal propensity to consume for the economy as a whole.

The impact on the consumption function of government taxes and transfer payments increased in importance throughout this period of rising incomes from 1929 to 1957 because of their rise in absolute amounts and as a proportion of national income. The data relative to the tax structure show an increasing degree of progressiveness during this period, largely as a result of the expansion of the progressive federal income tax. On the other hand, government transfer payments have also increased in scope and amount since 1929. The initiation and expansion of Social Security and related programs account for the largest proportion of this increase. Thus, the evidence indicates that government operates as a redistributive agency chiefly at the extremes of the income scale by reducing the income of the highest income classes and increasing the income of the lowest income groups. The effect of this experience upon the consumption function is to contribute to the support of a relatively high level of aggregate consumption.

**SUMMARY AND CONCLUSIONS:** While a variety of other factors have probably also contributed to maintaining a high level of consumption during this period of rising income, the impact of change in the income distribution and government fiscal policy are significant. The theoretical implications are especially interesting since critics of Keynes' theory have often charged that it has been invalidated by the phenomenon of the consumption level rising almost proportionately with national income. However, if the conclusions of this study, that changes in the distribution of income and government fiscal policy have contributed to the maintenance of a high level of consumption, are valid, then the explanation remains within the scope of Keynes' analysis. Perhaps the only valid criticism is that he underestimated the speed with which these factors could change.

**PROJECT COMMITTEE:** Dr. Carl J. Folkerts, Chairman; Dr. James G. Harris  
**DATE OF COMPLETION:** July 1958

## **AN INVESTIGATION OF THE PROCEDURES USED IN ESTABLISHING SEX EDUCATION IN THE SECONDARY SCHOOLS**

by Gordon Ellsworth Mortrude

**PROBLEM:** It was the purpose of this study to investigate and consider the various procedures used in organizing and establishing sex education in secondary schools.

**PROCEDURE:** The following methods and procedures were used in conducting this investigation:

A. Examination of current literature relating to the development of sex education programs in secondary schools.

B. Study and analysis of existing programs.

C. Survey of 252 high school students to determine the sources of their sex information.

D. Personal interviews with administrators and teachers in regard to their attitudes toward sex education.

E. Interpretation and report of the data.

F. Conclusions and recommendations elicited by the data.

**FINDINGS:** The findings of this study are as follows:

- A. The need and value of sex education is well established.
- B. Gaining community support is essential in promoting a sex education program.
- C. High school students are aware of the need for sex education.
- D. Administrators readily accept sex education in their schools if community support is shown.
- E. The selection of qualified teachers is essential to the success of sex education programs.
- F. The major obstacle to sex education is the lack of qualified teachers.
- G. A need exists for correlated courses of study in this field in our colleges.
- H. Each program must be organized to meet the needs of the particular community.

**SUMMARY AND CONCLUSIONS:** The problem of incorporating sex education into the secondary schools is a vital and pressing problem. It is a social problem that must be met.

It is apparent that in establishing this form of education in our schools, one must first educate the public as to the aims and purposes of sex education.

The major obstacle to sex education is the lack of qualified teachers in this field. There exists a need for more correlated courses of study in this area. Our colleges must accept this challenge and provide the training needed to prepare teachers in this important area of education.

This study is by no means complete. There exists a need for serious research in the field of sex education.

**PROJECT COMMITTEE:** Dr. H. P. Lohrman, Chairman; Dr. Vernon Mork

**DATE OF COMPLETION:** June 1959

## **A STUDY OF COMPARATIVE ATTITUDES IN THE EDUCATIONAL, MEDICAL, AND LEGAL PROFESSIONS**

by Arnold Gordon Olson

**PROBLEM:** The problem as treated in this study is: "How do the attitudes of persons in the medical, legal, and educational professions compare when answering statements based on accepted characteristics of professions?"

**PROCEDURE:** The initial part of the study involved the examination of books, magazines, and pamphlets dealing with professions, especially the educational, medical, and legal professions. Interviews and discussions with members of these professions helped to organize thoughts about what should be considered while making this study. After all of the information and material was digested, an appropriate questionnaire was prepared. In connection with the questionnaire a personal data form was prepared to help in the evaluation of the questionnaire.

The questionnaires were then distributed to members of each of the professions to be filled in and returned. The completed questionnaires were interpreted on the basis of the selected criteria of a profession. The conclusions were then determined based on materials and information gathered and used in this study.

**FINDINGS:** The members of the medical profession indicated stronger professional attitudes compared to the members of the legal and educational professions. The professional attitude of the members of the legal profession were also quite strong. Although the professional attitudes of the educational group were strong they indicated a need for improvement.

**SUMMARY AND CONCLUSIONS:** The conclusions indicate that the educational profession has to improve the following if it wants to be accepted on a par with the other two professions in this study.

1. Higher and more uniform educational standards.

2. A better understanding of and the recognition of professional autonomy of the educator.

3. A more uniform acceptance of the code of ethics.

4. One strong, united professional organization.

5. Many more persons choosing education as a life's career.

6. The performance of professional activities rather than the many sub-professional activities now required of the educator.

7. Encourage more male citizens into the educational profession. The improvement of the above conclusions will help attain this goal.

**PROJECT COMMITTEE:** Dr. R. G. Riggs, Chairman; Dr. H. P. Lohrman

**DATE OF COMPLETION:** August 1959

## SPEECH

### AN INVESTIGATION OF EDUCATIONAL THEATRE PUBLICITY METHODS IN MINNESOTA HIGH SCHOOLS AND COLLEGES

by Robert Jerome Canfield

**PROBLEM:** This study is based on the premise that a well planned publicity program can increase the size of an audience attending an individual performance, the run of a production, for a season of plays, and the financial return at the box-office. The purpose of this investigation is:

1. To discover what current methods of publicity are predominantly in use within the survey area.

2. To determine what segments of publicity are least touched on.

3. To determine what factors decide the nature and extent of publicity procedures in Minnesota high schools and colleges.

4. To appraise generally the publicity programs of Minnesota high schools and colleges.

**PROCEDURE:** The vehicle for this study was a questionnaire which was sent to all of the colleges in the state of Minnesota and to one hundred selected high schools in the state. The high schools were selected on the following basis:

1. The geographical location in the state (for a fair representation).

2. The number of students attending the school.

3. The degree of theatre activity.

**FINDINGS:** The writer found that there are several factors which appear to determine the nature and extent of theatre publicity programs in Minnesota high schools and colleges. These factors are as follows:

a. Little competition for the entertainment dollar.

b. Heavy competition for the entertainment dollar.

c. Type of production.

d. Nature of physical theatre facilities.

e. Enrollment.

f. Potential audience.

g. Length of production run.

h. Method of theatre financing.

i. Director's attitude towards theatre publicity procedures.

j. Variety of promotional devices.

k. Geographical location of audience.

**SUMMARY AND CONCLUSIONS:** Several general conclusions from this study seem appropriate:

a. Directors of educational theatre in the state of Minnesota are generally aware of the importance of publicity for their productions.

b. While traditional methods of theatrical publicity are predominantly in use, new methods are developing rapidly in common use.

c. Educational theatre publicity is not yet accepted as an indispensable part of the majority of high school and college theatrical enterprises, hence is often poorly organized and inefficient.

**PROJECT COMMITTEE:** Dr. Arthur L. Housman, Chairman; Dr. Edwin A. Nash

**DATE OF COMPLETION:** May 1960

## **AN ANALYSIS OF DARROW'S PLEA TO THE JURY IN THE MASSIE-FORTESCUE CASE**

by Richard Dale Christenson

**PROBLEM:** The purpose of this study was threefold: (1) to determine what modes of persuasion were utilized by Clarence Darrow in the final plea to the jury in the Massie case; (2) to determine how these devices were used in order to achieve a desired response from his listeners, namely the jury; and (3) to determine why he used these modes of persuasion in the existing situation.

**PROCEDURE:** Prior to the section containing the analysis, several chapters were devoted to the introduction of the problem, a brief biographical sketch of Clarence Darrow, and a reconstruction of the social setting.

In constructing the analysis, the three classical modes of persuasion, logical proof, emotional proof, and ethical proof were explained and then used as the criteria upon which the plea was analyzed.

**FINDINGS:** Clarence Darrow's plea to the jury in the Massie-Fortescue case made use of logical, emotional, and ethical proof. Darrow used logical argument, and supplemented this with effective emotional coloration.

The first element of logical proof consisted of the evidence he used in order to show that the months of mental strain had caused Massie to "break down."

The second element of logical proof used was reasoning or argument. Through this means he introduced the main theme of the entire plea — "The defendants' acts were the result of noble feelings which are common to all people, and therefore, they should not be punished." By means of deductive and inductive reasoning, Darrow's aim was to make the jury believe that the various causes and effects, as they were listed, were the motivating forces behind the actions of the defendants.

In the use of emotional proof, Darrow attempted to put the jury in the place of the defendant. In this way, he forced them to decide what they would do in a similar circumstance. He appealed to the jury for fair play and for humanitarian judgment in behalf of the defendant.

Throughout the entire plea, Darrow relied upon his personal experience and his reputation in order to establish character, sagacity and good will—the three constituents of ethical proof.

**SUMMARY AND CONCLUSIONS:** The investigation illustrated that Clarence Darrow utilized the three classical modes of persuasion to good advantage in his final plea to the jury.

**PROJECT COMMITTEE:** Dr. Robert H. Wick, Chairman; Dr. Charles L. Balcer

**DATE OF COMPLETION:** June 1961

# AN ANALYSIS OF THE PROBLEMS OF ACTOR-BEHAVIOR IN EDUCATIONAL THEATER

by Dwain L. Johnson

**PROBLEM:** Drama is a unique art in that it uses people as its tools. No artist would be justified in practicing his art without a thorough knowledge of how his tools function. Actor behavior, then, becomes an important consideration for any director of educational theater. Although much information is available on what the actor should do, there have apparently been no studies attempting to determine how a director in educational theater can best get an actor to carry out his assignment if the actor's behavior is maladjustive. This study, then, proposes to describe and to analyze problems in educational theater which arise from actor's maladjustive behavior, and to suggest some psychologically sound solutions to these problems.

**PROCEDURE:** Actor behavior will be divided into four divisions according to their observable characteristics. These divisions will be: overt defensive behavior, overt withdrawal behavior, behavior associated with illness, and behavior associated with stage fright. The findings of psychology will guide the analysis of these behavioral problems and the proposed solutions.

**FINDINGS:** Nine general conclusions emerged from the study.

1. Carefully planned and organized play rehearsals increase the actor's likelihood of staying adjusted.

2. An actor should be assigned roles from which it is possible for him to derive a feeling of having succeeded.

3. Dramatic performances of accepted high quality appear to be most effective in determining adjustive behavior in actors.

4. Adjustive behavior is of particular importance in educational theater because the nature of the activity requires an unusually high degree of inter-personal cooperation.

5. An educational theater director need not resign himself to actor's maladjustive behavior. Remedial procedures based on understanding can be effective if they are properly administered.

6. The exact diagnosis of maladjustive behavior is not essential in educational theater because the remedial suggestions are sufficiently similar to be relatively effective in all cases.

7. The application of the suggested remedial procedures for maladjustive behavior should be a part of sound directoral techniques regardless of whether the actors have adjustment problems or not.

8. Actors in educational theater need individual help and attention which the director is obligated to find time to give.

9. A director should suggest an adjustive behavior to an actor before the actor can be expected to abandon a nonadjustive behavior. In other words, every "don't" should be accompanied by a "do."

**SUMMARY AND CONCLUSION:** If a director of educational theater is to justify his activity educationally, the welfare of the student actor must be of primary importance. Assisting the students to acquire adjustive behavioral habits can be a major contribution of this activity. Often the knowledge of what causes the actor to behave as he does will, in itself, indicate the remedy without further study. Understanding, patience, and confidence appear to be the traits most necessary for a director if he is to avoid maladjustive behavior by the actor.

Although the study seems to have posed more questions than it answered, perhaps it has made some small contribution to this vast unexplored area of educational theater.

**PROJECT COMMITTEE:** Dr. Arthur L. Housman, Chairman; Dr. M. E. Van Nostrand

**DATE OF COMPLETION:** August 1959

## ENGLISH COMEDY ACTING STYLE 1750-1800

by Clyde Werner Lund

**PROBLEM:** Acting style is a significant factor in the successful production of any play. Obviously, the acting style becomes particularly important in the production of a period play. A knowledge of the features affecting style is desirable for the director or actor involved.

Of the various outstanding periods of drama, there is less distinct knowledge of the acting style used in the late eighteenth century English comedies than for classic Greek or Shakespearean plays. However, plays from the period 1750-1800 such as Oliver Goldsmith's "She Stoops to Conquer," or Richard Brinsley Sheridan's "School for Scandal," are prominent as revival productions. In order to insure a unified production of these desirable plays, the acting style should be investigated sufficiently to meet the demands of any particular production situation. The ultimate success of a period play may depend upon a number of factors, some controllable, some not. At any rate, it is incumbent upon the actor and director to make the acting style meaningful, clear and dramatically effective. The problem of this project then, is to determine the features of acting style in English comedy during the years, 1750-1800 and to relate those features to the production of plays from that period.

**PROCEDURE:** The introductory chapter establishes a workable definition of acting style. General agreement of sources indicates that acting style is concerned with the actual manner of performance by an actor and how it is affected by its relationship to the play, the period, the actor, the theatre, and the director.

Research was directed to these areas and eventually categorized into the period, the drama, the actors and the relationship of those areas to modern educational theatre. Pertinent information was compared and related in each of these areas. An extensive amount of information was gained from descriptions and remarks of actors and actresses of the period. A certain amount of information was found available in the form of critiques by viewers in the period. It remained to identify trends and similarities sufficiently to establish features of acting style in the period.

**FINDINGS:** The nature of the period, the state of the drama, and the role of the actors were found to be prominent factors affecting the acting style of the late eighteenth century.

The period contains emphasis upon nature and the importance of man in the universe. Repeated mention is made of "natural" abilities in reference to an actor's use of voice, gesture and movement. "Natural," it should be noted, is used in the highly mannered context of the period.

The nature of the drama plays an important role in the determination of acting style. The "laughing" comedies were written in rebellion to the highly mannered "sentimental" comedies. As such, there was need for excellent employment of voice, gesture and movement in satirizing the mannered comedies.

The acting of David Garrick plays a heavy role in the determination of style. His influence was decidedly "natural." The natural bent gradually became the more acclaimed and accepted in this period.

**SUMMARY:** For the actor or director approaching the production of an English comedy from the late eighteenth century, it is advisable to solidify concepts about the acting style. In so doing, it would be well to consult information concerning the period, the purpose of the drama and the general nature of the actors and acting itself. Generally, the acting was natural in the context of the period. The object of the plays was humor. The humor is dependent upon a reflection, through the acting style, of the excellent satire of manners found in the situations and characters created by Oliver Goldsmith and Richard Sheridan.

**PROJECT COMMITTEE:** Dr. Arthur Housman, Chairman; Dr. James G. Harris  
**DATE OF COMPLETION:** August 1960

# JUNIOR HIGH SCHOOL EDUCATION

## AN EVALUATION OF THE STUDENT ACTIVITY PROGRAM OF SAUK RAPIDS JUNIOR HIGH SCHOOL FOR THE YEAR 1958-59

by Donald L. Steenerson

**PROBLEM:** To evaluate the student activity program of Sauk Rapids Junior High School for the year 1958-59 to determine if the program meets the purposes for which it was designed.

**PROCEDURE:** The initial part of the study involved the examination of books, magazines, and pamphlets dealing with extra-class activity programs. From these readings appropriate questionnaires were devised to secure opinions and attitudes of pupils, parents and teachers regarding the activity period at Sauk Rapids Junior High School.

Permission to administer the questionnaires was secured from the Superintendent and the Junior High School Principal. The questionnaires were then administered during the school year 1958-59.

Results from these questionnaires were recorded and conclusions and recommendations are presented.

**FINDINGS:** A review of much of the literature on the broad subject of extra-class activities revealed that Sauk Rapids Junior High School had many problems in common with other junior high schools throughout the country who were trying to administer an adequate extra-class activities program. The program at Sauk Rapids Junior High School was set up to meet the following objectives: (1) to provide certain significant learning experiences which cannot be offered as effectively elsewhere in the school program, (2) to expand the activity program to include other activities not now offered, (3) to encourage more students to participate in at least one activity, (4) to schedule most of the activities during the school day so that bus pupils may participate, (5) to hold class interruptions to a minimum, and (6) to hold participation costs to a minimum. Results from the questionnaires and a rating scale indicate that these objectives have, to a large extent, been accomplished.

Most of the parents who responded to the questionnaire thought that the program was meeting the recreational, leisure, and/or social interests and needs of their children and that the opportunity to participate was equal for all children. Very few parents knew of any pupil who was unable to participate because of financial reasons and yet the majority of parents thought the school district should finance all the activities.

Most of the teachers in the Junior High School thought that the activity period was a good addition to the school day and that the program should be rated between "Very good" and "Good." Almost all of the students participating in the program enjoyed the various activities held during the year and most of them felt that the time spent in these activities had been of value.

**SUMMARY AND CONCLUSIONS:** It is evident from the data that the activity program made progress during the first year of operation. There are several parts of the program which can be revised and improved. Extending the length of the activity period, scheduling the period at a different time of the day and improving the method of giving out information about the program are all possibilities for improving the program. A continuous evaluation of the program is essential if it is to be improved.

**PROJECT COMMITTEE:** Dr. A. H. Schelske, Chairman; Dr. J. W. Yates  
**DATE OF COMPLETION:** June 1959



## A PROPOSED ORIENTATION PROGRAM FOR LITTLE FALLS JUNIOR HIGH SCHOOL

by Marvin H. Zastrow

**PROBLEM:** The problem set forth in this study was to determine what type of orientation program would be suitable for students entering Little Falls Junior High School at the seventh and ninth grade levels.

**PROCEDURE:** The first step was to examine the literature in recent periodicals to determine the trends in junior high school orientation. Activities and procedures which seemed to be used successfully were itemized in the form of a questionnaire, "Questionnaire on Practices and Procedures in Junior High School Orientation in Minnesota," which was sent to 100 junior high school principals in Minnesota. The completed questionnaires were tabulated and analyzed to determine what practices and procedures were followed and what success had been achieved. The next step was to formulate an orientation program that would meet the needs of Little Falls Junior High School.

**FINDINGS:** The findings include the following:

(1) Schools having introduced orientation programs found that the programs were well received. The trend is to continue such programs once they have been started.

(2) Eighty-six per cent of the 79 junior high schools responding to the questionnaire have an orientation program for incoming junior high school students.

(3) As many of the school personnel as possible are included in planning, preparing, and carrying out the schools' orientation programs.

(4) Student handbooks and visual aids in the form of slides of school activities are being used successfully in orientation programs.

(5) Parent orientation is an important phase of getting children ready for junior high school.

(6) A visit to the junior high school by the prospective student is an important part of orientation programs.

(7) Orientation must be continuous to be effective.

**SUMMARY AND CONCLUSIONS:** The purposes of the study, statement and background of problem, procedure, and a definition of orientation are given in Chapter I. A summary of the practices in junior high school orientation is outlined in Chapter II. The data collected with the questionnaire are reported in Chapter III. A proposed orientation program for Little Falls Junior High School is given in Chapter IV. Chapter V contains the summary, conclusions and recommendations.

Orientation is a group of activities and services planned by the school to help students adapt more easily to environmental changes. The orientation program familiarizes the student with the physical facilities of the school: plant layout, location of various rooms and services, home room, auditorium, shop, principal's office, and fire escape. Orientation familiarizes the pupil with school rules, policies, traditions, and citizenship standards. He becomes acquainted with teachers, school administrators, and guidance personnel. He learns about school courses and extra-curricular activities.

Orientation has an important place in laying the foundation for adjustments that will enable students to work at the peak of their abilities.

Orientation is really a reciprocal process. The teacher has an opportunity to learn what the students are like at the same time that he provides them with information about the school and classes.

An orientation program must be planned; it must be organized; it must be evaluated; it must be continuous.

**PROJECT COMMITTEE:** Dr. A. H. Schelske, Chairman; Dr. A. Krueger

**DATE OF COMPLETION:** July 1960

# ELEMENTARY SCHOOL ADMINISTRATION

## A STUDY OF THE PROFESSIONAL PREPARATION, EDUCATIONAL EXPERIENCE, AND CERTIFICATION STATUS OF ELEMENTARY SCHOOL PRINCIPALS IN MINNESOTA

by James Richard Bemis

**PROBLEM:** The purpose of this study was to appraise the professional status of the elementary school principalship in Minnesota in regard to: (1) the amount of professional preparation for the elementary school principalship, (2) the amount of educational experience of elementary school principals at the elementary, junior high, and/or senior high school levels, and (3) the degree to which certification requirements for the elementary school principalship are being met in Minnesota.

**PROCEDURE:** Data reported in the study were obtained by (1) a review of the professional literature and research concerning the elementary school principalship, and (2) a check-list type questionnaire submitted to the principals of all graded elementary schools in Minnesota, as listed in the *Minnesota Educational Directory*, for the year 1956-1957.

The tabular data contained separate treatment for elementary teaching principals and elementary supervising principals in Minnesota.

Appraisal of the professional preparation of elementary school principals in Minnesota was made by comparing their status, as determined in the study, to the professional qualifications recommended in the literature and research.

**FINDINGS:** The typical teaching principal in Minnesota is a woman, 45 years of age, and married. She does full-time teaching in a school having an average enrollment of 293 pupils, and a staff of ten teachers. She has a bachelor's degree, 18 years elementary teaching experience, and five years experience in the elementary school principalship. She holds a provisional elementary principal's certificate.

In contrast, the typical supervising principal in Minnesota is a man, 43 years of age, and married. He has no teaching duties in a school having an average enrollment of 658 pupils, and a staff of 21 teachers. He has a master's degree, nine years elementary teaching experience, and eight years experience in the elementary school principalship. He holds the regular elementary principal's certificate.

**CONCLUSIONS:** The study indicated that (1) Minnesota reflects the national trend toward more men serving in the elementary principalship. However, not all have professional preparation in elementary education, (2) teaching principals lack sufficient time in which to render effective supervision, (3) the great majority of supervising principals are located in schools having large enrollments and teaching staff, (4) elementary school principals revealed more professional preparation than Minnesota public elementary school teachers, but less preparation than secondary public school teachers, (5) many secondary-prepared personnel are serving in the elementary school principalship in Minnesota, (6) teaching principals revealed a lack of professional qualification for the elementary principalship, (7) supervising principals revealed more professional preparation than teaching principals, (8) most elementary school principals in Minnesota do not meet recommended standards for the elementary school principalship, and (9) increased certification requirements for the Minnesota elementary principal's certificate make it imperative that many principals return to school. Failure to do so can retard the professional status of the elementary school principalship in Minnesota.

**PROJECT COMMITTEE:** Dr. D. G. Pollock, Chairman; Dr. A. H. Schelske

**DATE OF COMPLETION:** October 1958

## **AN EVALUATION OF RECENTLY BUILT ELEMENTARY SCHOOLS IN TEN SCHOOL DISTRICTS OF THE MINNEAPOLIS SUBURBAN AREA BY APPLYING A RATING SCALE**

by Leonard Holmen

**PROBLEM:** The problem as treated in this study is the evaluation of fourteen recently-built elementary schools in ten school districts of the Minneapolis suburban area by the application of a rating scale.

**PROCEDURE:** The initial part of the study involved the examination of books, magazines, and pamphlets dealing with elementary school building programs. As a result of this research an appropriate elementary school score card was selected.

The next step was to secure the cooperation and the assistance of an evaluator qualified to carry on this project. The literature and score cards were discussed and evaluated with him.

Permission for the individual building evaluations was secured from the superintendent and he was asked to suggest an elementary school under his administration that he felt best fitted the educational program of his school and had been finished within the past ten years. This was necessary because of the large number of elementary schools in some of the districts. During the school year 1957-58 the school buildings were visited by the evaluators and conferences were held with the principals, teachers, and custodians.

**FINDINGS:** The findings indicated a great variety in type and form of school buildings in the project. Building sites followed no pattern of selection. Classrooms varied in design and purpose. Special classrooms ranged from none at all to well planned and developed rooms. General service provisions included a multi-purpose room in almost all buildings. Service systems indicated good planning and consideration of vital factors in heat control and ventilation.

**SUMMARY AND CONCLUSIONS:** The gross structure showed considerable variation. In many cases academic classrooms are used for activities for which they are not designed. In general special classrooms are not adequate. Multi-purpose rooms are not adequate in schools having large enrollments of children. In general service systems were adequate.

**PROJECT COMMITTEE:** Dr. A. H. Schelske, Chairman; Dr. M. E. Holmgren  
**DATE OF COMPLETION:** August 1958

## **AN ANALYSIS OF TEACHER SELECTION PRACTICES IN THE PUBLIC SCHOOLS OF CENTRAL MINNESOTA**

by Quinton Alwood Larson

**PROBLEM:** The purpose of this study was (1) to review the literature pertaining to teacher selection practices, (2) to survey the current teacher selection practices in the schools of Central Minnesota, and (3) to provide recommendations for future teacher selection.

**PROCEDURE:** The data for this study were obtained by: (1) a questionnaire submitted to the superintendents of all graded and secondary schools in the Central Division of the Minnesota Education Association, and (2) a review of the literature relating to teacher selection practices.

**FINDINGS:** 1. In 86 per cent of the schools the superintendent nominated the teachers and the board of education appointed them.

2. Nine per cent of the schools set age limits for new appointees to the teaching staff.
3. Ninety-eight per cent of the schools required no previous teaching experience for initial appointment.
4. A bachelor's degree for elementary teaching was required in only 15 per cent of the schools.
5. For initial appointment as a junior high school teacher, 97 per cent of the schools required a degree.
6. All of the schools required a degree for senior high school teaching.
7. The factor of local residence did not affect the employment of teachers in over three-fifths of the schools.
8. Ninety-four per cent of the schools employed married women teachers.
9. Both husband and wife could be employed as teachers in 44 per cent of the schools.
10. Only 8 per cent of the schools would not appoint teachers who planned to commute.
11. College and university placement bureaus and the state department of education placement bureau were most frequently used to secure the names of prospective candidates.
12. Thirty-two per cent of the superintendents observed classroom work of applicants.
13. Less than one-half of the schools required the completion of an application blank, an official transcript of college credits, proof of legal certification, and verification of previous teaching experience.
14. The principal participated in the interviewing of teachers in 45 per cent of the schools.
15. Members of the school board interviewed teachers in 11 per cent of the schools.
16. Elementary principals in 24 per cent of the schools and high school principals in 11 per cent of the schools had no voice in teacher selection.
17. About one-third of the schools occasionally found it necessary to assign secondary school teachers to fields of inadequate preparation.
18. The majority of the schools, 61 per cent, hired most of their new teachers in May or later.

**SUMMARY AND CONCLUSIONS:** 1. The survey indicates that teacher selection in the large majority of the surveyed schools is considered a professional task and not one to be delegated to a lay board.

2. Comparatively few schools denied appointments to teachers because of marital status, residence, or lack of previous teaching experience.

3. Preparation requirements in the surveyed schools did not meet the recommendations of related literature.

4. Greater participation of staff members in the interviewing of teachers should be encouraged.

5. It would be desirable to give principals a greater responsibility in teacher selection.

**PROJECT COMMITTEE:** Dr. D. G. Pollock, Chairman; Dr. Fred Menninga  
**DATE OF COMPLETION:** October 1960

## **THE ROLE AND STATUS OF THE ELEMENTARY PRINCIPAL AS VIEWED BY SUPERINTENDENTS**

by Raymond Henry Peterson

**PROBLEM:** The purpose of this study was to appraise the professional status of the elementary school principalship in central Minnesota as viewed by superintendents.

The following aspects of the principalship were surveyed and appraised: (1) the supervisory qualities in regard to staff and instruction, (2) the leadership qualities in regard to administration and organization, (3) the public rela-

tion activities as concerned with the school and community, (4) the responsibilities of the principal in curriculum development.

In addition to the superintendent's view of the status of the elementary principalship, a summary has been made on the professional preparation, major fields, and educational experience of the superintendents.

**PROCEDURE:** The data for this thesis were obtained by: (1) a questionnaire submitted to the superintendents in central Minnesota, and (2) a review of current research and literature regarding the elementary school principalship.

**FINDINGS:** 1. The questionnaire was submitted to 93 superintendents with 66, or 71 per cent, of the superintendents responding.

2. Approximately one out of five superintendents had two majors on the bachelor's degree level in addition to a master's degree in educational administration.

3. Eighteen per cent of the superintendents in central Minnesota do not have a master's degree.

4. One out of three superintendents had professional preparation and experience at both the elementary and secondary levels.

5. Superintendents with elementary and secondary preparation and experience as compared to superintendents with only secondary preparation and experience were more inclined to give the elementary principal more responsibility in the following areas: faculty selection, curriculum committee promotion, and preparation of daily and weekly schedules.

6. Sixty-six per cent of the superintendents felt the elementary principal was participating in professional organizations satisfactorily; 17 per cent felt the affiliations were above recommended requirements, and 17 per cent felt their principals participated in too few professional organizations.

7. Seventy-four per cent of the superintendents felt their principals were adequately participating in community functions.

8. Sixty per cent of the superintendents reported that the most frequently used method of determining subject content was the cooperative plan of principals and teachers.

**SUMMARY AND CONCLUSIONS:** 1. A great majority (82 per cent) of the superintendents in central Minnesota had a master's degree or additional training beyond a master's. As the degree of professional training was increased, the superintendents tended to have positions in larger school systems.

2. Supervising principals were recognized by superintendents as having desirable professional status to a greater degree than did teaching principals. This could be due to better professional preparation and a greater amount of time available to the principal for carrying on supervisory and leadership activities.

3. There is a definite lack of curriculum committee promotion in central Minnesota as 58 per cent of the school systems reported having no active curriculum committees in existence and 86 per cent reported having no active lay participation on any committees.

4. Superintendents felt that the majority of principals were interpreting the school program adequately to the community.

**PROJECT COMMITTEE:** Dr. D. G. Pollock, Chairman; Dr. Frank B. Slobetz  
**DATE OF COMPLETION:** July 1960

## **A COMPARATIVE INVESTIGATION OF THE COMPOSITION OF RURAL SCHOOL BOARDS IN KANDIYOHI COUNTY, MINNESOTA**

by Paul Richard Skagerberg

**PROBLEM:** This study proposes to determine the social, educational, and economic status of members of rural school boards in Kandiyohi County, Minnesota.

**PROCEDURE:** During the year 1957, the author completed a questionnaire which was approved by the School of Education of State College, St. Cloud, Minnesota. A mailing list was obtained from the County Superintendent of Kandiyohi County which listed all the school board members in that county. One hundred ninety-eight questionnaires, a letter of explanation, and a stamped, self-addressed return envelope was sent to the board members.

**FINDINGS:** The results of the questionnaire were as follows:

1. School board members of this study were all male with nine exceptions.
2. Ninety-nine per cent were married.
3. Eighty-nine per cent had children in school.
4. The average age of Kandiyohi County board members was 48 years.
5. Ninety-six per cent of the board members had completed elementary school. Forty-one per cent had finished high school and 2 per cent had finished college.
6. The average board members had served five years on the school board and had resided 17 years in the school district.
7. Forty-three per cent were born in Kandiyohi County. Eighty-eight owned their own home, and 83 per cent were engaged in agricultural occupations.
8. Fifty-two per cent made from one to ten visits a year to school, while 13 per cent made no visits to school.
9. All the board members belonged to some community organization with 96 per cent belonging to church.
10. All the board members had ancestors who came from Northwestern Europe with the Scandinavian countries the dominant nationality.
11. Kandiyohi County board members felt that more financial aid was needed to maintain the present quality of education, but were not in favor of having more direct school taxes levied against them.
12. Kandiyohi County rural school board members were in general agreement with modern trends in education concerning the school and curriculum planning.
13. Kandiyohi County rural school board members were in general against consolidation and had very conservative thinking regarding the personal lives of teachers.

**CONCLUSIONS:** First, another study similar to this one should be made within the next 15 to 20 years to determine whether trends are being established.

Second, the whole matter of qualifications of board members should be studied to determine whether changes should be made.

Third, a comparative analysis of certain school systems whose boards are relatively different economically and socially, should be made to determine what effects these factors have on the education policies they make.

Fourth, an analysis of the methods of selecting school board members and a study of prospective legislation regarding this matter should be conducted to determine whether improvements could be made.

**PROJECT COMMITTEE:** Dr. D. G. Pollock, Chairman; Dr. Paul E. Ingwell  
**DATE OF COMPLETION:** August 1960

# ELEMENTARY SCHOOL EDUCATION

## A FOLLOW-UP STUDY OF BEGINNING TEACHERS WITH SPECIAL REFERENCE TO THE OFF-CAMPUS STUDENT TEACHING PROGRAM AT ST. CLOUD STATE COLLEGE

by Virginia J. Chirhart

**PROBLEM:** It was the purpose of the study to (1) analyze the reactions of beginning teachers to their student teaching experience; (2) analyze the nature and extent of difficulties they encountered in their first year of teaching; (3) analyze their suggestions for improving the program and (4) derive conclusions and make recommendations as warranted by the findings relative to the off-campus student teaching program at St. Cloud State College.

**PROCEDURE:** The data for this study were secured from replies to a questionnaire received from eighty-two elementary and secondary beginning teachers who had (1) participated in the 1955-1956 St. Cloud State College off-campus student teaching program, (2) taught in the public schools during the 1956-1957 school year and (3) indicated a willingness to cooperate in the study. The questionnaire was designed to secure the beginning teacher's reaction to his student teaching program, his identification of first year teaching difficulties and his suggestions for improving the student teaching program. Interpretation of the checked reactions was made according to the per cent of the secondary, elementary and combined groups responding to the individual items in the questionnaire. Interpretation of the written reactions was made in terms of the categorized and tabulated information.

**THE FINDINGS:** More than 90 per cent of all beginning teachers indicated that their student teaching experience was adequate or highly effective in the areas of professional and personal self-growth, classroom control, systematic, sequential development of learning activities, working with faculty, planning with pupils and motivation of pupils. More than one-fourth of all beginning teachers indicated that their student teaching experience was ineffective in the areas of working with consultants, selecting and requisitioning materials, diagnostic procedures, working with home and community, school improvement activities, home work assignments, and co-curricular activities. No opportunity to participate in a particular activity, too short an assignment to a particular classroom and lack of guidance were the principal reasons given for an ineffective experience.

Less than 10 per cent of all beginning teachers indicated that they had a great degree of difficulty in any area of teacher activity.

Beginning teachers suggested that the student teaching program might be improved through better supervision, careful selection of cooperating teachers, student teaching activities and related course work and through giving additional consideration to the length and place of assignment.

**CONCLUSIONS AND SUMMARY:** An analysis of the data furnished by the beginning teachers indicates that the student teaching program might be improved through making provision for helping cooperating teachers acquire supervisory competency, through providing a single handbook which clarifies the roles of all those concerned, and through careful selection of cooperating teachers, student teaching centers and student teaching activities.

This study also indicates a need for further investigations which will relate similar data to specific student teaching centers and size of school.

**PROJECT COMMITTEE:** Dr. Paul E. Ingwell, Chairman; Dr. A. H. Schelske  
**DATE OF COMPLETION:** July 1958

# **AN EXPERIMENTAL READING PROGRAM IN GRADE FIVE AND SIX IN THE BUFFALO, MINNESOTA ELEMENTARY SCHOOL**

by Rachel Bowen Ferrell

**PROBLEM:** It was the purpose of this study to determine the amount of growth in reading in a group of fifth and sixth grade pupils when they were grouped according to their reading achievement.

1. Was there greater gain made in vocabulary by the 1958-1959 fifth and sixth grade pupils as compared to the 1957-1958 fifth and sixth grade pupils in the Buffalo Elementary School?

2. Was there greater gain made in comprehension by the 1958-1959 fifth and sixth grade pupils as compared with the 1957-1958 fifth and sixth grade pupils in the Buffalo Elementary School?

3. Was there greater total gain made by the 1958-1959 fifth and sixth grade pupils as compared with the 1957-1958 pupils in the Buffalo Elementary School?

**PROCEDURE:** Results of tests administered to the 1957-1958 fifth and sixth grade pupils were obtained from the cumulative record of each pupil. During the 1958-1959 academic year, the same kind of tests was administered by the author, and recorded. A questionnaire, teacher observation, and teacher-made tests provided additional data used in this study.

**FINDINGS:** The results of the analysis of the statistics prepared from the comparative scores achieved on the tests by the two groups of pupils indicated:

1. The 1958-1959 fifth and sixth grade pupils made greater gains in comprehension, vocabulary, and total score than the fifth and sixth grade pupils of the 1957-1958 academic year. When the t-test was applied, a significant difference was found between the scores of the two groups at the one per cent level of confidence.

2. Pupils showed increased interest in reading; parents felt the plan of homogeneous grouping was helpful to most of the pupils. Teachers involved in the experimental portion of the study expressed their approval.

**CONCLUSIONS:** The study indicated that (1) the pupils in the fifth and sixth grades of the Buffalo Elementary School profited by homogeneous grouping for instruction in reading, (2) a majority of the parents liked the plan and thought it helped their children in reading, (3) when pupils are given materials at their level of achievement, learning to read can be fun.

After conducting this study, the author feels justified in urging other teachers to consider using homogeneous grouping for instruction in reading. Further experimentation in different situations and with various groups of pupils will probably add to the existing knowledge concerning the teaching of reading.

**PROJECT COMMITTEE:** Dr. Floyd Gilbert, Chairman; Dr. Arnold Zaeske

**DATE OF COMPLETION:** December 1959

## **THE LITCHFIELD STUDY OF EYE MOVEMENTS IN READING**

by Jeanette Joan Greeley

**PROBLEM:** It was the purpose of this study (conducted in the Litchfield, Minnesota, Public School System) to answer the following questions: 1. What were the findings for each individual whose eye movements were photographed by the Reading Eye for number of fixations, regressions, eye span, duration of fixation, rate of reading, and per cent of comprehension? 2. What were the arithmetic means in each category for each grade? 3. Was there a significant difference between means for boys and girls? 4. Was there a correlation between fixations and regressions in each grade? 5. Was there a correlation between rate of reading and comprehension in each grade?



**PROCEDURE:** Upon receiving the Reading Eye from Educational Developmental Laboratories, the reading eye movements of each individual in the first, second, third, fourth, fifth, sixth, eighth, and eleventh grades were photographed. The film was developed and analyzed. The findings for each child were reported. It was decided to limit the study to the second, fifth, eighth, and eleventh grades because not all grades were tested and these grades are representative of primary, intermediate, junior and senior high school levels of education.

After the data were tabulated, several statistics (means, ranks, and deviations from the means) were computed for boys, girls, and the complete grade in each category. Fisher's t-test was used to determine the significance of difference between means in each category for boys and girls, and Spearman's rho was used to test the degree of correlation between some of the categories. Using the results of these tests, the questions listed under the problem were answered.

**FINDINGS:** The girls arithmetic means were slightly better than the boys in the number of fixations, regressions, eye span of recognition, pause duration, and rate of reading. The boys, except at the eleventh grade level, tested slightly above the girls in percentage of comprehension of the ten questions that were asked after the given selection was read.

**SUMMARY AND CONCLUSIONS:** There was very little evidence in the Litchfield Study to support the statement that "girls are better readers than boys." Their arithmetic means in fixations, regressions, eye span, duration of fixation, and rate of reading were somewhat higher but not enough to be significant when Fisher's t was applied. The boys higher percentage in comprehension was not enough to be significant.

There was high correlation between fixations and regressions except at the eighth grade level. Perhaps the lack of correlation at this level was due to the sampling. There was little correlation between rate of reading and comprehension.

**PROJECT COMMITTEE:** Dr. V. L. Lohmann, Chairman; Dr. Paul E. Ingwell  
**DATE OF COMPLETION:** August 1959

## **AN APPRAISAL OF THE UNGRADED PRIMARY PLAN OF ELEMENTARY SCHOOL ORGANIZATION**

by Helen M. Hansen

**PROBLEM:** In the history of elementary education, there has been much dissatisfaction with the rigid grade level plan of organization. Because of this, numerous plans such as the Gary Plan, the Winnetka Plan, the Dalton Laboratory Plan, and the Detroit XYZ grouping plan have been tried. One of the most recent plans to come out of the dissatisfaction with the graded plan is the ungraded primary plan.

The purpose of this study was to analyze this plan to find out: (1) what the ungraded primary plan is; (2) whether this plan creates a better learning situation; (3) whether the children are less frustrated and have a better mental attitude; and (4) whether the plan produces greater scholastic achievement.

**PROCEDURE:** The first step was a study of all related materials published in the educational journals.

Next, letters of inquiry about the primary plan were sent to twenty-eight of the school systems listed in the educational periodicals as having the ungraded primary plan. The materials received from these schools were analyzed under the following categories: definition, dealing with slow learners, dealing with the gifted child, classroom grouping, advantages, problems and factors involved in initiating and implementing the ungraded primary plan.

**FINDINGS:** The ungraded plan is a means of making functional a philosophy of education that recognizes recent advances in areas of child growth and development. It is not a departure from established procedures long used by good teachers, but rather an administrative tool to encourage and promote a philosophy of continuous growth. Pupils are not classified by grades. Instead, the pupils are placed in groups in each of which the children are as similar as possible in ability and achievement. Pupil placements are at multiple levels of attainment rather than traditional grade designations. The children progress from one reading level to the next according to the reading series used.

The usual methods used in setting up classrooms are employed in the ungraded primary plan.

The advantages most often quoted were: The plan more adequately meets the individual and social needs of the children. Tension-producing and growth-retarding grade lines with attending standards and expectations are obliterated, thus making possible for pupils to feel comfortable and free with differences in maturity and ability. The plan fits the obvious fact that children develop at different rates. It abolishes for all children the repeating and skipping of grades. There are no frustrations of failure.

**SUMMARY:** 1. The ungraded primary plan is a continuous growth plan with no grade designations. Each child progresses at his own rate through levels of work. Reading achievement is used to determine progress made.

2. Teaching methods found to be sound by good teachers in the graded plan are used in the ungraded primary plan.

3. Definite standards for work to be accomplished are not discarded.

4. Slow learning pupils are less frustrated and fast learners are happier because they can continue on without waiting for the slow learner.

5. For school administrators and teachers interested in organizing the elementary school on the basis of the ungraded plan, the following suggestions are indicated:

a) Make certain that parents and teachers understand the plan thoroughly.

b) Visit a school operating on such a plan.

c) Begin the plan at the kindergarten level.

d) Carry on a continuous program of education for parents and teachers.

**PROJECT COMMITTEE:** Dr. Frank B. Slobetz, Chairman; Dr. Herbert A. Clugston

**DATE OF COMPLETION:** August 1960

## **A STUDY TO DETERMINE THE INFLUENCE OF TELEVISION ON FIFTH AND SIXTH GRADE STUDENTS IN THE PUBLIC SCHOOLS OF ST. CLOUD, MINNESOTA**

by Elizabeth Ann Howard

**PROBLEM:** It was the purpose of this study:

1. To determine the number of hours, daily and weekly, spent in viewing television by students in the fifth and sixth grades in the public schools of St. Cloud, Minnesota.

2. To determine the type of television programs preferred by the fifth and sixth grade students in the public schools of St. Cloud, Minnesota.

3. To investigate the amount and kind of free reading elementary school children engaged in during a month's time in the public schools of St. Cloud, Minnesota.

4. To examine the type of guidance elementary school children received from parents and teachers in the selection of television programs in the public schools of St. Cloud, Minnesota.

5. To investigate the possible correlation between children's reading ability and the amount of time children spent in viewing television in the public schools of St. Cloud, Minnesota.

#### **PROCEDURE:**

1. Survey of literature for background on the effects of television upon elementary school children.
2. Survey of students through a questionnaire in the fifth and sixth grades of the St. Cloud Public Schools, St. Cloud, Minnesota.
3. Compiling results of the questionnaire.
4. Analyzing the results of the questionnaire.
5. Conclusions and possible application of the results.

#### **FINDINGS:**

1. Fifth and sixth grade pupils in the public schools of St. Cloud, Minnesota, averaged 2.0 hours daily and 12.0 weekly viewing television.
2. Fifth and sixth grade pupils in the public schools of St. Cloud, Minnesota, preferred television programs that dealt with comedy, cartoons, and programs especially created for children's viewing.
3. Almost two-thirds of the fifth and sixth grade pupils in the public schools of St. Cloud, Minnesota, read at least three or more books during the month previous to the survey with non fiction almost as popular as fiction books.
4. Over two-thirds of the fifth and sixth grade pupils in the public schools of St. Cloud, Minnesota, received guidance "sometimes" from parents and teachers in selecting television programs.
5. There appeared to be no relationship between reading ability and the hours spent weekly viewing television for the test group in the public schools of St. Cloud, Minnesota.

#### **SUMMARY AND CONCLUSIONS:**

1. The amount of recreational reading done by the fifth and sixth grade pupils in the public schools of St. Cloud, Minnesota, did not appear to be adversely affected by television viewing since almost two-thirds of the pupils stated that they have read three or more books during the month previous to the survey.
2. The quality of recreational reading done by the fifth and sixth grade pupils in the public schools of St. Cloud, Minnesota, did not appear to be subjects.
3. Children appeared to select television programs of a worthwhile nature adversely affected by television viewing since non fiction were almost as popular as fiction books and children preferred books on a wide variety of when the programs were available. There is a need for more children's programs on commercial television. Parents, teachers, community agencies, and local and state governments need to become aware of this need and help provide better television programs for children's viewing.
4. Parents and teachers did give guidance to children in the public schools of St. Cloud, Minnesota, "sometimes" in the selection of television programs. Much more effective use of television can be accomplished if both parents and teachers aid children "often" in the proper selection of television programs.
5. The children's daily average of 2.0 hours viewing television in the public schools of St. Cloud, Minnesota, did appear excessive when considering the fact that this survey was taken during a normal school week. A fifth or sixth grade pupil spends approximately six hours a day in school. This six hours, plus the two hours viewing television, account for much of the child's waking day. In other words, children in St. Cloud, Minnesota, are spending a great share of their waking day in a sedentary occupation.

**PROJECT COMMITTEE:** Dr. Floyd Gilbert, Chairman; Dr. Arnold Zaeske  
**DATE OF COMPLETION:** June 1960

# THE READABILITY OF SELECTED SCIENCE TEXTBOOKS IN GRADES IV, V, AND VI AS DETERMINED BY THE LORGE READABILITY FORMULA

by LeRoy Gerald Humbert

**PROBLEM:** It was the purpose of this study to determine the readability level of selected science textbooks for grades IV, V, and VI which are commonly used in the public schools of Minnesota.

**PROCEDURE:** To ascertain the readability of the science textbooks an accepted readability formula, the Lorge formula, was applied to a comprehensive sampling from each textbook. Science textbooks for grades IV, V, and VI from six leading publishers were considered in this study. An effort was made to select those textbooks in science which are widely used in the schools of Minnesota. The following publishers were selected: (1) Scott, Foresman, (2) Singer, (3) Ginn, (4) Winston, (5) Rand McNally, and (6) D. C. Heath.

One page out of every ten was sampled from each textbook. If the tenth page could not be analyzed because of tables, pictures, or diagrams, the nearest page on either side of this page was used. The entire page was considered, regardless of the number of words. Questions at the end of a chapter, experiments, and supplementary questions and exercises at the end of a chapter were included in the samplings.

The Lorge formula was selected because it is well suited for measuring in Grades IV, V, and VI. In the Lorge formula there are three variables: (1) sentence length, (2) hard words, and (3) number of prepositional phrases. The reading levels of the individual pages analyzed were averaged to determine an average level of readability for the textbook.

## FINDINGS AND CONCLUSIONS:

1. The science textbooks for grade VI surveyed in this study were written below grade level.

2. The science textbooks of Scott, Foresman were written at an easier reading level than those of the other five publishers.

3. The difference between the readability of the fourth and sixth grade textbooks of all six publishers was less than one year.

4. Although the sentence length of the science textbooks surveyed was not a significant element in the level of readability, there was a considerable difference in the average sentence length of the book with the shortest average sentence (9.74 words) and the longest average sentence (14.43 words).

5. The average difference in the extremes of readability within a textbook was approximately two years.

6. The easiest portions of the science textbooks were not necessarily toward the front of the book.

7. The science textbooks for grade IV would be difficult for the pupils in that grade reading at grade level.

8. The pupils in grade V reading at grade level could read the science textbooks for grade V surveyed in this study. They are written at grade level or close to it.

9. If it is agreed that textbooks in the content areas should be written a year below the grade level for which they are intended the science textbooks analyzed in this study for grades IV and V would be considered difficult for a majority of the pupils in these grades.

10. The difference in readability between the easiest and most difficult science textbook in grade VI was statistically significant.

11. Since a certain amount of basic specialized vocabulary is necessary in science, it is doubted whether the vocabulary of some of the science textbooks could be significantly reduced.

**PROJECT COMMITTEE:** Dr. D. G. Pollock, Chairman; Dr. Arnold Zaeske  
**DATE OF COMPLETION:** March 1960

# A PROPOSED PROGRAM OF COORDINATED HEALTH INSTRUCTION IN THE PRIMARY GRADES AT HOWARD LAKE

by Marjorie Elizabeth Jarvi

**PURPOSE:** To evaluate the present program of health instruction in the primary grades at Howard Lake through a study of research findings, interviews with personnel in the field, with a survey of available materials and guides. To propose an improved coordinated program of health instruction in the primary grades based upon these findings.

**METHOD OF RESEARCH:** A survey and analysis of the recent trends in health education was carried on through reading and study of current textbooks and periodicals. Further study of materials commercially available was made. Interviews were conducted with Dr. M. Elizabeth Barker, Professor of Health Education at the St. Cloud State College; Dr. William Thomas, M.D. of Howard Lake, Minnesota; Dr. E. E. Thiesse, D.D.S. of Howard Lake, Minnesota, and with Wright County Public Health Nurse Marion Lindquist, R.N.

Staff members of the primary grades at Howard Lake surveyed the materials already on hand at the school, requisitioned films, filmstrips, records and other materials necessary for the proposed units of work for the coordinated program based upon recommendations of the Minnesota State Department of Education Curriculum Bulletin Number 2, "Growing Up for Efficient Everyday Living," and upon the **Elementary Evaluative Criteria** of the Boston University School of Education, as well as several other pertinent materials.

A critical evaluation was made of the health instruction program and of health conditions at the school. Where corrections were necessary, recommendations were made.

**FINDINGS AND SUMMARY:** Deficits were found to exist in the following areas:

1. Pupils' understanding of community health problems was very limited—and knowledge of personal health problems was extremely limited in several cases.
2. Actual health instruction time was limited to inspections and "teachable moments."
3. There was an inadequate supply of health materials on the child's reading level.
4. Few published materials of business and industry which pertain to health were available.
5. A severe glare problem existed in south side classrooms.
6. A lack of good playground area and equipment was present.
7. Little use was being made of health records.
8. Parents were little acquainted with the purposes of the program.
9. Field trips to places of health, safety and recreation were not being fully utilized.
10. Doctors, dentists and nurses had not been participating in instructional activities.
11. Lack of careful planning of instructional activities was a factor.
12. Approximately fifty percent return on dental cards indicated failure of the dental program.
13. Poor breakfast habits and poor food choices by pupils were observed in the lunch program.
14. Little apparent carryover of health teachings into the lives of the children was found.
15. There were poor noon hour accommodations for elementary age children's activities.
16. The school had poor lunchroom facilities.

Since the beginning of the evaluation of the health program, many suggestions for improvement have been forthcoming. The local Board of Education has begun surveying the playground situation and begun estimates for resurfacing and improving the playground area.

Estimates have also been made for drapery or shades to reduce the glare in the classrooms.

Lunchroom facilities and gymnasium facilities are at present inadequate; however, with better planning, possibly they may be better utilized.

Plans for a Health Council made up of faculty, local medical personnel and parents should be forthcoming during the school year.

Additional professional materials and classroom supplies have been requisitioned. These include films, books, filmstrips, records, children's materials, and other commercial materials.

The staff of the primary grades at the Howard Lake school has made a concerted effort to plan a coordinated and revitalized series of activities for health instruction which should prove both inspiring and worthwhile to the children of the area.

**PROJECT COMMITTEE:** Dr. Floyd Perry, Chairman; Dr. M. Elizabeth Barker  
**DATE OF COMPLETION:** July 1957

## AN EXPERIMENTAL STUDY OF TWO METHODS OF TEACHING SPELLING

by Francis N. Kegler

**PROBLEM:** The purpose of this study is to appraise two methods of teaching spelling to one sixth grade class of thirty students in the public schools of Northfield, Minnesota. The study is based on the assumption that a list of basic spelling words is necessary and that there is a need for better methods of teaching spelling. In this study two different methods of teaching spelling were appraised.

**PROCEDURE:** A review of the pertinent literature was made to substantiate the methods used in conducting this research.

The two methods to be used in this study were basic types. Method One was used as directed from the basic test, *New Goals in Spelling*. Method Two was derived in part from *Minnesota Curriculum Bulletin No. 8*. It consisted of using the words to be learned in sentences and stories as well as drill on the words.

Before either method was taught, two pretests or beginning tests were given to discover how many of the words to be taught by each method were already known. Each method was taught for a period of 7 weeks and 119 new words were taught during each period. Ten weeks after each method was taught the group was given a follow up test to discover how many words were still known. The scores of the beginning tests, follow up tests, and gains were listed. The group was also divided into three separate groups of ten using intelligence scores. The spelling scores of each group on the beginning tests, follow up tests, and gains are listed. T-tests significant at the one per cent level were applied to the group as a whole and to the three intelligence groups.

**FINDINGS:** T-tests significant at the one per cent level showed a significant difference in the number of words known before either method was used, a significant difference in gains, but no significant differences on the follow up scores. The findings for this part of the study seem to indicate that Method Two was superior.

The findings of this study also indicate no significant difference between the two methods when they were used with students who have average intelligence scores. Method Two proved to be significantly superior when used with the middle group and the upper group.

**SUMMARY AND CONCLUSIONS:** The conclusions of this study are strictly limited. It is recommended that more study be given the general area of spelling before any complete valid conclusions may be drawn.

A second recommendation based on this study would be that Method Two be used with a sixth grade group which is above average in intelligence such as the one used in this study.

A final recommendation would be that a study of this type be carried out in several school systems for at least one year with matched groups. It is probable that a study of this nature would yield more valid results than obtained from this study.

**PROJECT COMMITTEE:** Dr. D. G. Pollock, Chairman; Dr. Paul E. Ingwell  
**DATE OF COMPLETION:** July 1959

## **THE CLASSROOM TEACHER AND ELEMENTARY SCHOOL CURRICULUM CHANGE**

by Clarence R. Kuefler

**PROBLEM:** The purpose of the study was to determine the ways in which the classroom teacher brings about elementary school curriculum change.

**PROCEDURE:** The study is based upon a review of literature which includes a presentation of the historical development of curriculum, principles of curriculum development, and the responsibilities of the classroom teacher in bringing about elementary school curriculum change.

**FINDINGS:** The study has revealed that curriculum change in the elementary school has not been rapid. The change that has taken place has been from a curriculum that was based upon mastery of subject matter to present increased consideration for the mental, emotional, social, and physical growth of children.

In recent years, more people have taken part in planning curriculum changes that formerly were made by school administrators. The participants now include superintendents, principals, directors of curriculum, teachers, parents, and pupils.

Teacher participation in bringing about curriculum change is becoming increasingly more pronounced. Participation that leads to changes that have purpose and are beneficial when applied to classroom situations are what teachers hope to attain. To make this possible, however, it is essential that capable leadership be provided by administrators, subject matter specialists, and the teaching ranks. It should also be pointed out that teacher participation in curriculum work has value in the sense that teachers who participate tend to become better teachers.

Along with increased participation in curriculum change has come a larger number of subject areas and an increase in content within each subject area. This has increased the problem of determining the most effective way in approaching curriculum change.

**SUMMARY AND CONCLUSIONS:** Curriculum changes in the elementary school are becoming more related to the needs for the all around growth and development of children.

Basic principles serve as a guide to curriculum change. They are intended to serve as the basis for the development of skills, attitudes, and procedures pertaining to curriculum.

Teachers play a leading role in bringing about curriculum change. Their responsibilities involve planning with other members of the educational staff those educational activities that lead to the desirable growth of children.

It appears that if curriculum change is to be constructive, more effort needs to be made to encourage teachers to participate with other members of the educational staff. Under the direction of sound leadership, this should be a continuous process.

**PROJECT COMMITTEE:** Dr. A. H. Schelske, Chairman; Dr. Floyd Perry  
**DATE OF COMPLETION:** August 1960

## A STUDY OF THE NECESSARY COMPETENCIES FOR TEACHERS OF GIFTED CHILDREN

by Angeline B. Lehn

**PROBLEM:** The purpose of this study was to determine and present the necessary competencies for teachers of gifted children.

The writer has attempted (1) to determine the competencies necessary for teachers of gifted children, (2) to provide a suggested guide for future teacher selection.

**PROCEDURE:** A questionnaire was submitted to the State Departments of Special Education and to numerous persons in charge of special education programs.

A question, rating, and check-list type of questionnaire was used to obtain necessary data. The questionnaire was composed of questions dealing with (1) legislation relative to the gifted child, (2) number of classes in operation, (3) the most outstanding teacher competency, (4) basis for teacher selection, (5) training, (6) experience, (7) preference for selection, (8) scholarship, (9) age, (10) foreign languages, and (11) a rating of twenty competencies.

The items in the questionnaire returns were analyzed and are presented and interpreted in the study. Many of the items have been constructed into tables.

**FINDINGS:** There has been a great concern for the gifted in recent years. Many states are realizing this great concern and have passed legislation relative to the gifted child. Individual schools are experimenting with programs, conducting pilot studies, providing study projects, holding conferences, and offering different opportunities for the gifted.

Selection of teachers for the gifted is made on the basis of qualifications and competencies. The most outstanding teacher competencies suggested on the questionnaires are: (1) ability and desire to fulfill the needs of the gifted, (2) high intellectual ability, (3) a knowledge of subject matter, (4) thorough understanding of children and the learning processes, (5) creative attitude toward teaching, and (6) the quality of motivating and inspiring.

The competencies necessary for teachers of gifted children receiving the highest ratings on the questionnaire rating scale are: (1) broad cultural background, (2) adaptability, (3) cooperation, (4) creativity, (5) emotional stability, (6) flexibility, (7) leadership, (8) general ability, (9) intellectual ability, (10) character, and (11) personal appearance.

**SUMMARY AND CONCLUSIONS:** Teachers for the gifted are selected because of their qualifications and competencies. Other criteria for selection seemed to be of minor importance.

The general responses seem to indicate a lack of thoughtful thinking along lines of teacher competencies in the area of giftedness.

**PROJECT COMMITTEE:** Dr. Floyd Perry, Chairman; J. Dixon Emswiler  
**DATE OF COMPLETION:** August 1959

## A COMPARATIVE STUDY OF TWO METHODS OF TEACHING READING

by Anne Catherine Mahoney

**PROBLEM:** It was the purpose of this study to try to determine which method was better by a year's study with two equated groups in one third grade classroom with an experienced teacher. The writer wished to answer a number of questions by this study:

1. Were there greater gains made in vocabulary by the pupils in individualized reading as compared with the pupils in the traditional ability groups in this third grade classroom?



2. Were there greater gains made in comprehension by the pupils in individualized reading as compared with the pupils in the traditional ability groups in this third grade classroom?

3. Were there greater total gains made by the pupils in the individualized group as compared with the pupils in the traditional ability groups in this third grade classroom?

4. Were there greater total gains made by the pupils of any one reading level in the individualized group as compared with the pupils in the traditional ability groups in this third grade classroom?

**PROCEDURE:** After a thorough study of the fall test results, the cumulative records, and the observations the first few weeks of school, the groups were organized. The students in the equated groups were grouped primarily on the basis of reading achievement, intelligence quotient, sex, and whenever possible on chronological age and social economic level. A well-planned procedure was followed for each group. The gains in this study are based on the period of seven months from the middle of October to the middle of May. The fall and spring tests results were mainly the basis for the comparisons made. Other tests and observations furnished additional data for this study.

**FINDINGS:** The results of the statistical analysis of the data collected for the two groups indicated:

1. The pupils in the individualized group and the control group made approximately the same gains in all categories tested in this study. Although the gains of the individualized group were slightly higher in some of the categories, none of these gains were found to be statistically significant when the t test was applied.

2. When the individualized group and the control group were compared at the three reading levels, they were found to be basically equal when the results of the two tests were considered jointly. It could be assumed from previous tests that the differences were not significant.

3. When the boys were compared with the girls, the gains, which were slightly in favor of individualized reading for the boys, were not found to be significant when the t test was applied.

**SUMMARY AND CONCLUSIONS:** Since no reason was found to change to individualized reading as the sole developmental method, the author would recommend the group basic plan incorporating some of the better features of individualized reading. As both methods have a place in a good developmental program, the writer feels justified in urging other teachers to combine the best features of both methods.

**PROJECT COMMITTEE:** Dr. Victor L. Lohmann, Chairman; Dr. Arnold Zaeske

**DATE OF COMPLETION:** August 1960

## **A BASIC PROGRAM OF GUIDANCE FOR THE ANNANDALE ELEMENTARY SCHOOLS**

by Fern Rose Swanson

**PROBLEM:** It was the purpose of this study (1) to survey the literature on elementary guidance; (2) to survey the elementary guidance practices used in Annandale; and (3) to recommend a basic program of guidance for the Annandale Elementary Schools.

**PROCEDURE:** A systematic reading of current literature on elementary guidance combined with purposeful observation preceded and followed the validated survey conducted in the elementary schools. Five aspects of guidance practices enumerated in the **Perry-Shaw Guidance Scale** were: (1) Information about pupils; (2) Appraisal instruments and techniques; (3) Classroom

guidance practices; (4) Pupil - teacher - community relationships; (5) Administrative guidance services. A total of thirty-seven items resulted in a five point rating ranging from very limited guidance to practices approaching the ideal.

The seventeen elementary teachers of the Annandale Public Schools rated each of the five guidance aspects according to their own personal viewpoints.

**FINDINGS:** When the results of the survey were tabulated, a tendency to rate all five aspects of guidance with an identical rating was noted. Although information about pupils received the lowest total group rating, classroom guidance practices received the highest total rating. Widely diverging interpretations of guidance practices were reflected in these ratings. Sporadic attempts at guidance had proved unsuccessful.

**SUMMARY AND CONCLUSIONS:** Since the child must be the center of emphasis in any guidance program, the results of the validated survey and personal observations definitely revealed the weaknesses of the unplanned guidance activities in the Annandale elementary schools.

In-service education must have priority in the planned guidance program in order that all faculty members, regardless of level of professional training, may understand, approve, and carry out each phase of the guidance program which aims to meet the scholastic and emotional needs of the pupils.

Improved cumulative records will provide a developmental picture of each child over a six year period. At least three mental capacity tests checking potential and achievement tests illustrating how well the potential has been used should provide useful standardized information. Pupil inventories showing pupil interests and feelings, and sociograms gauging social adjustment with peers will provide unstandardized aids for understanding the child more effectively.

Mental hygiene practices within the classroom will help in meeting the wide range of individual differences within the classroom.

Professional leadership provided by a part-time psychologist cannot be measured in dollars and cents but this leadership is needed by the faculty as they extend and implement new guidance practices in the planned program.

A faculty dedicated to meeting children's needs and supported by a wise administration will be able to grow in ability to help all pupils to better meet the challenges of this most interesting scientific age.

**PROJECT COMMITTEE:** Dr. Charles W. Emery, Chairman; Dr. J. W. Yates; Dr. Floyd Perry

**DATE OF COMPLETION:** October 1958

## **A COMPARATIVE STUDY OF THE EFFECTIVENESS OF TWO METHODS OF TEACHING SPELLING**

by Hazel West Widlund

**PROBLEM:** It was the purpose of this study (1) to compare the traditional method of teaching spelling with the functional method in regard to pupil achievement; and (2) to determine the incidence and types of errors in relation to the two different types of spelling instruction.

**PROCEDURE:** Experimental groups of children utilizing the functional method of teaching spelling and control groups taught in the traditional way were used for this study. One small school and one large school system participated in the study; a total of two hundred fifty-five students and ten teachers were active participants. Devices and activities used in this experiment were pre-testing, post-testing, tabulations, and interpretations of tests; General intelligence tests, spelling achievement tests, and spelling diagnostic tests were used. Questionnaires were given to children after the study was completed to determine attitudes.

The control group used the regular spelling text-book and word list for spelling instruction during the experiment. The experimental group omitted standardized lists and compiled individual lists of words they misspelled in creative writing and in content areas; spelling was individualized according to each child's need.

During the experiment, parents and community were informed about present-day methods of teaching spelling through brochures and publicity in the local newspaper. However, they were not aware that an experiment was in progress.

**FINDINGS:** As a result of this study, the following findings were evident:

1. Children taught by the more informal or functional approach made the most gains in spelling achievement.

2. The types of errors and words which were difficult for children to spell were essentially the same for both groups, but were less prevalent for the experimental group.

3. Children's positive attitudes toward spelling improved in the experimental groups.

**SUMMARY AND CONCLUSIONS:** According to this study, children seem to achieve better attitudes and enhance their spelling ability more by participating in the individualized and functional approach to spelling. Spelling was then tailor-made to each child, he learned at his own rate, and saw a need and purpose for spelling. Bright children were not limited, slower children were not frustrated, and average children enriched their writing vocabularies when not limited to a standardized list. It was difficult to measure the enriched writing vocabularies, sentence length, and number of words learned over and above standardized lists by using a standardized spelling test.

Positive public relations in regard to community and school were effected by an awareness of the fact that the school was concerned about improving spelling skill for the children of the community.

**PROJECT COMMITTEE:** Dr. V. L. Lohmann, Chairman; Dr. Arnold Zaeske  
**DATE OF COMPLETION:** August 1958

## GUIDANCE AND COUNSELING

### AN ANALYSIS OF THE ROLE OF GUIDANCE IN BUSINESS EDUCATION PROGRAMS IN SOME SELECTED HIGH SCHOOLS OF CENTRAL MINNESOTA

by Warren B. Andert

**PROBLEM:** This study was made to attempt to discover and analyze the role that the business education teacher is playing in the guidance of business education students in high schools with an enrollment of 200 to 700 students in Central Minnesota.

**PROCEDURE:** A review of literature was made to establish perspective and to study the research pertaining to the business education teacher's participation in guidance activities. A mailing list of the high schools served by St. Cloud State College was obtained from the Office of the Dean of Graduate Studies. This list was refined in terms of reported enrollment of from 200 to 700 students, which resulted in a mailing list for the questionnaire. The questionnaire was developed in five sections based on the activities involving the business teacher in the guidance program as indicated in the review of literature. These five sections dealt with the business education teacher's role in guidance and counseling and with activities in business

classes which are a part of the guidance program. The questionnaire was mailed to the business education teachers located in the 115 high schools on the mailing list.

**RESPONSE TO THE QUESTIONNAIRE:** A total of seventy-five business education teachers (65.2 per cent) completed and returned the questionnaire.

**FINDINGS:**

1. The number of business education teachers formally engaged in guidance and counseling is relatively small.

2. The formal guidance training of the business education teachers engaged in part-time counseling might be termed as minimal.

3. A wide variety of activities being carried on by business education teachers in the business classes might be classified as guidance activities.

4. Approximately one-half of the business education teachers reported that they are using vocational-fitness tests. In most of these instances the test results were interpreted to the student. However, in some instances the test interpretation was made by an individual who had not had a course in test interpretation.

5. One-fourth of the business teachers reported that they taught a course in occupations or occupational information. They reported the use of a variety of resource materials dealing with occupational and vocational information.

6. Over one-half of the business teachers reported that they utilized the services of businessmen and professional people in discussing occupations with the business students.

7. Only six business teachers reported that their school had a cooperative part-time work program with the local businessmen.

8. Formal follow-up studies of business graduates were reported in only five schools.

**SUMMARY:** The results of this study seem to point out that, as suspected, many business education teachers are actually involved in a variety of activities that may well be classified as guidance activities. Very few of the business teachers in the sample group, however, have had formal graduate training in guidance. It seems that additional graduate training in guidance and counseling by business education teachers would be desirable and beneficial to the teacher, to the school, to the business education program, and especially to the business student. The entire study points out the need for a skilled specialist in guidance and counseling to help the faculty in those areas where the aid of a specialist is needed.

**PROJECT COMMITTEE:** Dr. Albert H. Krueger, Chairman; Dr. Clair E. Daggett

**DATE OF COMPLETION:** August 1960

**THE ANALYSIS AND PROPOSALS FOR THE IMPROVEMENT  
OF THE GUIDANCE PROGRAM AT THE  
SAINT CLOUD STATE COLLEGE CAMPUS LABORATORY SCHOOL**

by Claud C. Crawford

**PROBLEM:** This study was to analyze the present guidance services at the Saint Cloud State College Campus Laboratory School with a view to suggesting changes or additions wherever they could be shown to be in keeping with accepted guidance procedures.

**PROCEDURE:** After reviewing the literature to summarize accepted guidance procedures, the author analyzed the present guidance services at the Campus Laboratory School: (1) by an evaluative checklist submitted to the principal, (2) by personal interviews of all the staff at the Campus Laboratory

School, and (3) by group discussions with each junior high grade. Proposals were made in the light of the survey and accepted guidance standards.

**FINDINGS:** The survey showed that the present guidance program at the Campus Laboratory School:

1. did not have a defined guidance philosophy.
2. did not have an organized guidance program.
3. did not have guidance personnel though it did have the referral use of the Psychological Services Center of the state college.
4. did not have an organized vocational-educational guidance program, however units were given as part of the core in grades eight and nine.
5. did not have an in-service program.
6. did not have a follow-up program.
7. did not have a research program.
8. did maintain an acceptable cumulative record system though it was poorly utilized.
9. did have serious problems of inter-staff unity.
10. did express a desire for an effective guidance program but as yet this has not been realized.
11. did express lack of confidence in college administrators and faculty and their relationships with the Campus Laboratory School.

**SUMMARY AND CONCLUSIONS:** Before an effective guidance program can be established at the Campus Laboratory School, the college administration needs to define clearly the function of the Campus Laboratory School and, once defined, to take the necessary steps to implement its function. This report maintains that the Campus Laboratory School should maintain leadership in curriculum and guidance and serve as an information source to the public schools. Responsibilities of the laboratory school personnel need to be clearly defined and respected by the college administration.

The principal should establish a guidance committee which he would chair and which would have the responsibility for setting guidance policies and procedures. Important functions of the committee would be to maintain effective communication with the entire staff and an effective public relations program. Subsequently, the laboratory school should secure a trained counselor who, in cooperation with the guidance committee, would inaugurate an in-service training program. The laboratory school should provide the staff with time for training and should encourage the use of group procedures to ameliorate the guidance point of view and enhance inter-staff unity. Library materials should be increased; the cumulative record should be improved and used effectively to understand students; and the counselor should utilize group guidance and individual counseling, primarily, with respect to personal life adjustment, and also, with respect to vocational-educational guidance.

**PROJECT COMMITTEE:** Dr. M. E. Van Nostrand, Chairman; Dr. Harold Lieberman

**DATE OF COMPLETION:** July 1960

## **AN ANALYSIS OF THE GUIDANCE SERVICES OFFERED BY THE MINNESOTA CATHOLIC HIGH SCHOOLS**

by Robert Joseph Gilbride

**PROBLEM:** The primary purposes of this study were to (1) state the qualifications necessary for certification as a counselor in the state of Minnesota; (2) to determine the criteria of a "model" secondary school guidance program; (3) to determine the extent to which the Catholic secondary schools of Minnesota are using certified counselors in their guidance programs; and (4) to determine the degree to which the guidance services in these schools are organized.

**PROCEDURE:** Forty of the fifty-seven Minnesota Catholic high schools were contacted personally by the author. During the course of the one to three hour personal interview a questionnaire was completed. Due to distance, the remaining seventeen schools completed the same identical questionnaire by mail.

**FINDINGS:** Following are some of the findings of this study:

1. Only one school had a guidance committee.
2. Only one per cent of the counselors were qualified to counsel.
3. Forty-three per cent of the schools had adequate counseling quarters.
4. Not only was the counselee load heavy in many of the schools but many of the counselors also serve as disciplinarians.
5. The personal libraries of the counselors were in need of evaluation as few of the counselors had an adequate library for ready reference.
6. There should be more concern in the teaching of occupations either as a subject or as a unit as only seventeen of the schools taught occupations as a course or as a unit. Also, more materials on occupations should be made available for the students.
7. Information concerning colleges, post-high school institutions, and other educational subjects should be provided for those students desiring it.
8. Testing programs were somewhat weak, particularly in reading tests.
9. Only two of the schools had an organized in-service training program for their staff.
10. Community surveys and follow-up studies were rarely used by the schools and then when they were a part of the guidance services the results were generally not used wisely.

**SUMMARY AND CONCLUSIONS:** Results of the present study revealed that only one of the fifty-seven Minnesota Catholic high schools had a guidance committee. A functioning and successful guidance program can be developed from a strong, interested, active, and well-organized guidance committee. The guidance committee, with the assistance of the principal, can give clear-cut direction to the guidance program and can help eliminate over-lap in school services. The high schools studied seemed to need help in both of these areas.

The guidance committee can set policies concerning a qualified counselor, counselee-counselor ratio, the testing program, a strong in-service program, and research sufficient to evaluate and strengthen the guidance program of the school. A qualified counselor would endeavor to present all information possible concerning the occupational and educational problems of the students and make an effort to grow in knowledge through an up-to-date library. As a result of his leadership, he can show the need for adequate counseling quarters, transfer of disciplinary duties to other personnel, adequate orientation of all students, and satisfactory placement of all students.

**PROJECT COMMITTEE:** Dr. Albert H. Krueger, Chairman; Dr. M. E. Van Nostrand

**DATE OF COMPLETION:** August 1960

## **A STUDY OF OPINIONS, AS EXPRESSED BY FRESHMEN ENROLLED AT ST. CLOUD STATE COLLEGE, TO DETERMINE THEIR DEGREE OF SATISFACTION WITH THEIR HIGH SCHOOL VOCATIONAL GUIDANCE PROGRAMS**

by Lawrence L. Harmsen

**PROBLEM:** It was the intent of the report to study the opinions of a group of freshmen at the St. Cloud State College to determine to what extent they were satisfied with the vocational counseling they had received in high school.

**PROCEDURE:** Persons who recently had contact with vocational guidance programs provided the necessary evaluative data. A representative sampling of students was selected from the various schools in the St. Cloud State College service area. The size of the sample group was set at 120.

The primary means of gathering evaluative data for the study was a questionnaire. Personal interviews were held with one-fourth of the persons (30 students) composing the sample group. The purpose of this was to gain additional information and to clarify the responses given to the various questionnaire items so as to avoid misinterpretation.

The total number of responses to the questionnaire was ninety-seven which represented 80.82 per cent of the sample group. There was 100 per cent participation in the personal interviews.

**FINDINGS:** The study revealed that 30 per cent of the students surveyed had no vocational goals in mind. Twenty-seven per cent of the students could see reasons why they would not attain their vocational goals.

It was found that only 8 per cent of the students were able to recognize the three basic areas in their guidance programs: Vocational, educational and personal counseling.

It was discovered that parents and teachers were persons who had the greatest influence in aiding students in the selection of a vocation. Fifty-one per cent of the students indicated that they felt more help should come from the counselors. Fifty-nine per cent of the students wanted more help in selecting high school subjects which would be consistent with their abilities, interests and vocational goals.

Sixty per cent of the students indicated that high school counseling helped them toward a better understanding of their own abilities, interests, strengths and weaknesses.

**SUMMARY AND CONCLUSIONS:** The entire study seems to point out the fact that the counseling which is done in the high schools today is good and the students feel that it is worthwhile. The problem seems to be that there is not enough of it. This seems to emphasize the need for more qualified counselors. It can also be assumed on the basis of the survey results that for effective counseling, the student-counselor ratio should be low enough to allow the counselors adequate time to spend with each student.

It might be helpful to both students and counselors if parents and teachers were more fully implicated in the vocational guidance program. The students expressed a definite need for an increase in the amount of vocational counseling which is done and that the students should receive more help in selecting high school subjects and planning their high school programs.

The following suggestions seemed to represent the general attitudes of the sampled students toward improving their high school guidance programs: More well trained counselors should be hired; more time should be spent with each individual student; counseling should be started in the junior high school; and more emphasis should be placed on vocational counseling.

**PROJECT COMMITTEE:** Dr. A. H. Krueger, Chairman; Dr. Raymond H. Larson

**DATE OF COMPLETION:** June 1961

## **AN EXPERIMENT IN THE APPLICATION OF THE GUECK SOCIAL PREDICTION TABLE IN MINNESOTA**

by Wallace Francis Johnson

**PROBLEM:** The purpose of this paper is twofold: (1) to point out the school's responsibility in juvenile delinquency prevention; (2) to present an application of the Glueck Social Prediction Table<sup>1</sup> to a sample of Youth

<sup>1</sup> Sheldon Glueck and Eleanor Glueck, *Unraveling Juvenile Delinquency* (New York: Commonwealth Fund, 1950).

Conservation Commission Youths in the Minnesota State Reformatory, showing the extent to which the youths could have been identified as potential delinquents at the time of entry into elementary school.

**METHODS AND PROCEDURES:** This experiment in the application of the Glueck Social Prediction Table was carried out at the Minnesota State Reformatory, in St. Cloud, Minnesota, in the summer of 1960. A sample of 100 youths was selected from the 500 Youth Conservation Commission Youths incarcerated at the Reformatory.

The Glueck Social Prediction Table is a delinquency prediction instrument based on five social background factors. In *Unraveling Juvenile Delinquency*, Sheldon and Eleanor Glueck in a comprehensive study of 1000 boys in Boston developed the Social Prediction Table. The five social background factors and their weighted failure scores are as follows:

	Weighted Failure Score
1. Discipline of the boy by the father	
Overstrict or erratic	71.8
Lax	59.8
Firm but kindly	9.3
2. Supervision of the boy by the mother	
Unsuitable	83.2
Fair	57.5
Suitable	9.9
3. Affection of the father for the boy	
Indifferent or hostile	75.9
Warm (including overprotective)	33.8
4. Affection of the mother for the boy	
Indifferent or hostile	86.2
Warm (including overprotective)	43.1
5. Cohesiveness of the family	
Unintegrated	96.9
Some elements of cohesion	61.3
Cohesive	20.6

The weighted failure score above was derived from the fact that of all the cases in the Gluecks' study of 1000 boys 71.8 percent were delinquent who had overstrict or erratic discipline by the father, 59.8 percent were delinquent who had fathers whose discipline was described as being "lax," and so forth for all the five factors and their sub-categories.

In the Minnesota experiment, each of the five factors was judged from information in the case histories of the 100 youths selected at random for the experiment relative to the categories above, and in accordance with the definitions of each category as defined by the Gluecks.

By totaling the five weighted failure scores a total weighted failure score was obtained ranging from 116.7 to 414.7. Between these limits, score classes in intervals were established by the Gluecks: Under 250, 250 and over. With a weighted failure score of under 250 the youth would be predicted a non-delinquent, over 250 he would be predicted as a potential delinquent.

In order to enhance the validity of the experiment an independent scoring was made by Mr. Walter Gutman, a teacher at the Reformatory who rescored twenty of the 100 youths.

The responsibility of the school in the prevention and control of juvenile delinquency was pointed out through library research.

**FINDINGS:** The results of the experiment indicated that 87 percent of the 100 youths could have been identified as potential delinquents had the Glueck Social Prediction Table been applied to them at the time of entry into elementary school. A comparison of the independent scoring with the writer's revealed that, for the purpose of predicting delinquency, the two scorers agreed in 90 percent of the cases.



**SUMMARY AND CONCLUSIONS:** The responsibility for the prevention and control of juvenile delinquency should be borne by the home, the community and the school. Our schools should function as the litmus paper of personality and character maladaptation, indicating early in the child's development his success or failure in his first attempts to adjust to the problems which are met in a restricted environment.

The Glueck Social Prediction Table has not proved itself as a reliable prediction instrument to be used on a large scale. If, in the future, the Glueck Social Prediction Table proves itself reliable and valid it should be used discriminately to aid the social worker, clinician, and police officer to exercise discretion more meaningful than would otherwise be possible.

**PROJECT COMMITTEE:** Dr. Richard L. Nash, Chairman; Dr. Ralph S. Holloway

**DATE OF COMPLETION:** June 1961

## **A SURVEY OF FRESHMEN ORIENTATION PROGRAMS AT THE FIVE MINNESOTA STATE COLLEGES**

by Richard Ramsey Mitton

**PROBLEM:** Assisting college freshmen in bridging the gap between high school and college has now become a well accepted procedure. The purpose of this study is (1) to determine the differences and similarities of the freshmen orientation programs of the five Minnesota State Colleges; (2) to determine the students' evaluation of the orientation program in their respective college.

**PROCEDURE:** The first step was to contact and interview the Dean of Student Personnel of each of the five state colleges of Minnesota. From this interview information pertaining to the orientation program of that particular college was gathered and recorded on a prepared questionnaire. At the time of the interview the Dean gave the writer a Student Directory. From this Student Directory a random sample of third-quarter freshmen were asked to evaluate the orientation program of their particular college. This was done by the use of a mailed questionnaire, based on the review of literature and the results of the interview with the Dean of Student Personnel.

### **FINDINGS:**

- (1) The trend seems to be away from an all-college career day toward career days conducted by individual departments within the college.
- (2) The printed material distributed varies in format more than in material presented.
- (3) Only two of the colleges use large pictures and one uses slides in the pre-college orientation.
- (4) None of the colleges use the "Big Brother" program and only two use the "Big Sister" program.
- (5) Orientation week varies in length from four to six days.
- (6) All of the colleges have a planned social program during orientation week.
- (7) Some of the students felt that:
  - a. contacts with upperclassmen were of more value than all other types of personnel used in the orientation program.
  - b. "beanies" should be done away with.
  - c. "Big Brother" and "Big Sister" programs could be strengthened and extended through the first quarter.
  - d. the connecting link between the high school and the college could be strengthened.
  - e. there is enough free time during orientation week.
  - f. orientation week was the best time for testing.
  - g. the social events could be expanded to include more than dancing.
  - h. the groups were too large in most of the orientation activities.

- i. the purpose of the tests should be explained more fully before the tests are given.
- j. there should be more opportunity for questions and answers.
- k. more counseling should be done before registration is completed.
- l. a complete orientation program that deals with the library should be included.
- m. an anonymous question box would be desirable.
- n. more time should be spent on church activities.

**SUMMARY AND CONCLUSION:** There are more similarities than there are differences in the orientation program of the state colleges of Minnesota. All of the colleges have pre-college orientation and orientation week. With the exception of Winona, all of the colleges require freshmen students to take an orientation course.

**PROJECT COMMITTEE:** Dr. Albert H. Krueger, Chairman; Dr. R. G. Zumwinkle

**DATE OF COMPLETION:** August 1960

## MISCELLANEOUS

### AN EVALUATION OF SCHOOL - COMMUNITY RELATIONS IN THE AREA SERVED BY THE ALEXANDRIA HIGH SCHOOL, ALEXANDRIA, MINNESOTA

by Josephine Sylvia Hokanson

**PROBLEM:** The purpose of this study was to (1) examine the present expanding school program and the increased responsibility of the school, (2) ascertain the quality of the school-community relations as warranted by the findings relative to the parents, students and teachers in the area served by the Alexandria High School, (3) make recommendations for improving school-community relations and (4) suggest additional research in the field.

**PROCEDURE:** The data for this study were secured from replies to three questionnaires - one designed for parents, another for students, and a third for teachers. Many of the items in the three questionnaires were identical. A basis was thus furnished to determine any dissatisfaction which might be common among parents, students and teachers. Interpretation of the checked reactions were made according to the per cent of responses to the individual items in the questionnaires after the replies were tabulated and analyzed.

**FINDINGS:** Enrollment in the Alexandria High School has steadily increased during the past ten years. It appears that growth will continue for several more years. Parents, students and teachers indicated satisfaction with the school and its program in almost every aspect. Students liked their teachers and teachers liked the administration. Parents received more information about school from their children than from any other single source. Teachers wished they knew the parents better.

**SUMMARY AND CONCLUSIONS:** An analysis of the data furnished by the replies given in the three questionnaires indicates that the school-community relations in the area served by the Alexandria High School might be improved by (1) re-evaluating the present high school curricula as well as teaching methods with special emphasis on music in the junior high school and English and history in the senior high school, (2) improving the noon lunch program, (3) attempting to set up a more desirable method for evaluating pupil progress and (4) getting more parents to take an active interest in the school by conferences and visitation.

**PROJECT COMMITTEE:** Dr. A. H. Schelske, Chairman; C. O. Bemis, Dr. M. E. Van Nostrand  
**DATE OF COMPLETION:** August 1958

## **AN APPRAISAL OF CLOSED-CIRCUIT TELEVISION IN COLLEGES AND UNIVERSITIES**

by Etny Clell Nequette

**PROBLEM:** Is it practical to establish closed-circuit television in a college or university? This study attempted to weigh or evaluate the feasibility of such an undertaking from (1) a utilitarian point of view, i. e., the alleviation of teacher and classroom shortage, and the providing of laboratory experience in classroom participation, classroom observations, and in student teacher demonstrations to large groups of students and (2) a research point of view.

It was hoped that as a result of this study some tangible evidence would be compiled on which a decision may be based regarding the establishment of a closed-circuit television facility at the college level.

**METHODS AND PROCEDURES:** In order to get an overall picture of educational television and some knowledge of its historical growth, literature on the history of educational television, literature on the status of educational television today and its prospects for the future, and literature on closed-circuit television in education were reviewed.

The data-gathering device used was a set of two questionnaires designed to gather information from (1) colleges and universities using closed-circuit television in education and (2) colleges and universities planning to use closed-circuit television.

The questionnaires were designed to gather information about (1) source of funds and equipment and maintenance costs, (2) personnel, (3) technical difficulties encountered or anticipated, (4) the reason or purpose for the establishment of the television facility, (5) where, in the opinion of the institution, closed-circuit television could most easily be applied, and (6) opportunity for research.

**CONCLUSIONS:** The following conclusions are based upon the findings of this study:

1. Most of the institutions depended upon state money for financing the television facility. College or university funds were the sources mentioned next.

2. The size of the college and the amount of money allocated to the project seemed to be related.

3. Problems in the use of the television facility were not related to the size of the institution.

4. The predominant use of the facility in teacher education was to provide laboratory experience. In most of these cases, increased enrollments were creating a problem in providing laboratory experience for students in teacher-education.

5. Use of television for direct teaching was found to be practically nil. Comments on some of the returns indicated there was too much repetitious investigation already in the direct teaching of factual, informational-type subject matter.

6. In the survey of literature and in correspondence received, some concern was shown about the lack of preparation manifested by classroom teachers in the use of television in the classroom.

7. Apparently, the administration of the television facility was predominantly centered in the Audio-Visual Office. The title of practically all of the persons completing the questionnaire indicated a relationship with that office.

8. Closed-circuit television is just beginning to be used to help solve some problems in teacher-preparation. In the future, many new and unique applications of closed-circuit television are likely to be found.

**PROJECT COMMITTEE:** Dr. Frank B. Slobetz, Chairman; Dr. Albert Luker  
**DATE OF COMPLETION:** August 1960

## **A HANDBOOK FOR COOPERATING TEACHERS IN OFF-CAMPUS STUDENT TEACHING PROGRAMS**

by Clara A. Pederson

**PROBLEM:** The purpose of this project was to compile a handbook for the benefit of cooperating teachers who have assumed the responsibility of guiding and directing student teachers in off-campus student teaching programs.

**PROCEDURE:** The project was divided into four basic areas. These included: (1) an introduction to the problem, (2) research and review of pertinent literature in the field, (3) the handbook, and (4) a summary of the project.

The literature was reviewed for the purpose of discovering how others have attempted to meet the problem of providing materials and information to cooperating teachers. The material reviewed also presented suggestions, ideas, and techniques for orienting student teachers, inducting them into teaching, and evaluating their work. This provided the writer with a background of information necessary for the preparation of the handbook.

**FINDINGS:** The review of literature seemed to indicate that most of the materials applied directly to student teachers in the elementary or secondary field; however, this information may be of value to cooperating teachers at either the elementary or secondary level by providing them with a broader overview of the student teaching program at both levels.

After reviewing the literature, the writer believed that cooperating teachers would profit by having the materials gleaned from the various sources assembled into a usable form. The busy classroom teachers who have assumed the additional role of guiding and directing student teachers, apparently, would welcome the readily available ideas, suggestions, and information. It appeared that a handbook may best serve this function. In this way materials would be readily accessible to the teachers at all times.

**SUMMARY AND CONCLUSIONS:** Specific suggestions were presented that would be of value to cooperating teachers in assisting student teachers. The following areas were included:

1. Orientation of the student teacher to the school, the pupils, and the community.

2. Preparations necessary for observation, participation, lesson planning, and unit teaching.

3. Evaluation of pupils and student teaching progress.

Information pertaining to the need for cooperating teachers, their qualifications, and evaluation of their work was also included.

The handbook that was developed in this project could be of value to cooperating teachers who are already engaged in the student teaching program. It could facilitate their work by providing, in a compact form, materials which give suggestions for guiding, directing, and evaluating student teachers.

Prospective cooperating teachers might be more willing to participate in the off-campus student teaching program if they found, in condensed form such as is available in the handbook, the essential information necessary for guiding student teachers.

The belief of the writer was that the off-campus student teaching program could be improved if cooperating teachers used a systematic approach in guiding student teaching activities. This could be provided by using the handbook in off-campus student teaching centers.

The use of the handbook could also aid in systematizing the program from one student teacher to another.

The handbook could also be of value to colleges in strengthening their own programs of off-campus student teaching and could be of assistance to them in establishing new centers for off-campus student teaching.

**PROJECT COMMITTEE:** Dr. Floyd Perry, Chairman; Dr. Paul E. Ingwell

**DATE OF COMPLETION:** October 1957

