

AN EVALUATION OF THE EFFECT OF A  
UNITED STATES OFFICE OF EDUCATION  
TALENT SEARCH PROJECT ON THE ACADEMIC  
PERFORMANCE OF M-SCALE-IDENTIFIED  
LOW-MOTIVATED NINTH GRADE  
MICHIGAN STUDENTS

Thesis for the Degree of Ph. D.  
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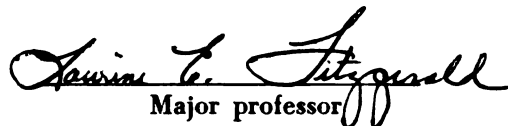
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## ABSTRACT

### AN EVALUATION OF THE EFFECT OF A UNITED STATES OFFICE OF EDUCATION TALENT SEARCH PROJECT ON THE ACADEMIC PERFORMANCE OF M-SCALE- IDENTIFIED LOW-MOTIVATED NINTH GRADE MICHIGAN STUDENTS

by David V. Schultz

The purpose of this study was to determine if an outside agency could bring about an improvement in academic performance among ninth grade students who had been identified by a reliable instrument and by school officials as being low-motivated.

The treatment consisted of letters to high school personnel confirming the identification of their low-motivated youngsters; letters to the students themselves describing ten ways to improve grades; and letters to the parents of the students requesting their help in this critical problem. The letters originated with Project MEMO: (a United States Office of Education Talent Search Project) and were distributed by high school officials.

Three hundred and thirty-four (334) Michigan schools and 51,998 ninth graders participated in the Project MEMO: Ninth Grade Motivation Study. A "low-ten" group (bottom 10 per cent of all ninth graders as determined by scores on the

Farquhar M-Scales) was selected to receive the "paper treatment."

All males scoring 79 or below and females scoring 65 or below on the M-Scales received the letters. To establish a comparison group for this study the investigator selected all males with scores of 80-81 and females with scores of 66-67 (the 11th percentile) for a non-equivalent control group. Males scoring 78-79 and females with scores of 64-65 (the 10th percentile) were selected from the "low-ten" students for the treatment group. Two hundred and nine (209) schools had students with these scores and 173 of the 209, or 83 per cent, provided complete grade point information for this study. This figure represented a total control group of 506 (322 male and 184 female) and a treatment group count of 391 (227 male and 164 female). The students were identified and the treatment was given midway through the ninth grade. Grade point averages were requested at the end of the first semester of the tenth grade. The pretest measurement was the grade point average for the first semester of the ninth grade. The posttest measurements included the grade point averages for the second semester of the ninth grade and the first semester of the tenth grade.

The dependent variable was the gain score in grade point average (Gain 1: the first semester ninth grade grade point averages subtracted from the second semester ninth

grade grade point averages, and Gain 2: the first semester ninth grade grade point averages subtracted from the first semester tenth grade grade point averages). The grade point averages were determined on a twelve point scale, i.e., A = 12, A- = 11, B+ = 10 . . . E = 1.

### Null Hypotheses

Null Hypothesis Ho:1. No difference will be found in grade point averages for Gain 1 and/or Gain 2 between the total treatment and total non-treatment groups.

Null Hypothesis Ho:2. No difference will be found in grade point averages for Gain 1 and/or Gain 2 between male (female) treatment and male (female) non-treatment groups.

Null Hypothesis Ho:3. No difference will be found in grade point averages for Gain 1 and/or Gain 2 between treatment and non-treatment groups independently in Class A, Class B, Class C or Class D schools.

Null Hypothesis Ho:4. No difference will be found in grade point averages for Gain 1 and/or Gain 2 between treatment and non-treatment groups when these groups independently consist of Male-Class A, Male-Class B, Male-Class C, Male-Class D, Female-Class A, Female-Class B, Female-Class C, and Female-Class D schools.

The hypotheses were based on these possible trends:

1. Lasting results from treatment (significant improvement in Gain 1 and in Gain 2).

2. Short-term results from treatment (significant improvement in Gain 1 only).
3. Delayed results from treatment (significant improvement in Gain 2 only).

The grade point averages were first tested by computing an analysis of variance of gain scores. No significant main effect was found for the treatment. The F-ratio's were not found to be significant when testing for the interaction of treatment and sex, treatment and school size, sex and school size and treatment, and treatment, sex and school size.

Secondly, a one-way analysis of variance was computed to determine Gain 1 and Gain 2 cell mean grade point averages. The obtained mean gains could be explained in terms of chance. These results supported the first data and no significant differences were found between the treatment and control groups. Since no significant differences were found in either test,  $H_0:1$ ,  $H_0:2$ ,  $H_0:3$ , and  $H_0:4$  were accepted in their entire forms.

These results tend to disprove the educational value of the "paper treatment." However, some boys and girls did benefit, as evidenced by an increase in academic performance and by a noticeable improvement in their overall attitude in school. Some parents were benefited by becoming aware of the concept of "low-motivation" as related to their son or daughter, and by subsequent discussions with high school officials.

The known examples of positive affect (identified in individual case studies and in letters from school officials to the investigator), represented the minority and did not significantly alter the statistics in favor of this type of treatment. However, some students did measureably profit from this attempt by an outside agency to effect the academic performance of low-motivated ninth graders. Perhaps the improvement in these isolated cases made the entire project worthwhile.

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By

David V. Schultz

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1968

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DEDICATION

To Nancy, Doug and Deb.

An eternally welcomed source of motivation. . . .



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I would like to acknowledge the encouragement and professional direction given to me by my guidance committee: Dr. Laurine E. Fitzgerald, Dr. Walter F. Johnson, Dr. Max R. Raines and Dr. Edgar A. Schuler. Particular acknowledgment is given to Dr. Laurine Fitzgerald, who has served as the chairman of this committee and has been of invaluable assistance as the major advisor for this research. It has been through her patience and insights that this project has reached its conclusion.

To Dr. Gordon Sabine, I would give thanks for his inspirational leadership and creative direction which he provided for Project MEMO's Ninth Grade Motivation Study.

To the United States Office of Education, Mr. Hugh Satterlee, for his permission to use the information obtained in the Project MEMO: Ninth Grade Motivation Study.

To the principals and counselors of the participating schools, my sincere thanks for the splendid cooperation and important feedback of information.

To Dr. W. W. Farquhar, author of the Michigan M-Scales for permission to use his instrument in this research project and for his advice throughout the entire effort.

For assistance in working out the technical details of procedure and statistical analysis, I would like to acknowledge Dr. Andrew C. Porter and Mr. David Wright.

And foremost, to my wife, Nancy, son, Doug and daughter, Debbie, for their sacrifice, patience, inspiration and love, for without their understanding encouragement, this project would still be on the drawing board.

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## CHAPTER I

### STATEMENT OF THE PROBLEM

#### Introduction

There are few problems more puzzling than how to improve the academic performance of low-motivated boys and girls. Despite counselors' and classroom teachers' best efforts, these underachievers seem always to be with us. And naturally enough, it is from this group that our society loses much potential talent via the school drop-out route. To try to prevent some of this dropping-out, Project MEMO: (Appendix A) conducted its Ninth Grade Motivation Study

The MEMO: ninth grade project dealt with low-motivated students. The goal was to increase their motivation toward academic success. Project MEMO: supplemented rather than replaced the efforts already being made by teachers, counselors, and school officials. Assuming that parent-student conflict is a source for much low-motivation, MEMO:'s method was to write to both student and parent to state that (a) the student's grades apparently could be better, (b) having the motivation to make better grades requires good communication and

support between parent and student, and (c) making better grades requires work, not merely dreaming or wishful thinking, and this work must start now, not sometime in the future.

### The Problem

It is the purpose of this study to determine if letters by an outside agency can improve the academic performance of ninth grade students who have been identified as being low in motivation. The treatment in this case consisted of letters to school personnel identifying the low-motivated youngsters, letters to the students themselves, and letters to the parents of these students. The academic records of these students will be studied to see if any noticeable changes take place following the treatment. It is admitted that any increase in academic performance cannot be entirely credited to the treatment. However, it is possible that the treatment will serve as a catalyst and subsequently will play an important part in the over-all improvement in academic performance. This improvement may be the result of the parents', student's and/or school's interests or a combination of factors resulting in the increase in actual grade point average.

### The Need for the Study

Simple as the Project MEMO: approach sounds, a pilot study conducted in a Lansing High School confirmed



it did do some good for some students--and with the very low in academic motivation for whom nothing else had succeeded, any improvement at all could mean fewer problems for the teacher, the school and the student.

Fifty-one thousand nine-hundred and ninety-eight (51,998) Michigan ninth graders were given an instrument which measured motivation. This instrument, the M-Scale (Appendices B and C) was designed and created by Dr. William Farquhar, Professor of Education at Michigan State University. Professor Farquhar has been developing these measures of motivation for seven years. During this period, the M-Scales have been tested on approximately 24,500 different students at all levels of upper elementary and high schools, and with some college students. They have been used in school systems in England, Israel, and in Puerto Rico. In the United States they have been used in North and South Dakota, California, Minnesota and Michigan.

Validity coefficients have been in the acceptable range for measures of this type. Repeated validation and cross-validation studies have yielded reliability coefficients at the .80 and even the .90 level. Further details on the M-Scales are available in the publications listed in Appendix D. Specific information on the reliability and validity of the M-Scales is found in Chapter III.

In the Project MEMO: Study, the M-Scale results were machine scored for 51,998 ninth graders. These scores were then ranked in order and an arbitrary line was drawn at the 10th percentile, and it was this group (the "low ten") that was designated by Project MEMO: as being low in motivation. This "low-ten" group included 2,857 males and 2,379 females.

The MEMO: plan was then put into operation. This project consisted of three distinct areas of concentration; the school, the student, and the home. First, the administrative personnel of each participating school received a list of the names of the boys and girls whose M-Scale scores were at or below the "low-ten" cut-off point (Appendix E). Secondly, the schools received student letters which listed ten ways grades could be improved. One letter was given to each identified student by the school counselor (Appendix F). Thirdly, letters were sent to the parents of the identified students (Appendices H and I).

This concentration of letters and counselor attention took place in February and March of 1967. In June of 1967, a comparison was made between the grades for the first half of the year (pre-treatment) and the grades for the second half of the year (post-treatment). School officials were asked to indicate if the academic performance of these "low-ten" boys and girls improved, decreased or

remained the same. At this time the actual amount of change was not indicated. The direction of change was simply noted by the words "higher," "lower," and "same" for each student.

Results on returns for 4,967 students showed an increase in academic performance in 1,752 cases or 35.3 per cent, a decrease in 1,709 or 34.4 per cent and the remaining 1,506 or 30.3 per cent were recorded as remaining the same. This return was chance variation and did not provide sufficient proof for a repeat of the Project MEMO: Ninth Grade Motivation Study.

As the Director of Project MEMO:, the investigator had the opportunity to work with many of the high school principals and counselors in Michigan and during this interaction gained sufficient testimonial feedback to indicate that the project possibly did have merit. The following comments taken from letters written by high school officials provide some insight into the positive effect the "low-ten" study did have on some identified low-motivated boys and girls.

The program really proved beneficial for all concerned. The letter to parents and the brochure to the students were excellent. You told the parents what we would not dare tell them.

Thank you so much for permitting our school to participate in such a worth-while project.

In comparing second semester averages with first semester marks, appreciative gains were made by almost all the students studied. Also the personal outlooks of many appeared greatly improved.

Our students were motivated to pursue better study habits from interest and encouragement from a source not directly connected with the school.

Each of the students who received the letter seemed pleased in the interest taken in her and left the interview with definite practical resolutions on how to improve her marks.

The information provided for the parents was of greatest value since it came from an outside source.

Many parents called asking what they could do to better help their youngsters.

I feel confident that I speak for the administration and staff when I say that the entire study was a tremendous success.

One mother commented that the letter complimented what she felt about her husband's attitude toward their girl. This was that the father was pushing the child too much.

Several parents contacted our school and expressed interest in the information made available by Project MEMO:.

Personally I am favorably impressed that it was a project that was worth the time and effort and should be repeated every year.

We are enthused that you are offering another direction of attack on these problems and are only too happy to cooperate with these studies.

Project MEMO: is no longer actively in existence, and with its conclusion goes the possibility of proving that the Ninth Grade Motivation Study does have definite educational value. If evidence is to be gathered to support similar motivation studies, it will have to be done in this type of broad investigation. The "need" for this investigator's study is self-evident, i.e., if a successful program were discontinued because of lack

of sufficient evidence, then someone must accept the responsibility of gathering data and carefully studying the results while the information is available.

### Hypotheses to be Evaluated

The primary goal of this study is to demonstrate that an outside agency, by means of the use of letters to school officials, students and parents, can be instrumental in initiating an improvement in academic performance of ninth grade boys and girls who have been identified as being low in motivation. Possible trends which may be uncovered are: (1) positive results from the treatment (improvement in the academic performance in both semesters immediately following the treatment); (2) short term results from the treatment (improvement in academic performances in the second semester of the ninth grade but no carry-over into the tenth grade); and (3) delayed results from the treatment (no significant academic improvement in the semester immediately following treatment, but a noticeable improvement for the first semester of the tenth grade).

The statistical hypotheses then become: \*

1. The grade point average gain for the treatment group will exceed the grade point average gain for the non-treatment group. (Is there a treatment main effect?)

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\*These hypotheses are restated in testable form in Chapter III.

2. The grade point average gain for the treatment group males (females) will exceed the grade point average gain for the non-treatment group males (females). (Does treatment interact with sex?)
3. The grade point average gain for all treatment group students enrolled in Class A (Class B, C and D) schools will exceed the grade point average gain for the students in the non-treatment groups who are enrolled in Class A (Class B, C, and D) schools. (Does treatment interact with size of school?)
4. The grade point average gain for all treatment males (females) in Class A (Class B, C and D) schools will exceed the grade point average gain for all non-treatment males (females) in Class A (Class B, C and D) schools. (Do sex, size of school and treatment interact?)

#### Definition of Terms

Outside Agency.--Refers to any establishment that is non-affiliated or non-identified with a particular school system. This type of agency could vary from one of the United States Office of Education's Talent Search Projects to the State Department of Public Instruction. The agency-student relationship is one of an impersonal nature, in that, all interaction and discourse takes

place via letters and similar correspondence. The outside agency does not attempt to interrupt the natural dialogue which goes on within the individual schools.

Academic Performance.--Refers to the execution of scholastic achievement for an individual student and is measured by computing the grade point average for all subjects for any single marking period or group of marking periods. The higher the grade point average, the higher the degree of academic performance.

Low-Motivated.--Refers to a below normal stimulus to action in the area of academic performance. The student's grade point average is not indicative of his intellectual capabilities. Somehow there is a lack of impulse, incentive or inducement which ordinarily spurs the student to perform on a higher achievement level.

Ninth Graders.--Refers to those students in both public and private schools who have completed eight years of formal schooling. In some systems the ninth grade is the first year of high school, in others, it is the last year of junior high school, and in still others, it is either the last or next to the last year in a middle or intermediate school.

Paper Treatment.--Refers to the mailed correspondence to the schools, students, and parents. The school initially received the M-Scales and machine scoreable test forms. Later it received a listing of





the names of all boys and girls whose M-Scale score was at or below the "low-ten" cut-off score. The students received a twelve page letter (developed and distributed by Project MEMO: but individually handed out by school personnel) which listed ten ways the students could improve their grades. The parents received a blue letter for boys and a pink letter for girls. These letters defined low-motivation and explained the importance of the role the parents must play if their child is to be properly motivated.

Low-Ten.--Refers to those boys and girls whose scores on the M-Scale placed them in the bottom ten percentiles of all the students that participated in the study. This does not mean the bottom 10 per cent of any single participating school. It does mean the bottom 10 per cent of the students from all schools who took the M-Scale.

M-Scale.--Refers to the instrument used to measure the factor of motivation for each individual student. This instrument was created and developed by Dr. William Farquhar of Michigan State University. Additional information on the M-Scale can be obtained from the sources listed in Appendix D.

### Organization of the Study

The format of this study will be as follows:  
in Chapter II a review of pertinent literature is

presented; Chapter III contains the methods used in the collection of the data, its organization, and statistical methods used for analysis; the findings of the study are reported in Chapter IV, together with the tables to assist in clarification of data; Chapter V contains several brief case studies of students whose academic record showed a considerable change after participating in the MEMO" project; Chapter VI contains a summary, discussion of findings, conclusions and implications for similar treatments and further research.

## CHAPTER II

### REVIEW OF LITERATURE

In this study the selection of low-motivated ninth graders was based on motivation scores obtained from the Michigan M-Scales developed by William Farquhar. The concepts of "motivation" and "self" or the "self-concept" are critical if one is to understand the reasoning behind this attempt to improve academic improvement on such a wide scale.

#### Motivation

In the simplest terms, motivation is what lies behind our behavior--the "why" we do what we do.

Psychologists have a somewhat more precise definition. Lindsley<sup>1</sup> defines motivation as a combination of forces which initiate, direct and sustain behavior toward a goal.

Psychologists differ in their beliefs regarding the nature of these forces that initiate and sustain behavior. Combs and Snygg<sup>2</sup> see behavior as powered by a continuing

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<sup>1</sup>D. B. Lindsley, "Psychophysiology and Motivation," Nebraska Symposium on Motivation (Lincoln, Nebraska: University of Nebraska Press, 1951).

<sup>2</sup>A. W. Combs and S. Snygg, Individual Behavior (New York: Harper and Brothers, 1959).



attempt to preserve and enhance one's concept of one-self.

Guthrie<sup>3</sup> feels motivation is simply "the condition which increases the vigor of responses."

Farquhar<sup>4</sup> defines "academic motivation" as a combination of forces which initiate, direct and sustain behavior toward a scholarly goal.

The subject of motivation has been studied by a number of researchers and scholars,<sup>5,6,7,8</sup> as is evident by a review of literature relevant to the topic. McClelland has been one of the leaders in this field. McClelland's<sup>9</sup> theoretical analysis of motivation is that all motives are learned. He feels they develop out of

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<sup>3</sup>E. R. Guthrie, The Psychology of Learning (New York: Harper and Brothers, 1952).

<sup>4</sup>W. W. Farquhar, Motivation Factors Related to Academic Achievement, Cooperative Research Project 846, January, 1963 (East Lansing: Office of Research and Publications, College of Education, Michigan State University).

<sup>5</sup>Dalbir Bindra, Motivation: A Systematic Reinterpretation (New York: The Ronald Press Company, 1959).

<sup>6</sup>Jerome Kagan and G. S. Lesser, Contemporary Issues in Thematic Apperceptive Methods (Springfield, Illinois: Charles C. Thomas, Publisher, 1961).

<sup>7</sup>K. B. Madsen, Theories of Motivation (Copenhagen, Denmark: Munksgaard, 1959).

<sup>8</sup>D. C. McClelland et al., The Achievement Motive (New York: Appleton-Century-Crofts, Inc., 1953).

<sup>9</sup>Ibid., p. 12.

repeated affected experiences connected with certain types of situations and types of behavior. In cases of academic motivation the situation should involve "standards of excellence," presumably imposed on the child by the culture, or more particularly by the parents as representatives of the culture. Behavior should involve either "competition" with those standards of excellence or attempts to meet them which, if successful, produce positive affect or, if unsuccessful, negative affect. It follows that those families which stress "competition with standards of excellence" or which insist that the child be able to perform certain tasks well by himself would produce children with high achievement motivation.

There has been a dearth of studies in the area of motivation, and until the 1960's, no study had produced a usable instrument which could be utilized by a classroom teacher to measure the concept of motivation. In 1963 an objective test was created by Dr. William W. Farquhar.<sup>10</sup>

Farquhar polarized the McClelland theory which posits that achievement motivation is composed of: (1) long-term involvement, (2) common accomplishment, and (3) competition with minimal standard of excellence. Along the continuum Farquhar assumed that highly motivated students would be found at the top with less

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<sup>10</sup>Farquhar, Motivation . . ., op. cit.

motivated students falling somewhere below that level but above failure. By utilizing an aptitude base, Farquhar identified those students who exceeded an aptitude based expectation of academic performance as over-achievers, and those students falling below expectation as under-achievers.

The Farquhar study shows that some of the variance between aptitude and actual achievement, as indicated by grade point average, can be measured to increase the predictability of achievement.

In Farquhar's study<sup>11</sup> a summary of personality traits associated with academic achievement are presented. They are: (1) academic anxiety; tension expressed as fear of failure, denial of shortcomings, and excessive concern with problems of control; (2) self valuation; the attitude held toward self; (3) authority relations; acceptance or resistance to externally imposed controls by a responsible agent; (4) interpersonal relations; (5) dependence-independence; the reliance on self or others for direction and decision making; (6) activity patterns; the area in which satisfaction is pursued, academic or social, individual or group; and (7) goal orientation; the flexibility and persistence exhibited in pursuing immediate, short-term or long-term objectives.

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<sup>11</sup>Ibid., p. 8.

Of special interest to this study are the forces associated with academic low-motivation. Farquhar and Stewart<sup>12</sup> state that low-motivation is a symptom generated from and associated with many forces. They see the more important dimensions as:

1. Hostility: the low-motivated adequate ability student uses his under-achievement as a device to punish significant adults.
2. Intolerance of Delayed Rewards: the low-motivated student has little desire or tolerance for delayed academic rewards.
3. Negative Reflected Self Concept: the low-motivated student feels that teachers view him with negative terms.
4. Persistent Syndrome of Under-achievement: the syndrome extends way back into their school history.
5. Low Job-Task Involvement: the low-motivated student's task of involvement extends to other commitments of life.
6. Low Academic Involvement: the low-motivated student either rejects the goals of school or passively endures their intrusion into his life.

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<sup>12</sup>W. W. Farquhar and N. R. Stewart, "Counseling the Low Motivated Male: A Working Paper," East Lansing, Michigan, Michigan State University, 1966. (Mimeographed.)



7. Unique Versus Common Accomplishment: doing the unusual, standing out from the crowd, and identifying with the teacher are rejected by the low-motivated male.

The research by Farquhar<sup>13</sup> has provided information which implies that academic motivation is a syndrome composed of non-intellectual factors such as the need for academic achievement, self-concept, occupation aspirations and academic personality factors.

Further support to the fact that self-concept, occupation aspirations and personality traits are related to achievement was given by the studies of Payne,<sup>14</sup> Taylor,<sup>15</sup> Duetsch,<sup>16</sup> Green,<sup>17</sup> and KipfmueLLer.<sup>18</sup>

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<sup>13</sup>Ibid., p. 13.

<sup>14</sup>D. A. Payne and W. W. Farquhar, "The Dimensions of an Objective Measure of Academic Self-Concept," Journal of Educational Psychology, LIII, No. 4 (February, 1962), pp. 187-192.

<sup>15</sup>R. G. Taylor and W. W. Farquhar, "The Validity and Reliability of the Human Trait Inventory Designed to Measure Under and Over Achievement," The Journal of Education Research, LIX, No. 5 (January, 1966), pp. 19-21.

<sup>16</sup>M. Deutsch, "Minority Groups and Class Status as Related to Social and Personality Factors in Scholastic Achievement," Society for Applied Anthropology and Personality Factors in Scholastic Achievement (Society for Applied Anthropology, No. 2, 1960), pp. 1-32. (Mimeographed.)

<sup>17</sup>R. L. Green and W. W. Farquhar, "Negro Academic Motivation and Scholastic Achievement," Journal of Educational Psychology, LVI, No. 5 (September, 1965), pp. 241-243.

<sup>18</sup>M. KipfmueLLer, "The Predictability and Factored

Of special interest to this study is Payne's<sup>19</sup> "Parental Influences and Achievement." Payne reviewed many studies of parental influences and their implications for the achievement of the children. At the end of his review he drew the following conclusions about high academic achievement after cautioning the reader that the lack of comparability in sampling techniques, instrumentation and analysis procedures are just a few of the factors which affected the frequently contradictory results.

1. Parents exert a high degree of achievement pressure that develops in the child a competitive spirit and a need for achievement.
2. There is a high frequency of parental behavior which is perceived by the child as rejecting or ignoring. The child is encouraged to be on his own at an early age, this behavior being interpreted as rejection. The father is generally seen as a rejecting figure, the mother as a warm and accepting one. There is often a rejection of parental responsibility and the homemaking role on the part of the mother.
3. Parents exhibit a low degree of possessiveness where the child is not dominated by his parents and is not encouraged to depend upon them.
4. A high degree of permissiveness exists, encouraging the child to act freely and to make decisions on his own at an early age. The frequent practice of independence training is found.
5. A generally high degree of authoritarianism is shown on the part of the parents. The

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Dimensions of the M-Scale for Eleventh Grade Parochial School Students" (unpublished Ph.D. dissertation, Michigan State University, 1963), pp. 22-29.

<sup>19</sup>Payne and Farquhar, op. cit., p. 15.

child is not consulted on decisions which affect the whole family or its individual members.

6. There is a low frequency of discipline. The child is expected to accept the consequences of his own behavior.
7. Children manifest a high valuation of and respect for parents, but without a warm and intimate association. Frequently a somewhat emotionless atmosphere engenders feelings of doubt and confusion in areas of felt understanding and acceptance. Parents are trusted and confidence is placed in them, as evidenced by acceptance of their standards. Achievement is a result of an attempt to please parents and to meet expectations.

The above conclusions, even though directly associated with high academic achievement, allow the reader to identify areas which may be the causative factors for the non-performing child who has adequate academic ability. In other words, the low-motivated boy or girl.

### Self-Concept

In the psychological literature two chief meanings of "self" have evolved: the self as an individual who is known to himself, and the self as the subject or agent.<sup>20</sup> As Wylie has noted, the words "self-concept" have come into common use to refer to the first of these meanings.

William James saw the "self" as a composite of thoughts and feelings which constitute a person's

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<sup>20</sup>H. B. English and A. C. English, A Comprehensive Dictionary of Psychological and Psychoanalytical Terms (New York: Langmans, Green, 1958), pp. 484-485.

awareness of his individual existence, his conception of who and what he is.<sup>21</sup>

Drawing upon the symbolic interaction framework of social psychology and phenomenological field theory, these theoretical tenets have been presented by Brookover<sup>22</sup> and later substantiated by additional research:

1. The student learns what he perceives he is able to learn.
2. Significant others, particularly teachers, have important influences on the development of a student's self concept.

One of America's leading perceptualists, Earl Kelley suggests that:

One of the most revealing facts about perception is that it is selective. There are thousands of coincidences in the situations in which we find ourselves at any given point of time. To perceive them all would cause pandemonium. We therefore choose that which the self feeds upon. The direction of growth of the self depends upon these choices.<sup>23</sup>

The available research appears to indicate that self-concept and school achievement are positively related.

<sup>21</sup>William James, The Principles of Psychology (New York: Henry Holt and Company, 1902), Vol. I.

<sup>22</sup>W. B. Brookover, "A Social Psychological Conception of Classroom Learning," School and Society, Vol. 8 (1959), pp. 84-87.

<sup>23</sup>E. C. Kelley, "A Perceptual View of the Adequate Personality," Perceiving, Behaving, Becoming, A. S. C. D. Yearbook (Washington, D. C.: National Education Association, 1962), p. 14.

Evidence in support of this position has been found by Bruck and Bodwin<sup>24</sup> in their study on the relationship of the self-concept and scholastic under-achievement. The authors utilized the Self-Concept Scale of the Machover Draw-A-Person Tests and correlated the scores with the presence and absence of under-achievement for thirty children with learning difficulties and thirty under-achievers. They obtained a significant correlation of .60 indicating a positive relationship between under-achievers and a low self-concept.

Wilbur B. Brookover's study, "The Self-Concept of Academic Ability" represents continuous phases of a six-year longitudinal study of the relation of self-concept of academic ability to school achievement among students in one school class while in the seventh through the twelfth grade. The research has been based on the symbolic interactionist theory of behavior, which has been developed by George H. Mead<sup>25</sup> and C. H. Cooley.<sup>26</sup>

Briefly, the general theory states that self-concept is developed through interaction with significant others

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<sup>24</sup>M. Bruck and R. F. Bodwin, "The Relationship Between Self-Concept and the Presence and Basence of Scholastic Under Achievement," Journal of Clinical Psychology, XVIII (April, 1962), 181-182.

<sup>25</sup>George H. Mead, Mind, Self and Society (Chicago: University of Chicago, 1934).

<sup>26</sup>C. H. Cooley, Human Nature and the Social Order (New York: Charles Scribner's Sons, 1902).

which in turn influences one's behavior. When applied to the school learning situation, a relevant aspect of self-concept is the person's conception of his own ability to learn the accepted type of academic behavior; performance in terms of school achievement is the relevant behavior influenced. The student role is composed of several sub-roles, including one involving academic achievement; the student self-concept similarly is a complex of several segments, including self-concept of ability. Previous studies have not attempted to measure the academic ability segment of self-concept and test its relationship to achievement and the perception of other's evaluation.<sup>27</sup>

The propositions basic to this theoretical approach are that:

1. A functional limit on a student's ability to learn in school is set by his "self-concept of ability";
2. A student's self-concept of academic ability is acquired in interaction with his significant others through his perception of their "evaluation of his academic ability";
3. A student's self-concept of academic ability is an "intervening variable" between his perceptions of others and his attempts to learn in school.<sup>28</sup>

This basic theory of the research of Brookover, postulates that human behavior is a function of the

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<sup>27</sup>W. B. Brookover, Self-Concept of Ability and School Achievement, Final Report of Cooperative Research Project No. 845 (East Lansing, Michigan: Michigan State University, Office of Research and Publications, 1962).

<sup>28</sup>Ibid., p. 44.

expectations and evaluations of others who are significant to the actor as perceived by him and as internalized in a self-conception of what is appropriate and proper for him to do and what he is able to do. The author defined self-concept of ability as referring to "the evaluation definitions an individual holds of his ability to achieve in academic tasks as compared with others in his school class."<sup>29</sup>

The basic propositions of the theory of self-concept of ability assert that:

. . . a student's self-concept of academic ability results from his perceptions of the evaluations significant others hold of his ability. The student's self-concept of academic ability in turn functions to limit the level of academic achievement attempted. Self-concept of academic ability is therefore hypothesized as an intervening variable between the expectations and evaluations of significant others and evaluations of significant others and school achievement. The relationship of perceived evaluations of significant others is conceptualized as necessary and sufficient condition, i.e., a change in the perceived evaluations of others will be reflected in a change in self-concept. The relationship of self-concept of academic ability to academic achievement, on the other hand, is hypothesized as a necessary but not a sufficient condition for the occurrence of a particular level of academic performance.<sup>30</sup>

Brookover found that parents were the most important significant others over the six-year period. Friends, who were at no point as important significant others as were parents to the self-concept of academic ability, tended to become more important to the subjects as time passed.

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<sup>29</sup>Ibid., p. 139.

<sup>30</sup>Ibid., p. 19.

Thus, in the later years of adolescence the peer group became more important than it had previously.<sup>31</sup>

From the Brookover data, teachers were not seen by children as being as important significant others as their parents or friends, but yet had some influence.

The findings indicated that a change in self-concept of academic ability over two-year periods was significantly related to parallel change in grade-point average.<sup>32</sup>

Brookover has written that:

The relationships supporting the social psychological theory of school learning presented here are not therefore greatly affected by variation in either measured intelligence or socioeconomic status. Rather, the evidence indicates that much of the correlation between these variables and school achievement is accounted for by variation in self-concept of ability.<sup>33</sup>

Self-concept--symbolic behavior in which the individual articulates a program of action for himself as an object in relation to others. It was stated that the self-concept is not a static phenomenon, but is ever changing and complex. It appears to be affected by the child's stage of psychosexual development, parents, friends, and teacher association, as well as by anxiety and stress brought about by fear of failure, which may be connected to one of many education practices and policies.<sup>34</sup>

### Summary

The low-motivated student may be the boy or girl who has failed to develop an adequate self-concept. This failure plus the possibility of a poor academic record

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<sup>31</sup>Ibid., p. 19.

<sup>33</sup>Ibid.

<sup>32</sup>Ibid.

<sup>34</sup>Ibid.



tends to group the low-motivated youngsters as prime candidates for the school drop-out lists. As they continue with high school they represent a sizable financial and emotional investment to themselves, their families, the schools and to the total national economy. Being under-achievers, they are apt to become discouraged and quit school. They are presently not adequately motivated, yet they have the potential to learn. The problem is to stimulate them--to provide the opportunity to construct, develop or even uncover adequate "self-concepts"--to tap the hidden potential, in short, to motivate them.

The key to academic success is proper motivation and this academic motivation as defined by Farquhar<sup>35</sup> consists of a combination of forces which initiate, direct and sustain behavior toward a scholarly goal. These same forces if adequately directed will lead to the proper development of self-concept. Additional studies support the statement that self-concept and school achievement are positively related. Therefore, the key to providing the proper motivation is directly related to establishing an adequate concept of "self." This concept of ability is the functional limit that regulates, stimulates, inspires and motivates the student's ability to learn. Important figures in this developmental program are the parents, the school personnel, and the students themselves.

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<sup>35</sup>Ibid., p. 12.

Project MEMO: attempted to increase the motivation factor by working with three of the agents involved. The parents of identified low-motivated youngsters received a letter which asked,

Have you ever wondered whether your 9th grader could do better in school than he is doing? According to a recent test of his desire to do school work, he seems to have more ability than his present grades show. But your son cannot improve these grades alone. He needs help and support--not merely from his teachers and counselors at school but also from you. Parents are very important to a student's work at school. The parents cannot do the whole job but can make the difference between a successful motivated student and an unsuccessful one.<sup>36</sup>

The letter continued by describing two types of parents who hurt rather than help this motivation process: (1) the high pressure-nagging type, and (2) the low pressure, leave them alone type. The purpose of the parent letter was to enlist the help of parents by identifying the term "low-motivation" and by stressing the importance of their role in the development of self-concept in their child.

A similar procedure was carried out with the schools. The students were identified as being low in motivation and suggestions were made as to what part the school must play in the over-all developmental picture.

And a letter went to the student. The theme of this letter was based on the questions, "Ever wonder whether you could earn better grades in school? Would you like to?" The letter continued by stating,

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<sup>36</sup>See Appendix G.

The purpose of this letter is to help you raise those grades. That's if you really want them to improve just to please yourself. Of course, it is easy to decide to do better (but really tough to bring it off). But if you're interested, so are we, and we have some ideas that we think can help you.<sup>37</sup>

A list of ten questions were provided with a page of suggestions for each question (Appendix F).

The value of proper motivation and an adequate self-concept is undeniable if the student is to excell. And as Brookover states, ". . . a student's self-concept of academic ability results from his perceptions of the evaluations significant others hold of his ability."<sup>38</sup> Others in this case refers to parents, teachers, and peers. In the following chapters the results of the treatment are unfolded.

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<sup>37</sup>See Appendix F.

<sup>38</sup>Brookover, Self Concept . . ., op. cit., p. 19.

## CHAPTER III

### DESIGN OF THE STUDY

#### Nature of the Sample

In January of 1967, Project MEMO: sent an invitation to 933 Michigan schools containing a ninth grade. This invitation encouraged each school to participate in a study dealing with low-motivated students. The goal of the study was to increase the motivation of low-motivated students toward academic success.

The schools were offered three choices. Plan A was for those schools in which it was felt that they could not identify their lowest motivated students and wanted independent verification.

#### Plan A:

Step 1. You administer to all your 9th graders the M-Scale, which produces a measurement of the motivation of 9th grade students. Send the answer sheets to MEMO: for scoring. MEMO: will report to you the names of your students who fall within the lowest 10% of the entire state in motivation.

Step 2. You hand to each student in the "low-ten" group a special letter from MEMO:.

Step 3. You mail to the parent of each student another special letter from MEMO:.

Step 4. At the close of school this spring, you send MEMO: a report on the grades of each of the students in the "low-ten" group, so we can know whether spring grades are higher, lower, or the same as fall grades.

Plan B was for the schools who believed that they personally knew all their ninth graders who belonged in the low-motivated category and did not desire verification.

#### Plan B

Step 1. You do not administer the M-Scale, but with the help of your teachers and counselors, make up your own list of your 10% lowest-motivated students.

Step 2. Same as Plan A.

Step 3. Same as Plan A.

Step 4. Same as Plan A.

Plan C combined both Plans A and B, in that the school provided a list of the students that they believed to be low-motivated and a comparison was then made between these students and the ones identified by the results of the M-Scale study.

#### Plan C

Step 1. Make up your own list of the 10% lowest-motivated 9th graders in your school. Also administer the M-Scales. Send us your list and we will report to you how it compares with the M-Scale results.

Step 2. Same as Plan A, but including every student from both lists.

Step 3. Same as Plan A, but including the parents of every student from both lists.

Step 4. Same as Plan A, but including every student from both lists.

The entire MEMO: study was done at no cost to the schools except clerical time for addressing the parent envelopes. Project MEMO: (financed by the United States Office of Education under Section 408 of the Higher Education Act of 1965) paid for the M-Scales, answer

sheets, scoring and postage. All the schools had to do was administer the M-Scales; return the answer sheets to MEMO:; personally distribute the student letters; type the home addresses on the postage paid envelopes to the parents; and mail the parent letters.

Three-hundred and thirty-four (334) schools indicated they wanted to participate in the MEMO: study. Distribution of these schools in the three different plans was as follows:

<u>Plan A</u>		<u>Plan B</u>		<u>Plan C</u>	
Public	175	Public	6	Public	68
Private	<u>64</u>	Private	<u>1</u>	Private	<u>20</u>
	239		7		88

The 327 schools in Plans A and C were mailed M-Scales. It was MEMO:'s objective to identify the bottom 10 per cent of low-motivated youngsters from the total ninth grade population. A stratified sample of schools was selected, M-Scales scored, and the scores ranked in order. The estimated male M-Scale 10 per cent cut-off score was 77 and the similar female score was 69. Since the original MEMO: goal was to identify the bottom 10 per cent of males and bottom 10 per cent of females these cut-off points were later changed to 79 for the males and 65 for the females. Results of the final scoring were as follows:

Total Tests Scored	51,998	100%
Total "low-ten" Identified	5,236	10.1%
Total Tests Not Able to be Scored	1,337	2.6%
Total Males	26,281	50.5%
"Low-ten" Males	2,857	10.8%
Males Not Able to Score	881	3.3%
Total Females	25,717	49.5%
Females Not Able to Score	456	1.8%

For this study, only those schools which selected "Plan A" were included. This represented 72 per cent of the total number of schools in the Project MEMO: study.

Since the treatment was not withheld from any student who had been identified as being within the "low-ten" group, it was impossible to set up a true control group situation. It was decided to establish a nonequivalent control group which would come as close as possible to the true control group situation. Therefore, the population in this study consisted of those boys and girls with M-Scale scores within two points above and below the "79" male and "65" female "low-ten" cut-off scores. All males with Michigan M-Scales scores of 78 and 79 formed the male treatment (experimental) group and those with scores of 80 and 81 formed the nonequivalent control group. All females with M-Scale scores of 64 and 65 were included in the female treatment group and females with scores of 66 and 67 made up the nonequivalent control group.

The tests for the 239 schools that participated in "Plan A" were sorted accordingly. The number of students within the schools having the above mentioned scores ranged from 0 to 33. Seven schools no longer existed due to consolidations. Eighteen schools with zero students were dropped leaving a total of 214 schools. Five of the 214 schools replied that the one, two or three students in their system had either dropped or moved prior to the completion of the ninth grade, and these student changes reduced the number of participating schools to 209. [The twenty-three schools having no students consisted of one Class B, seven Class C and fifteen Class D schools.] Of the 209 schools, two indicated that they did not wish to participate and thirty-seven schools did not respond to the original request or to the follow-up requests. The final school population participating in this study was 173 out of 209, which represented 82.5 per cent.

The breakdown of the 173 participating schools according to enrollment classification was:

	Class A	Class B	Class C	Class D
Total	48	42	54	29
Public	43	38	30	15
Private	5	4	24	14



### Instrumentation

The students were selected on the basis of their scores on the Michigan M-Scales (Appendix B for males and C for females). All males scoring 79 and lower, and females scoring 65 and lower, were considered as being in the bottom 10 per cent of the total population of ninth graders who took the M-Scale test.

For this specific study, males with scores of 78-79 were selected for the treatment group. Males with scores of 80-81 made up the non-treatment group. Females with scores of 64-65 formed their treatment group and those with scores of 66-67 were included in the non-treatment group.

A letter (Appendix I) was sent to the principal of each school. Accompanying the letter were forms (Appendix K) for each student in that particular school whose original M-Scale score was in the above mentioned ranges. The principal was asked to complete each form so a semester grade point average would be available for all the students from the first semester of the eighth grade through the first semester of the tenth grade. The grade point average was determined on a twelve-point scale: A = 12, A- = 11, B+ = 10, B = 9, B- = 8, C+ = 7, C = 6, C- = 5, D+ = 4, D = 3, D- = 2, and an E = 1. The grades for all subjects, academic and nonacademic, were included in determining the semester grade point averages.

The grade point averages were used as the pretest and the posttest measurements for the analysis of the data. The use of semester gain in grade point averages comes under considerable attack. As support for the use of them in this study the following is taken from W. W. Farquhar's study: "The use of grade point average as an achievement criterion can be defended on a number of grounds. However, the most important supporting aspect is its usefulness in predicting future academic grades."<sup>1</sup>

#### Reliability of the M-Scales

In the study by W. W. Farquhar, entitled Motivation Factors Related to Academic Achievement, eleventh grade high school students residing in nine different Michigan cities were studied. For the purpose of this project, Farquhar defined under-achievers as those who achieved significantly lower than predicted from an aptitude measure.

A Hoyt's analysis of variance reliability estimate of .94 was obtained for the 139 male cross-validated items for a total male sample of 240. A female sample of like size yielded a comparable .93 reliability estimate on 136 cross-validated items.

. . . . . Based on a sample of 254 males and 261 females the validity estimates of the total M-Scales against grades was .56 and .40 respectively. The cross-validation estimates were .49 and .48 for males and females.<sup>2</sup>

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<sup>1</sup>Farquhar, Motivation . . ., op. cit., Summary, Conclusions, and Discussions.

<sup>2</sup>Ibid., p. 3.

The following information was taken from an unpublished study conducted by W. W. Farquhar and Arthur Resnikoff.<sup>3</sup> The population in this study consisted of 184 male and 202 female eighth graders. The students were enrolled in the Duluth, Minnesota Public School System. Two different test batteries, the Iowa Tests of Educational Development and the Lorge-Thorndike Intelligence Test, were used in an attempt to establish the predictive value of the M-Scales in identifying grade point averages. The students' cumulative grade point averages for 1962, 1963 and 1964, total M-Scale scores, scores from the English portion of the ITED, and scores from the Lorge-Thorndike Intelligence Test were subjected to analysis.

Simple correlations for males:

Lorge-Thorndike Intelligence Test scores with cumulative grade point averages:	.60
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English portion of ITED scores with cumulative grade point averages:	.68
--	-----

Total M-Scale scores with cumulative grade point averages:	.58
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Multiple correlations for males:

Grade point averages = Lorge-Thorndike plus M-Scale:	.74
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Grade point averages = ITED (English portion) plus M-Scale:	.79
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<sup>3</sup>William Farquhar and Arthur Resnikoff, "An Unpublished Study of Eighth Graders in Duluth, Minnesota," College of Education, Michigan State University, 1968.

## Simple correlations for females:

Lorge-Thorndike Intelligence Test scores with cumulative grade point averages:	.66
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English portion of ITED scores with cumulative grade point averages:	.68
--	-----

Total M-Scale scores with cumulative grade point averages:	.57
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## Multiple correlations for females:

Grade point averages = Lorge-Thorndike plus M-Scale:	.73
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Grade point averages = ITED (English portion) plus M-Scale:	.74
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Statistical Hypotheses

The statistical hypotheses were based on the following possible trends:

1. Lasting results from treatment.
2. Short-term results from treatment.
3. Delayed results from treatment.

The desired results from treatment would provide an increase in academic performance in both the second semester of the ninth grade and the first semester of the tenth grade. This increase would be measured by subtracting the first semester ninth grade grade point average from the second semester ninth grade grade point average and the first semester ninth grade point average from the first semester tenth grade grade point average. The dependent variable was the gain scores between semesters. This is graphically depicted by:

	2nd 9th-1st 9th	1st 10th-1st 9th
Experimental		
Control		

Positive lasting results would be demonstrated by an experimental group gain in grade point average for both the second semester ninth grade and the first semester tenth grade minus the first semester ninth. By "lasting" the investigator is not claiming "eternal" results, but lasting results for both semesters included in the posttest.

Positive short-term results from treatment obtained by the same method would be represented by a gain in grade point average for the second semester of the ninth grade but no noticeable results for the first semester tenth grade.

Positive delayed results from treatment would be represented by no gain in the second semester of the ninth grade but a noticeable gain in the first semester of the tenth grade.

The statistical hypotheses are:

1. There is a treatment main effect: The grade point average gain for the treatment group will exceed the grade point average gain for the non-treatment group.
2. Treatment does interact with sex: The grade point average gain for the treatment group males (females) will exceed the grade point

average gain for the non-treatment group males (females).

3. Treatment does interact with size of school:  
The grade point average gain for all treatment group students enrolled in Class A (Class B, C, and D) schools will exceed the grade point average gain for the students in the non-treatment groups who are enrolled in Class A (Class B, C, and D) schools.
4. Sex, size of school and treatment do interact:  
The grade point average gain for all treatment males (females) in Class A (Class B, C and D) schools will exceed the grade point average gain for the non-treatment males (females) in Class A (Class B, C and D) schools.

### Experimental Design

#### Null Hypothesis Ho:1

- A. No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the second semester ninth grade between the total treatment and non-treatment groups.
- B. No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester

ninth grade from the first semester tenth grade between the treatment and non-treatment groups.

Symbolically:  $H_{0A}: M_1 = M_2$        $H_{0B}: M_3 = M_4$

Legend:  $M_1$  = The difference obtained when subtracting the treatment group's grade point average for the first semester of the ninth grade from the second semester of the ninth grade.

$M_2$  = The difference obtained when subtracting the control group's grade point average for the first semester of the ninth grade from the second semester of the ninth grade.

$M_3$  = The difference obtained when subtracting the treatment group's grade point average for the first semester of the ninth grade from the first semester of the tenth grade.

$M_4$  = The difference obtained when subtracting the control group's grade point average for the first semester of the ninth grade from the first semester of the tenth grade.

### Alternate Hypothesis

- A. The treatment group's difference in grade point average between the first semester of the ninth grade and the second semester of the ninth grade will exceed that of the non-treatment group.
- B. The treatment group's difference in grade point average between the first semester of the ninth grade and the first semester of the tenth grade will exceed that of the non-treatment group.

Symbolically:  $H_{1aA}: M_1 > M_2$        $H_{1aB}: M_3 > M_4$

### Null Hypothesis $H_0:2$

- C. No difference will be found in grade point averages as measured by the difference in grade point average for the first semester ninth grade from the second semester ninth grade between the male treatment and male non-treatment groups.
- D. No difference will be found in grade point averages as measured by the difference in grade point average for the first semester ninth grade from the first semester tenth grade between the male treatment and male non-treatment groups.



- E. No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the second semester ninth grade between the female treatment and female non-treatment groups.
- F. No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the first semester tenth grade between the female treatment and female non-treatment groups.

Symbolically:  $H_{0C}: M_5 = M_6$        $H_{0E}: M_9 = M_{10}$

$H_{0D}: M_7 = M_8$        $H_{0F}: M_{11} = M_{12}$

Legend:  $M_5$  = The difference obtained when subtracting the male treatment group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade.

$M_6$  = The difference obtained when subtracting the male control group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade.

- $M_7$  = The difference obtained when subtracting the male treatment group's grade point averages for the first semester of the ninth grade from the first semester of the tenth grade.
- $M_8$  = The difference obtained when subtracting the male control group's grade point averages for the first semester of the ninth grade from the first semester of the tenth grade.
- $M_9$  = The difference obtained when subtracting the female control group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade.
- $M_{10}$  = The difference obtained when subtracting the female control group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade.
- $M_{11}$  = The difference obtained when subtracting the female treatment group's grade point averages for the first semester of the ninth grade from the first semester of the tenth grade.

$M_{12}$  = The difference obtained when subtracting the female control group's grade point averages for the first semester of the ninth grade from the first semester of the tenth grade.

#### Alternate Hypothesis

- C. The male treatment group's difference in grade point average between the first semester of the ninth grade and the second semester of the ninth grade will exceed that of the male non-treatment group.
- D. The male treatment group's difference in grade point average between the first semester of the ninth grade and the first semester of the tenth grade will exceed that of the male non-treatment group.
- E. The female treatment group's difference in grade point average between the first semester of the ninth grade and the second semester of the ninth grade will exceed that of the female non-treatment group.
- F. The female treatment group's difference in grade point average between the first semester of the ninth grade and the first semester of the tenth grade will exceed that of the female non-treatment group.

Symbolically:  $H_{2aC}: M_5 > M_6$        $H_{2aE}: M_9 > M_{10}$

$H_{2aD}: M_7 > M_8$        $H_{2aF}: M_{11} > M_{12}$

Legend: Same as for null hypothesis  $H_0:2$ ;  $M_5$ ,  $M_6$ ,  $M_7$ ,  $M_8$ ,  $M_9$ ,  $M_{10}$ ,  $M_{11}$ , and  $M_{12}$ .

### Null Hypothesis $H_0:3$

- G. No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the second semester ninth grade between the treatment and non-treatment groups in Class A, Class B, Class C, and Class D schools.<sup>4</sup>
- H. No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the first semester tenth grade between the treatment and non-treatment groups in Class A, Class B, Class C and Class D schools.

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<sup>4</sup>Michigan High School Athletic Association Bulletin, XLIV, Number 4-S (November, 1967). Class A Schools have an upper four grade enrollment of 1100 or more; Class B = 450-1099; Class C = 250-449; and Class D = less than 250.

Symbolically:  $Ho_G: M_{13} = M_{14}$        $Ho_H: M_{15} = M_{16}$

$Ho_G: M_{17} = M_{18}$        $Ho_H: M_{19} = M_{20}$

$Ho_G: M_{21} = M_{22}$        $Ho_H: M_{23} = M_{24}$

$Ho_G: M_{25} = M_{26}$        $Ho_H: M_{27} = M_{28}$

Legend:  $M_{13}, M_{17}, M_{21},$  and  $M_{25}$  = The difference obtained when subtracting the Class A, B, C, and D treatment group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade.

$M_{14}, M_{18}, M_{22},$  and  $M_{26}$  = The difference obtained when subtracting the Class A, B, C, and D non-treatment group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade.

$M_{15}, M_{19}, M_{23},$  and  $M_{27}$  = The difference obtained when subtracting the Class A, B, C, and D treatment group's grade point averages for the first semester of the ninth grade from the first semester of the tenth grade.

$M_{16}$ ,  $M_{20}$ ,  $M_{24}$ , and  $M_{28}$  = The difference obtained when subtracting the Class A, B, C, and D non-treatment group's grade point averages for the first semester of the ninth grade from the first semester of the tenth.

### Alternate Hypothesis

- G. The Class A, B, C, and D treatment group's differences in grade point averages between the first semester of the ninth grade and the second semester of the ninth grade will exceed that of the non-treatment group.
- H. The Class A, B, C, and D treatment group's differences in grade point averages between the first semester of the ninth grade and the first semester of the tenth grade will exceed that of the non-treatment group.

Symbolically:  $H_{3aG}: M_{13} > M_{14}$        $H_{3aH}: M_{15} > M_{16}$

$H_{3aG}: M_{17} > M_{18}$        $H_{3aH}: M_{19} > M_{20}$

$H_{3aG}: M_{21} > M_{22}$        $H_{3aH}: M_{23} > M_{24}$

$H_{3aG}: M_{25} > M_{26}$        $H_{3aH}: M_{27} > M_{28}$

Legend: Same as for null hypothesis Ho:3;  $M_{13}$ ,  $M_{14}$ ,  
 $M_{15}$ ,  $M_{16}$ ,  $M_{17}$ ,  $M_{18}$ ,  $M_{19}$ ,  $M_{20}$ ,  $M_{21}$ ,  $M_{22}$ ,  
 $M_{23}$ ,  $M_{24}$ ,  $M_{25}$ ,  $M_{26}$ ,  $M_{27}$ , and  $M_{28}$ .

Null Hypothesis Ho:4

- I. No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the second semester ninth grade between the treatment and non-treatment groups (these groups consist of Male-Class A, Male-Class B, Male-Class C, and Male-Class D, Female-Class A, Female-Class B, Female-Class C, and Female-Class D respectively).
- J. No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the first semester tenth grade between the treatment and non-treatment groups (these groups consist of Male-Class A, Male-Class B, Male-Class C, Male-Class D, Female-Class A, Female-Class B, Female-Class C and Female-Class D respectively).





Symbolically:     $Ho_I: M_{29} = M_{30}$                        $Ho_J: M_{31} = M_{32}$

$Ho_I: M_{33} = M_{34}$                        $Ho_J: M_{35} = M_{36}$

$Ho_I: M_{37} = M_{38}$                        $Ho_J: M_{39} = M_{40}$

$Ho_I: M_{41} = M_{42}$                        $Ho_J: M_{43} = M_{44}$

$Ho_I: M_{45} = M_{46}$                        $Ho_J: M_{47} = M_{48}$

$Ho_I: M_{49} = M_{50}$                        $Ho_J: M_{51} = M_{52}$

$Ho_I: M_{53} = M_{54}$                        $Ho_J: M_{55} = M_{56}$

$Ho_I: M_{57} = M_{58}$                        $Ho_J: M_{59} = M_{60}$

Legend:  $M_{29}$ ,  $M_{33}$ , and  $M_{41}$  = The difference obtained when subtracting the Male-Class A, Male-Class B, Male-Class C, and Male-Class D treatment group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade.

$M_{45}$ ,  $M_{49}$ ,  $M_{53}$ , and  $M_{57}$  = The difference obtained when subtracting the Female-Class A, Female-Class B, Female-Class C, and Female-Class D treatment group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade.

$M_{30}$ ,  $M_{34}$ ,  $M_{38}$ , and  $M_{42}$  = The difference obtained when subtracting the control group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade using Male-Class A, Male-Class B, Male-Class C and Male-Class D groups respectively.

$M_{46}$ ,  $M_{50}$ ,  $M_{54}$ , and  $M_{58}$  = The difference obtained when subtracting the control group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade using Female-Class A, Female-Class B, Female-Class C and Female-Class D groups respectively.

$M_{31}$ ,  $M_{35}$ ,  $M_{39}$ , and  $M_{43}$  = The difference obtained when subtracting the Male-Class A, Male-Class B, Male-Class C, and Male-Class D treatment group's grade point averages for the first semester of the ninth grade from the second semester of the ninth grade.

$M_{47}$ ,  $M_{51}$ ,  $M_{55}$ , and  $M_{59}$  = The difference obtained when subtracting the Female-Class A, Female-Class B, Female-Class C and Female-Class D treatment group's grade point averages for the first semester of the

ninth grade from the second semester of the ninth grade.

$M_{32}$ ,  $M_{36}$ ,  $M_{40}$ , and  $M_{44}$  = The difference obtained when subtracting the Male-Class A, Male Class B, Male-Class C, and Male-Class D control group's grade point averages for the first semester of the ninth grade from the first semester of the tenth grade.

$M_{48}$ ,  $M_{52}$ ,  $M_{56}$ , and  $M_{60}$  = The difference obtained when subtracting the Female-Class A, Female-Class B, Female-Class C, and Female-Class D control group's grade point averages for the first semester of the ninth grade from the first semester of the tenth grade.

#### Alternate Hypothesis

- I. The treatment group's difference in grade point average between the first semester of the ninth grade and the second semester of the ninth grade will exceed that of the non-treatment group.
- J. The treatment group's difference in grade point average between the first semester of the ninth grade and the first semester of the tenth grade will exceed that of the non-treatment group.

Symbolically:	$H_{4aI}: M_{29} > M_{30}$	$H_{4aJ}: M_{31} > M_{32}$
	$H_{4aI}: M_{33} > M_{34}$	$H_{4aJ}: M_{35} > M_{36}$
	$H_{4aI}: M_{37} > M_{38}$	$H_{4aJ}: M_{39} > M_{40}$
	$H_{4aI}: M_{41} > M_{42}$	$H_{4aJ}: M_{43} > M_{44}$
	$H_{4aI}: M_{45} > M_{46}$	$H_{4aJ}: M_{47} > M_{48}$
	$H_{4aI}: M_{49} > M_{50}$	$H_{4aJ}: M_{51} > M_{52}$
	$H_{4aI}: M_{53} > M_{54}$	$H_{4aJ}: M_{55} > M_{56}$
	$H_{4aI}: M_{57} > M_{58}$	$H_{4aJ}: M_{59} > M_{60}$

Legend: Same as for null hypothesis  $H_0:4$ ;  $M_{29}$ ,  $M_{33}$ ,  $M_{37}$ , and  $M_{41}$ ;  $M_{45}$ ,  $M_{49}$ ,  $M_{53}$ , and  $M_{57}$ ;  $M_{30}$ ,  $M_{34}$ ,  $M_{38}$ , and  $M_{42}$ ;  $M_{46}$ ,  $M_{50}$ ,  $M_{54}$ , and  $M_{58}$ ;  $M_{31}$ ,  $M_{35}$ ,  $M_{39}$ , and  $M_{43}$ ;  $M_{47}$ ,  $M_{51}$ ,  $M_{55}$ , and  $M_{59}$ ;  $M_{32}$ ,  $M_{36}$ ,  $M_{40}$ , and  $M_{44}$ ; and  $M_{48}$ ,  $M_{52}$ ,  $M_{56}$ , and  $M_{60}$ .

### Analysis

The nonequivalent control group design was selected for this study. This involved an experimental group and a control group both given a pretest and a posttest. Symbolically this design is represented as:

	1st 9th	(Treatment)	2nd 9th	1st 10th
Experimental	$O_1$	X	$O_2$	$O_3$
Control	$O_4$		$O_5$	$O_6$

The pretest ( $O_1$  for the experimental group and  $O_4$  for the nonequivalent control group) was the grade point average for the first semester of the ninth grade. The treatment (X) consisted of the MEMO: letters sent to schools, students and parents. The posttest ( $O_2$ ,  $O_5$  and  $O_3$ ,  $O_6$ ) represented the grade point averages for the two groups for the second semester of the ninth grade and the first semester of the tenth grade respectively.

The treatment group consisted of males with M-Scale scores of 78-79 and females with M-Scale scores of 64-65. The control group was made up of males with M-Scale scores of 80-81 and females with scores of 66-67. The dependent variable was the gain scores between semesters, i.e., the difference between the grade point averages for the second semester ninth grade and the first semester ninth grade and the difference between the first semester tenth grade and the first semester ninth grade. An analysis of variance of the gain scores was computed.

The model used is as follows:

TREATMENT	SEX	S.S.*	2nd 9th-1st 9th	1st 10th-1st 9th
CONTROL	MALE	A		
		B		
		C		
		D		
	FEMALE	A		
		B		
		C		
		D		
TREAT- MENT	MALE	A		
		B		
		C		
		D		
	FEMALE	A		
		B		
		C		
		D		

\*S.S. = School Size which is based on upper four grade enrollment.

Campbell and Stanley<sup>5</sup> regard the proposed design as one that controls the main effects of history, maturation, testing, instrumentation, selection, and mortality in that the difference for the experimental group between pretest and posttest (if greater) cannot be explained by main effects of these variables such as would be found affecting both the experimental and control group.

An apparent weakness in this design was in the area of interaction of selection and maturation. This source of internal invalidity was controlled by the method of selecting the two groups. In this case the groups represented the 10th percentile (experimental group) and the 11th and part of the 12th percentiles (control group) of

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<sup>5</sup>Donald Campbell and Julian Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally and Company, 1963).

the same population. The percentile ranking consisted of the M-Scale scores for all ninth graders who took the test. A line for treatment was arbitrarily drawn at a point separating the approximate bottom 10 per cent of the total population, the experimental group from the non-experimental or in this case the nonequivalent control group. The similarity in the groups nearly approached that of a true control group situation.

The threat to external invalidity is partially reduced as stated by Campbell and Stanley,<sup>6</sup> "One way to increase it [external validity] is to reduce the number of students or classrooms participating from a given school or grade and to increase the number of schools or grades in which the experiment is carried on." In this study the groups were taken from 173 different Michigan schools. The students per school varied in number from one to thirty-three.

It is acknowledged that the population did not represent a true random selection. Nine-hundred and thirty-three Michigan schools were asked to participate in the original MEMO: project. One-third of these schools which contained a ninth grade elected to participate. Of this one-third, 232 participated in Plan A and were subsequently selected for this study. Several of these schools either consolidated or did not have students in the selected

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<sup>6</sup>Ibid., p. 19.

score ranges and this reduced the total number of possible participating schools to 209. Of this 209, the 173 or 83 per cent which did participate were represented as follows:

	Class A	Class B	Class C	Class D
Public	43	38	30	15
Private	5	4	24	14

In March of 1968, these 173 participating schools returned completed forms for 897 tenth graders. This figure represented a total control group count of 506 (322 male and 184 female) and a treatment group count of 391 (227 male and 164 female).

The variation in school size (A, B, C, and D), school location (large urban areas such as Detroit to small rural villages in the Upper Peninsula), and school types (public, private, and parochial); the use of a nonequivalent control group which was closely related to the treatment group; and a population of boys and girls totaling 897 all are points which favor the generalization which may be made for the value of the MEMO: "paper treatment." These generalizations should be confined to future Michigan ninth grade student populations.

In addition to the statistical analysis of the grade point averages of the students in the two groups, the investigator attempted to uncover some positive evidence of the value of the MEMO: letters by personally interviewing six students from the treatment group.





Secondarily, it was considered essential for the investigator to gain some insight into the life activities of this type of youngster. Grade point averages, alone, could not provide the necessary information if an understanding of students who had been identified by schools and the Michigan M-Scales as having the potential to do better academic work was to be acquired. Therefore, the case studies provided an opportunity for the investigator to familiarize himself with some of the characteristics, problems and general activities of identified low-motivated youngsters.

Three boys and three girls were interviewed in the attempt to uncover some of the underlying factors which may have caused them to become labeled as being low in motivation. These case studies are presented in Chapter V.

#### Summary

One-hundred and seventy-three Michigan schools submitted grade point averages for 897 current sophomores for the semesters of the first ninth through the first tenth grades. The selection of the students was based on their scores on the Michigan M-Scales which were administered to 51,998 ninth graders in February of their ninth grade.

The students in the experimental group were involved in Project MEMO's letter treatment. This "paper treatment" consisted of letters to high school personnel, to the students themselves and to the students' parents.

The treatment took place in the early part of the second semester of the ninth grade.

The dependent variable for the students was the grade point average gain score (the grade point average difference between the two semesters of the ninth grade and likewise the difference for the first semester of the ninth grade from the first semester of the tenth grade). An analysis of variance of these gain scores was computed to determine the value of the treatment.

The nonequivalent control group was made up of students scoring 80-81 (male) and 66-67 (female) on the M-Scale. The experimental group was selected by students scoring 78-79 (male) and 64-65 (female) on the same instrument. The experimental group represented the top percentile (10th) in the "low-ten" experimental group. The control group represented the 11th and part of the 12th percentiles for the total population.

The four possible results which may come from the analysis of the data are: (1) lasting results (two semesters) from treatment; (2) short-term results (first semester only) from treatment; (3) delayed results (second semester only) from treatment, and (4) no effect from treatment.

The statistical hypotheses test if there was a treatment main effect; if treatment interacted independently, with sex, and with size of school; and if there

was an interaction when sex, size of school and treatment were combined.

## CHAPTER IV

### ANALYSIS OF THE RESULTS

A general review of the statistical procedures and comments, and the rationale for the procedures used have been integrated in the following pages to assist in clarification of the analysis.

To determine whether or not there were improvements in the academic performance of identified low-motivated ninth graders, an analysis of variance with unequal cells was computed. The population was selected from the original Project MEMO: Ninth Grade Motivation Study. The treatment males had M-Scales scores of 78-79 and treatment females had M-Scale scores of 64-65. The nonequivalent control group consisted of those ninth graders whose M-Scale scores were within two scores of the MEMO: bottom 10 per cent (low-ten) cut-off level. The control males had M-Scale scores of 80-81 and control females had scores of 66-67. The grades were reported in terms of twelve levels: A = 12, A- = 11, B+ = 10, B = 9, B- = 8, C+ = 7, C = 6, C- = 5, D+ = 4, D = 3, D- = 2, and E = 1.

An analysis of variance of gain scores was selected as the statistical analysis to be used in the computation

of the results. The principal reason for this selection was to insure adequate control of the high school counselors' hypothesized cyclic pattern of marks from fall to spring semesters. A one-way AOV was used to compute cell frequencies, cell grade point average means (Table 5) and cell grade point average differences for Gain 1 and Gain 2 (Table 6).

The over-all regression of all variables for Gain 1 is provided in Table 1 and the same information for Gain 2 is found in Table 2.

TABLE 1.--Analysis of variance for over-all regression of Gain 1.\*

Source of Variation	Sum of Squares	df	Mean Squares
Between Groups	20.353	15	1.357
Within Groups	763.697	882	0.866
Total	784.050	897	
F = 1.567		Significance 0.076	

\*Gain 1 = The difference obtained when subtracting the first semester ninth grade grade point averages from the second semester ninth grade grade point averages.

TABLE 2.--Analysis of variance for over-all regression of Gain 2.\*

Source of Variation	Sum of Squares	df	Mean Squares
Between Groups	48.170	15	3.211
Within Groups	2212.051	882	2.508
Total	2260.221	897	
F = 1.2805		Significance 0.207	

\*Gain 2 = The difference obtained when subtracting the first semester ninth grade grade point averages from the first semester tenth grade grade point averages.

Hypothesis Ho:1

Null hypothesis Ho:1 consisted of two parts:

$$Ho_A: M_1 = M_2$$

$$Ho_B: M_3 = M_4$$

Ho<sub>A</sub>: No difference will be found in grade point averages as measured by the difference of grade point averages for the first semester ninth grade from the second semester ninth grade between the total treatment and non-treatment groups.

Ho<sub>B</sub>: No difference will be found in grade point averages as measured by the difference of grade point averages for the first semester ninth grade from the first semester tenth grade between the treatment and non-treatment groups.

The F-ratio of the main effect of treatment for the entire population when computed for Gain 1 was 0.179

(Table 3) and for Gain 2 was 0.501 (Table 4). The significance levels were 0.676 and 0.486 respectively. These results indicate that the treatment group's grade point average did not significantly exceed that of the non-treatment group for either Gain 1 or Gain 2. Since there apparently was no statistically significant treatment main effect the investigator failed to reject  $H_0:1$ .

#### Hypothesis $H_0:2$

Null hypothesis  $H_0:2$  consisted of four parts:

$$H_{0C}: M_5 = M_6$$

$$H_{0E}: M_9 = M_{10}$$

$$H_{0D}: M_7 = M_8$$

$$H_{0F}: M_{11} = M_{12}$$

$H_{0C}$ : No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester 9th grade from the second semester 9th grade between the male treatment and male non-treatment groups.

$H_{0D}$ : No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the first semester tenth grade between the male treatment and male non-treatment groups.

$H_{0E}$ : No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the



second semester ninth grade between the female treatment and female non-treatment groups.

$H_{o_F}$ : No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the first semester tenth grade between the female treatment and female non-treatment groups.

The data in Tables 3 and 4 confirm that the F-ratio for the main effect of sex was 0.124 for Gain 1 and 0.613 for Gain 2. The significance levels were 0.723 and 0.440 respectively. Interaction of treatment and sex had a F-ratio of 1.148 for Gain 1 and 2.269 for Gain 2 with significance levels of 0.284 and 0.128 respectively. The data supported that there was no noticeable main effect of sex or any favorable interaction of treatment and sex and since these results were not statistically significant, the investigator failed to reject null hypothesis  $H_{o:2}$ .

### Hypothesis $H_{o:3}$

Null hypothesis  $H_{o:3}$  consisted of eight parts:

$$H_{o_G}: M_{13} = M_{14} \qquad H_{o_H}: M_{15} = M_{16}$$

$$H_{o_G}: M_{17} = M_{18} \qquad H_{o_H}: M_{19} = M_{20}$$

$$H_{o_G}: M_{21} = M_{22} \qquad H_{o_H}: M_{23} = M_{24}$$

$$H_{o_G}: M_{25} = M_{26} \qquad H_{o_H}: M_{27} = M_{28}$$

TABLE 3.--Analysis of variance of grade point averages for Gain 1.\*

Source of Variation	Sum of Squares	df	Mean Squares	F-Ratio
Treatment	0.155	1	0.155	0.179
Sex	0.108	1	0.108	0.124
School Size	11.510	3	4.431 <sup>b</sup>	0.004
Interaction of: Treatment and Sex	0.994	1	0.994	1.148
Treatment and School Size	3.034	3	1.011	1.168
Sex and School Size	2.232	3	0.744	0.859
Treatment, Sex and School Size	1.917	3	0.639	0.738
Within Groups	763.697	882	0.866	
Total	783.647 <sup>a</sup>	897		

\*Gain 1 = The difference obtained when subtracting the first semester ninth grade grade point averages from the second semester ninth grade grade point averages.

<sup>a</sup>Lack of equal cell frequency accounts for the discrepancy of Total for Sums of Squares.

<sup>b</sup>Four school sizes (A, B, C, and D) and 882 degrees of freedom: Significance of F at .05 = 2.600 and at .01 = 3.800.

TABLE 4.--Analysis of variance of grade point average  
for Gain 2.\*

Source of Variation	Sum of Squares	df	Mean Squares	F-Ratio
Treatment	1.255	1	1.255	0.501
Sex	1.538	1	1.538	0.613
School Size	17.182	3	5.727	2.284
Interaction of: Treatment and Sex	5.690	1	5.690	2.269
Treatment and School Size	1.793	3	0.598	0.238
Sex and School Size	10.334	3	3.445	1.373
Treatment, Sex and School Size	2.765	3	0.921	0.367
Within Groups	2252.051	882		
Total	2252.608 <sup>a</sup>	897		

\*Gain 2 = The difference obtained when subtracting the first semester ninth grade grade point averages from the first semester of the tenth grade grade point averages.

<sup>a</sup>Lack of equal cell frequency accounts for the discrepancy of Total for Sums of Squares.

$H_{0G}$ : No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the second semester ninth grade between the treatment and non-treatment groups in Class A, Class B, Class C, and Class D schools.

$H_{0H}$ : No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the first semester tenth grade between the treatment and non-treatment groups in Class A, Class B, Class C, and Class D schools.

The data in Table 3 show that the main effect of school size was significant for Gain 1, i.e., the F-ratio was 4.431 and the significance factor was 0.004. Four school sizes and 882 degrees of freedom at a .05 are significant with an F-ratio larger than 2.6 and at .01 are significant with a 3.8 or larger. This was not the case for Gain 2 as illustrated in Table 4. When comparing the interaction of treatment and school size and also sex and school size the F-ratio's are insignificant for both Gain 1 and Gain 2. Therefore, the investigator accepted  $H_{0:3}$  and admitted that the results of the data indicated that the treatment had no significant effect on the majority of the students regardless of the size of school attended.

Hypothesis Ho:4

Null hypothesis Ho:4 consisted of sixteen parts:

$$Ho_I: M_{29} = M_{30} \quad Ho_J: M_{31} = M_{32}$$

$$Ho_I: M_{33} = M_{34} \quad Ho_J: M_{35} = M_{36}$$

$$Ho_I: M_{37} = M_{38} \quad Ho_J: M_{39} = M_{40}$$

$$Ho_I: M_{41} = M_{42} \quad Ho_J: M_{43} = M_{44}$$

$$Ho_I: M_{45} = M_{46} \quad Ho_J: M_{47} = M_{48}$$

$$Ho_I: M_{49} = M_{50} \quad Ho_J: M_{51} = M_{52}$$

$$Ho_I: M_{53} = M_{54} \quad Ho_J: M_{55} = M_{56}$$

$$Ho_I: M_{57} = M_{58} \quad Ho_J: M_{59} = M_{60}$$

$Ho_I$ : No difference will be found in grade point averages as measured by the difference in grade point averages for the first semester ninth grade from the second semester ninth grade between the treatment and non-treatment groups (these groups consist of Male-Class A, Male-Class B, Male-Class C, and Male-Class D; Female-Class A, Female-Class B, Female-Class C, and Female-Class D respectively).

$Ho_J$ : No difference will be found in grade point averages as measured by the difference in grade point

averages for the first semester ninth grade from the first semester tenth grade between the treatment and the non-treatment groups (these groups consist of Male-Class A, Male-Class B, Male-Class C, and Male-Class D; Female-Class A, Female-Class B, Female-Class C, and Female-Class D respectively).

The AOV results indicated that the interaction of treatment, sex, and school size was not statistically significant. Gain 1 (Table 3) had an F-ratio of 0.738 and a significance of 0.533 and Gain 2's (Table 4) F-ratio was 0.367 and significance level was 0.779. Since these results were not statistically significant the investigator failed to reject  $H_0$ :4.

In an attempt to study the individual cell grade point average means a one-way analysis of variance was computed. Table 5 provides information on cell frequency and mean grade point averages for the specific categories depicted in the proposed model on page 53. As was to be expected the grade point averages were higher for females than for males. No cyclic trend (grade point averages lower for the second semester than for the first semester) was noticeable in this information. As stated in Chapter I, one of the key reasons for this study was that many high school counselors hypothesized that spring semester grade point averages are generally lower than fall semester grades and if a student's record was the same for both

TABLE 5.--Cell frequencies and cell grade point averages for the first semester ninth grade (pretest) and second semester ninth grade and first semester tenth grade (posttest).

Treatment	Sex	SS*	Frequency	1st-9th	2nd-9th	1st-10th
Control	Male	A	143	5.364	5.280	5.160
		B	108	5.306	5.244	5.181
		C	53	5.124	5.335	5.209
		D	16	4.834	4.828	4.893
	Female	A	82	6.054	6.012	5.737
		B	59	5.739	5.798	5.704
		C	35	6.151	6.162	6.478
		D	10	6.434	6.706	6.686
Treatment	Male	A	116	5.084	4.805	5.371
		B	63	5.036	5.081	5.006
		C	34	4.784	5.037	4.993
		D	15	4.837	5.093	5.446
	Female	A	77	6.252	6.062	5.886
		B	44	5.664	5.784	5.631
		C	29	5.599	5.686	5.807
		D	14	6.163	5.946	6.124

\*SS = School Size based on upper four grade enrollment A = 1100+, B = 450-1099, C = 250-449, D = -250.

Grade point averages figured on a 12 to 1 point scale (A = 12, A- = 11, B+ = 10 . . . E = 1).

semesters, he did in fact, reflect an improvement in academic performance for the second semester.

In Table 6, the data indicated a drop in grade point averages for four of the eight cells of the control group in Gain 1 and also four drops in Gain 2. The treatment group had a drop in three cells in Gain 1 and four in Gain 2. This represented an over-all drop of approximately 47 per cent which is accountable by chance variation. If the treatment main effect was significant, the treatment group's grade point average mean for Gain 1 and Gain 2 would have been greater than is indicated in Table 6.

#### Summary of the Results

The significant results of this study have been summarized as follows:

1. Ho:1 was accepted. It was found that there were no significant differences in academic improvement between the total treatment group and the total nonequivalent control group.
2. Ho:2 was accepted. It was found that the main effect of sex was not significant nor was the effect of interaction of treatment and sex significant.
3. Ho:3 was accepted. It was found that there were no significant differences in academic



TABLE 6.--Cell means for Gain 1 and Gain 2 by treatment, sex, and school size.

Treatment	Sex	School Size	Gain 1	Gain 2
Control	Male	A	-.083	-.203
		B	-.062	-.125
		C	.211	.084
		D	-.006	.058
	Female	A	-.041	-.317
		B	.058	-.035
		C	.011	.327
		D	.271	.251
Treatment	Male	A	-.278	.286
		B	.045	-.029
		C	.252	.208
		D	.256	.609
	Female	A	-.189	-.365
		B	.119	-.032
		C	.087	.208
		D	-.217	-.038

Note: Grade point averages figured on a 12 to 1 point scale (A = 12, A- = 11, B+ = 10 . . . E = 1).

performance among the treatment students and the control students when grouped according to the size of the school they attended.

4. Ho:4 was accepted. It was found that the interaction of treatment, sex and school size made no difference in the improvement in academic performances of those students who had been identified as being low-motivated.

## CHAPTER V

### CASE STUDIES

#### Introduction

In a study which deals with low-motivated boys and girls, it is essential for the investigator to gain some insight into the life activities of this type of youngster. Grade point averages do not provide the necessary information and understanding of students who have been identified by schools, and in this case by the Michigan M-Scales, as having the potential to do better academic work but for reason or reasons are not academically productive. Therefore, the purpose of these brief case studies was to provide the opportunity for the investigator to become familiar with some of the characteristics, problems and general activities of identified low-motivated ninth graders. With this goal in mind, three boys and three girls were personally interviewed in an attempt to uncover some of the underlying factors which may have caused them to become low in academic motivation.

Six students were selected for depth interviewing in the following manner. The grade point average for five semesters (first and second eighth grade, first and second ninth grade and first tenth grade) was plotted

for all males having scores of 78 or 79 and females having scores of 64 or 65. All students showing a marked improvement in academic performance were separated from the rest and the trend of academic achievement was analyzed. Twenty students (twelve females and eight males) with the most noticeable improvement in grade point averages were then selected. Finally, six students were randomly selected from this group of twenty. The high school principals of the selected six were telephoned and subsequent appointments were made. Individual interviews were then conducted with the students, principals, counselors, coaches and classroom teachers.

#### Interview Procedure

A general data sheet (Appendix K) was compiled for each student. The majority of this information was obtained from the school records and from talking to the school counselors. Facts on outside interests, future goals, reaction to the MEMO: study and the student's reason for the improvement in academic performance were obtained during the student interviews. A series of twelve questions were used in each interview. These questions were not used in any specific sequence nor were they presented in a structured form. The twelve questions were:

1. If you could, would you drop out of school?
2. Are you outside the "in-group" in school?

3. Do you put your school work off?
4. Do you sometimes feel that nothing ever will go right?
5. Do your parents "ride" you too hard about school work?
6. Do you feel your parents really don't care about you or how you do in school?
7. Do you feel teachers have a low opinion of you?
8. Do you blow up when a teacher criticizes you?
9. Do you expect too much from your teachers?
10. Are you so busy with "other things" you don't have time for school work?
11. Do you have trouble concentrating?
12. What events have caused your grade point average to improve this past year?

The interviews with the students lasted from forty-five minutes to three hours. Subsequent discussions with school personnel likewise varied in time from one to three hours. The investigator was given the school records on each student and had the opportunity to discuss any point of interest in the records with the appropriate school official. Classroom teachers provided assignments completed by the students in question and any additional information that was available.

In five of the six interviews the students were very cooperative and apparently appreciated having an

opportunity to discuss this phase of their life with somebody other than the customary authority figures. In all cases the school personnel were most helpful and cooperative.

Case #1--Paul

Paul was fifteen years old, five feet nine inches tall and weighed 138 pounds. He was a slender blue-eyed blond. He had two brothers, ages 7 and 17, and two sisters, ages 12 and 14.

Paul's father was 48 years old and was a successful orthodontist. His mother graduated from college and was very active in community social affairs.

The family traveled extensively and just recently returned from a trip to Puerto Rico. It was interesting to note that Paul resented these family trips. He said, "It never fails that they end up in one big hassel with everybody hollering at each other and getting on each other's nerves."

One of the counselors in the high school personally knew the family. His reactions were that both the father and the mother were seldom home. They both were very active with outside interests and the children often had sitters. The counselor stated that the children had the newest and the best of toys and equipment and that money was no object. In fact things had always come too easily to the children and the family was recognized by the school as being under-achievers.

When asked about plans after high school Paul stated that he did not want to go to college or to any type of vocational or trade school. His vocational aspiration was to be a professional baseball player or not anything. When asked if he currently was on the school's baseball team, he answered, "I didn't go out for baseball." Paul played tennis at home and felt he could earn a varsity letter in tennis easier than in baseball. When asked if he planned on playing summer baseball his answer was negative. He then said, "Who says a person has to star in a sport in high school or college in order to make it as a pro."

Paul was a tenth grader in a Class A public high school with an upper four grade enrollment of 1096. This school was located in an upper middle class residential area and prided itself that better than 97 per cent of its graduates went on for additional education. There were four full-time counselors in the high school. Paul's elementary record showed an I.Q. measurement of 135 in the first grade, 119 in the third grade, 131 in the fifth grade and 107 in the seventh grade. The above scores were from the California Mental Maturity Test.

Paul's DAT percentile scores ranged from 35 to 75. His ninth grade SCAT scores showed a language percentile of 62 and a mathematics percentile of 80. His grade point average (based on a 12 = A to a 1 = # scale) for the





eighth grade was 4.125. First semester ninth grade saw a drop to a 3.80. Second semester ninth grade witnessed another drop to a 3.00, and then in the first semester of the tenth grade this improved to a 6.00.

When asked if he could specifically state the reason for the increase from a 3.00 to a 6.00 he said, "I didn't realize I had improved that much." He indicated that his parents tried to set up some competition between him and his eleventh grade brother but the boys were not interested. The school counselor indicated that the brother was also an under-achiever. Paul said that his parents offered to pay him money for each good grade he received but this was not much of an incentive because if he needed money he could always get it. "Mom tells me to study at night so I go to my room for thirty minutes and that satisfies her."

When asked why his grade point average fell to a three point during the ninth grade his answer was, "I was going steady with a girl who attended a private school and I wasn't interested in school work or school activities." He stated that he would talk to her for an hour each night on the telephone and the rest of the time he "goofed off."

He indicated that he was lucky in the ninth grade to get in the same classes with his close friends. "We had a ball in algebra and didn't pay any attention to the teacher at all."

Paul gave the impression that he was not interested in achieving better marks and did not care if this prevented

him from any form of post-secondary education. He felt that one reason his average improved this year was that he had failed algebra last year and was repeating it now under a different teacher. He indicated that it was not as much fun since his buddies were not taking it but he was getting better grades.

A check was then made on Paul's immediate peer group. Paul's academic performance was below average when compared to the rest of the boys. He was not the leader but was an active member of a clique.

Paul was then asked if he remembered taking part in the Project MEMO: motivation study. He remembered taking the test and being called in by one of the counselors. He recalled the student letter and said he had read it and parts of it were interesting (Appendix F). He took the letter to his parents. His parents also showed him the MEMO: parent letter (Appendix G) they had received. Paul's older brother and older sister were included in a family discussion involving the letters. Paul said, "I know I am not getting as good grades as I should or can and so do my parents, but so what!" He followed this statement with, "I don't want to go to college so why should I bust myself now."

The counselor reported that Paul's father came to see him shortly after this family conference. The father realized his children were under-achievers but could not

seem to discover any method to motivate them. In the counselor's words, "The father is very concerned but is also a very busy man professionally and is seldom at home."

After talking to the counselors, some of Paul's teachers gathered in the faculty lounge. It was a general reaction that the boy simply was not motivated and that they could not reach him. "He works just hard enough to get by and no harder. Discipline-wise he is not a problem and at times it is easy to forget that he is even in class." None of the teachers felt close to Paul and none knew of any vocational aspirations he had other than the unrealistic professional baseball career. When asked why he had improved in the tenth grade the general reaction was, "No special reason, he just seems to be doing a little better." Again, the big reason as identified by Paul was the fact that he was failing algebra in the ninth grade and now was repeating it and doing acceptable work.

The following notes are from Paul's counselor:

1. From grades one through six Paul was at least one grade level above his class.
2. Paul has high potential but is satisfied with just getting by.
3. The whole family is low-motivated. The family is matriarchial and the father is never home.
4. Socially minded, very personable parents--frequent baby sitters.

5. Parents are upstanding people in the community and express concern but are terribly busy.
6. There is a lack of evidenced parental control.
7. The kids have everything they have ever wanted and this may have spoiled their ambition.
8. The kids never have been taught the value of ownership or money.

It was generally accepted by Paul's teachers, counselors, principal, parents and most importantly by Paul himself, that he was not doing the type of academic work in school which he was capable. This seemingly did not bother Paul. His lack of personal motivation and vocational aspiration apparently had lulled him into a state of inactivity. Paul had successfully structured a negative self-image. His home environment, parents, peers, and teachers were important influencing elements in this negative self-concept development.

In Paul's case, the home life was without proper parental guidance and interest. If money could buy it, then the children had it--but if it involved actual parental time and support, then the children suffered. Paul's peer group was considered to be the "low academic group" of the tenth grade. Meager academic accomplishments kept him within the group's expectations. And finally, the children of this family had developed a pattern of under-achievement accompanied with high potentiality.

The teachers identified Paul as another one of the Doctor's low-motivated boys.

Case #2--Tom

Tom was sixteen years old, five feet eight inches tall and weighed 175 pounds. The first impression he gave was one of an athlete with a well-developed physique. Tom had one younger brother and five sisters ranging in age from twelve-year-old twins to the oldest sister who was twenty-five.

Tom's father was fifty-four years old and managed, but did not own, an 160-acre farm. The father never completed the eighth grade. Tom's mother was forty-six, a housewife, and like the father, never attended high school.

Five of the children presently attended a parochial school and the cost of tuition and other educational expenses were all the family could manage. Tom did not complain of lack of money but did indicate that he had to work in order to "make ends meet." He did not assist his father with the work on the farm but relied on outside employment.

Tom's grade point average (based on a 12 = A to a 1 = E scale) was: first semester eighth grade - 6.00, second semester eighth grade - 5.625, first semester ninth grade - 2.60, second semester ninth grade - 2.60, and first semester tenth grade - 6.00. The school records showed a ninth grade I.Q. measurement of 85. The DAT percentiles were: Verbal 25, Numerical 30, Abstract

Reasoning 15, Spacial Relations 25, Mechanical 10, Clerical 30, Spelling 05, Sentence Construction 35, and VR and NA 25.

The school Tom attended was a Catholic High School with an upper four grade enrollment of 1258. The neighborhood was equally divided into Polish and Holland factions. There was only one full-time counselor and she could only provide Tom's school record. She had no previous personal relations with the boy and stressed that her load prohibited individual counseling unless of special referred nature.

Tom was very easy to talk to and seemed to have a good understanding of his capabilities and vocational aspirations. When asked why his ninth grade point average fell, he said, "Last spring I could not have answered that question, but I certainly can now." He had always wanted to be a football player and had the speed, size and natural ability to make the team. In the middle of his freshman season he injured the cartilage in his knee and was told he was done with contact sports. He soon discovered that his pals were still out for football and he had plenty of spare time to while away. He started going steady with an older girl and spent several hours a day with her. He adopted a "don't care" attitude about his school work. "Even when I tried, my folks couldn't help me."

Basketball season followed football and again Tom's friends were active with school activities. To counter

this lack of personal achievement Tom joined a combo and soon was the lead singer. This nightly activity, plus his girl friend, took care of the many evenings during the school weeks. He said, "My parents were real concerned, but at the time, nothing else mattered."

Then came the event that really woke him up. In June he found he was two credits short to be a tenth grader. His only acceptable alternative was to go to summer school. This consisted of classes five days a week for six weeks. Summer school was really a punishment: he could not "goof around with his pals"; he could not get a job and was in trouble at home as well as not having any spending money; and most importantly, he could not take driver's training, which meant no driver's license for another year. This was especially damaging since this parochial school did not offer driver's training and contracted with a local public school for summer programs only.

Now Tom was ready to start the tenth grade. His friends were excited about football and were driving the family car. Tom said that he sat back and truthfully sized up the situation. "I really had two choices; first, I could continue the way I had in the ninth grade and end up in summer school again or worse yet be requested to leave school, or I could buckle down and grow up." He selected the latter, broke up with the girl and

quit the combo. He became the manager for the football team and renewed his friendship with his original peers. His grades improved from a 2.60 to a 6.00.

When asked how he made his decision he said, "I have always wanted to be a state trooper and you show me one who has made it after quitting high school."

When asked how much influence his parents had on this decision he stated, "My dad leaves me pretty much alone and my mother is so high strung that I just stay away from her as much as possible."

Tom said that he really liked biology but found Spanish very difficult. He gave the impression that reading was difficult for him and he did not understand grammar. During the interview Tom's grammar reflected a weak background, however, his speech was fluent.

Tom said that another important reason why he wanted to improve his grades was that he resented being "the dumbest one in his gang." In checking his peers' grade point averages it was evident that Tom's ninth grade performance was the lowest of any of the boys.

Since Tom stated that reading and grammar were difficult for him the counselor suggested that the tenth grade English teacher's comments might be of interest. The English teacher was most cooperative and readily admitted that Tom had a severe reading problem. "In classroom oral reading assignments he stutters, stammers, mispronounces



words and reads at a very slow speed." She provided three themes Tom had written and pointed to the many spelling errors. She said that on her insistance his penmanship had improved significantly during his first semester of the tenth grade. She said that when the class was discussing a familiar topic Tom took an active part and his comments were good. However, he did do poorly on any oral or written assignments. The quality of his homework assignments was lacking but he always did them and handed them in on time.

The English teacher reported that Tom caused no trouble in class and that he tried hard and she felt deserved credit for effort. She emphasized that he was well liked by his classmates. She provided one of his assignments on vocational goals. The general theme throughout this paper was that he could not study at home. The house was too small, crowded, and noisy and the television sounded throughout the entire structure. The last paragraph restated his desire to become a state trooper and emphatically stated that he would never consider dropping out of school because "you are a nobody if you don't finish school and that isn't for me."

Tom's English teacher admitted that a large part of his English grade came from his positive attitude and the fact that he really was trying. She felt that he was a good "C" student and she really did not expect any more than that from him.

When asked about the value of the MEMO: letters, Tom's reply was that he had read the student letter and certainly agreed with the student quotes regarding high school dropouts. He then said that at the time the rest of the information did not interest him. When asked how his parents reacted Tom replied that his father had said, "See, I told you what would happen if you hung around that girl all the time." He did not talk to his mother regarding the student letter and neither parent acknowledged receipt of the MEMO: parent letter. The counselor confirmed that all parent letters were mailed out as requested.

At the time of the MEMO: motivation study Tom was low-motivated. He was discouraged about football and had dropped out of his peer group. He was wrapped up with a world not familiar to him, i.e., an older girl and a combo made up of youths outside of his peer association group.

The hard cold truth came to Tom when, in his own words, "I grew up a little bit and quit feeling sorry for myself." The loss of a summer vacation, a summer job and driver's training provided the stimuli he needed. His attitude changed and his grade point average improved. He now had a goal which included graduating from high school with a respectable academic record. He was very much aware of the types of employment opportunities

which were available to a man who had no education or saleable skills. He stated that "under no circumstances am I going to spend the rest of my life living in a crowded little house with not enough money to live on." The interview ended with Tom saying, "I want a job I can be proud of and a house of my own."

It was the counselor's and several classroom teachers' opinions that Tom had made a significant change for the better in the past year. He was a good citizen and had many friends, both students and teachers. From an outsider's point of view it appeared that this was an example of a boy who was faced with a problem and did not let it get him down. Now he had realistic goals of his own and the motivation to achieve these desires.

Farquhar<sup>1</sup> has defined academic motivation as being a combination of forces which initiate, direct and sustain behavior toward a scholarly goal. In this case the goal was to become a state trooper and to do this a high school diploma was a recognized necessity.

#### Case #3--Lon

Lon was sixteen years old, five feet ten inches tall and weighed 150 pounds. He had two brothers, ages five and thirteen, and six sisters, ages, two, four, seven, eleven, twelve, and fifteen. Lon's father was thirty-six

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<sup>1</sup>Farquhar, Motivation . . ., op. cit.

years old and attended a strict denominational college for two years. He had a seven-day-a-week rural milk route for a number of years and recently took a job as a water softener salesman. Lon's mother was also thirty-six, a graduate from high school and spent her time taking care of the nine children.

Lon excelled in sports in high school. As a freshman he set a school record in the 100 yard dash and won a regular position on the wrestling team. As a sophomore he made the regular half-back spot on the football team. According to statements by the counselor and his coaches, Lon would not be in school if it were not for sports.

As a side-note, the community had just voted down the school mileage issue which meant that all freshman sports, and varsity wrestling and track were no longer offered at the school.

Lon's freshman accomplishments involved the now defunct sports of wrestling and track and since these were cancelled the school's physical education teacher had made Lon one of his regular assistants. Lon took great pride in this responsibility and according to the instructor had become a very capable and dependable assistant.

One of Lon's outstanding characteristics was that he insisted on fair play, both on the field and off. He did not tolerate cheating or foul play. This was especially noticeable by an incident where he physically knocked out

a boy in the locker room when he caught him going through another player's personal belongings. The football coach felt that at first the rest of the players resented Lon's exaggerated "fair play" attitude, but now he was accepted and respected by his teammates.

Lon had no professed vocational aspirations. When asked about future plans he said, "I'd drop out of school tomorrow if something good came along, but I doubt if I do." When asked about what career interested him, he said, "Frankly I can't think of a single job that interests me." This statement is supported by a statement in his seventh grade autobiography, "When I was eight years old I wanted to be a policeman or a fireman. This idea soon left me and I became a blank on my future."

Lon's father wanted him to go to college. He was a large boisterous man and had said in public many times, "Yes, Lon is going to college, whether he wants to or not!" Lon insisted that he was not going to go, "I have never even visited a college campus in my life and I don't plan on doing it now."

Lon was attending a Class "B" school with an upper four grade enrollment of 540. The school was located in a rural town having a population of 4,000. The building was new this year and the conservative town folk and rural people had recently voted down the needed operational mileage by an overwhelming majority. There were two

half-time counselors this year for the first time. There had been no testing program in the past and students who had always gone to school in this system had no elementary records. In 1967, 52 seniors out of 147 planned to continue with some form of post-secondary education. This year only 46 seniors planned on continuing their education after being graduated.

Lon's academic record based on a 12 = A to a 1 = E scale was: first semester eighth grade - 6.60, second semester eighth grade - 6.00, first semester ninth grade - 6.60, second semester ninth grade - 7.20, and first semester tenth grade - 8.40. Since the school had no elementary testing records, the counselor was unable to verify Lon's academic potential. Lon inferred that grades were not important as long as he got a "C" average. He said, "I know I can do better but why should I?" At that time he did not have a study hall since he had become a physical education assistant nor did he take any school work home.

When asked how he compared with his friends academically, he was quick to reply that he was slightly better than they were and did not have to work to keep that position. According to the counselor, Lon's gang was not the "in-group" in the school. "They are all known to be low in academic performance." When asked if his steady girl helped him with his school work he laughed and said,

"No, she isn't as smart as I am and I have to help her."

Lon felt that he was pushed into a French class in the ninth grade. He received a D- for the entire year. "This year is different, I am taking Mechanical Drawing, Physical Education, Typing, History and English and I don't have to work at all." In the ninth grade Lon was taking College English, French, Biology and Algebra. The change from a college preparatory curriculum to a general curriculum more than likely accounted for the increase in grade point average from a 6.60 to an 8.40.

Lon then said, "You know my father went to a religious college for four years part-time. It didn't help him one bit so why should I take college prep subjects?" He then added, "Our family doesn't even go to church anymore and at one time my folks were so pious you couldn't do or say anything."

When asked about his relationship with his parents he said that he hunted and fished with his dad and that was the only time they really got along. "We go fishing in Canada every year and really have a great time." He then said that his father came to all the athletic events but his mother was too busy at home. "I get along with my parents o.k. as long as we don't discuss my future."

When asked if he remembered the MEMO: project Lon nodded his head and said, "I took the many paged green and

white letter home, but my folks didn't think it was very important. I don't think they ever got a letter from you because they never mentioned anything about one to me." When asked what he thought of such a project he replied that it might do some good for some people but not for him. He again emphasized that he did not plan on going to any kind of school if he finished high school and felt that this type of project would be more for the college bound student or for the one with plans for a certain type of career.

After the investigator finished talking with Lon the school principal, football coaches, the morning counselor, and the history teacher were called together for a general discussion.

This session started off with the counselor saying, "Did Lon tell you that his father is an alcoholic?" The counselor emphasized that he felt the boy's attitude about college and vocational plans was a direct attack at his father. The coaches agreed that the father attended the athletic events in an inebriated state and was excessively loud. "When we are winning he is our most loyal supporter, but I remember the first game we lost last year--man, he cussed me out from the top row of the bleachers and this really bothered Lon."

All of the people present felt that Lon was quite capable of doing better work but that he was happy and self-satisfied with his present level of achievement.



The history teacher took exception and said, "I feel Lon will be one of our good ones. We always have a 'head and a tail' represented in any school group, but what we lack is a strong backbone connecting these two extremes. Lon is the type of boy we need to provide the strength to the backbone and he will do a good job of it."

One of the coaches then stated how Lon needed to experience a sense of accomplishment. Several times he had noted the pride Lon took in being the captain in a physical education class. This really meant something to him. He then told how Lon came to him during the last track meet of the year and said, "Coach, what is the school record for the 100 yard dash? Want to see it broken?" and it was.

Lon's freshman football coach had established the best rapport with him. He was the only adult in school in whom Lon confided and this was done rarely. He said that Lon seemed to be very serious but in reality he liked to clown and would do so when he felt secure. In his freshman year in wrestling he often wore a turban and was introduced as the "Terrible Sheikh." This lasted until he was beaten and then his mood quickly changed to one of absolute seriousness for the rest of the season.

The counselor and principal felt that Lon could do much better academically than he was doing. The counselor admitted that nobody was very close to the boy and that he

was really quite a puzzle to all that knew him. It was their joint opinion that the boy's father was the key to the entire issue and that Lon's apparent lack of aspirational planning was a direct rebutal to an overbearing father who could not successfully run his own life. Education, religion, and self-pride had become a mockery to the boy. Lon's attempt at developing a "self-concept" had met the roadblocks of an unstable home turn apart by alcohol and money problems. The boy was identifying all the factors of the father's past and was attempting to prohibit them from becoming a part of his life. Defiance of religion and education; no aspirational goals; and a strict self-imposed demand for fair play were currently the motivating factors for Lon.

#### Case #4--Virginia

Virginia was a sixteen-year-old sophomore in a consolidated rural Class "B" high school. The upper four grade enrollment was 640 and there was one full-time counselor. The school was geographically located between two small rural villages.

Virginia had no brothers but did have seven sisters ranging in age from four to twenty. Her father was fifty-four years old and was dually employed, i.e., he worked the night shift in a factory and operated a large dairy farm in the daytime. He had quit school in the fourth grade. The mother was forty years old and was a high

school graduate. She was an all A and B student and had at times tutored the girls.

Virginia and her sisters began an average day at 5:30 in the morning. They milked and cared for over fifty milch cows. The days ended for them with the completion of chores after school which was usually no earlier than 9:00 in the evening.

Virginia and her two older sisters were identified by the school as suffering from self-imposed inferiority complexes. They felt looked down on for being farmers. Virginia's hands were strong working hands and were heavily calloused with blunt fingers and short nails. Her clothes were poor as evidenced by the "hand-me-down" style and the holes in both stockings and sweater. Her hair was long and not well groomed.

At the start of the interview she was very nervous. When asked why, she said, "The last time I had an interview with a strange man he turned out to be a special education consultant. He suggested that I be placed in a special education class." After saying this she laughed and said, "This was in the sixth grade and by the end of the seventh grade they were thinking about letting me skip a grade, but my mother wouldn't let me."

Virginia was on a college preparatory program. Her academic record for the past five semesters was: first semester eighth grade - 6.00, second semester eighth

grade - 5.40, first semester ninth grade - 5.40, second semester ninth grade - 6.60, and first semester tenth grade - 7.80. The averages were based on a A = 12 to an E = 1 scale. When asked about the noticeable trend of improvement she was surprised and said that she really had not noticed that she was improving. She then said, "Dad was poor in school and doesn't expect anything from us girls but Mom really hollers at us when we get low grades. Mom got all A's and B's when she went to school and expects us to get them too."

When asked about conditions at home, she said, "It is just about impossible to study at home. It is so crowded and noisy and we just got a television set. And my folks are always fighting. I can't study in my room because there is only a single bulb in the ceiling and besides it is usually too cold up there."

Virginia knew she was not in the "in-group" in school and said that she did not want to be. "I don't like the way they dress and the things they do on dates." Her social life consisted primarily of school functions and baby sitting. "Mom grounds me from baby sitting if I do something wrong or if my grades are poor."

She then implied that it was difficult to satisfy both of her parents because her mother was a strict Baptist and was against dancing and movies and her father did not go to church, but insisted that the girls be

allowed to go to shows and dances so they would not become wall flowers.

In a hushed voice she explained how her parents had been in the process of separation for the past year, but seemingly had patched things up temporarily during this past summer. The constant family bickering had made the sisters close. "I guess the reason I don't have many friends is because I am so close to my sisters that I don't need other friends."

The discussion then turned to Virginia's vocational aspirations. She said that she had three choices and in order of preference they were: an airline hostess, an elementary teacher, and a beautician. When asked if going to a cosmetology school would be an acceptable substitute for college, she replied, "What in the world is a cosmetology school?" She knew that her grades would determine what she did after she graduated.

When asked about her present subjects she replied that she liked geometry but hated biology and usually did not even read the text. "I don't have time to get all my assignments done in school so I skip the ones I don't like." When asked why biology, she replied that there was too much reading and she did not like to read. She then told of how she was the only one in her class for her first six years of elementary school. "There were twenty of us in all eight grades and the teacher just didn't take the

time to teach me how to read." She expressed real apprehension over an American History course she would be required to take in her junior year. Again this fear was based on the thoughts of long reading assignments.

Virginia valued a high school education and gave the impression that under no circumstances would she drop out of school. A high school diploma was the ticket off the farm and this was an active part of her future plans. In fact, this was the key to her motivation.

At this point in the interview she said, "You want to know why I really was scared when I first came in?" She immediately continued and told how two weeks ago several girls were looking at some pictures in another girl's wallet. When the wallet was returned the money was no longer in it. Each girl in the group was then called to the office and questioned by the principal. Virginia said, "I thought for sure that you were a policeman or something and wanted to question me some more."

Virginia was then asked to respond to the value of the MEMO: project. She said, "I remember taking the pink test and getting the student letter from my counselor. I took it home and mother really laid into me about not doing better work in school." She then said that her folks never discussed the MEMO: parent letter with her but during an argument one night she heard her father say to her mother, "Just like that letter says, all you

do is nag, nag, nag at the girls. Get off their backs for awhile!"

Virginia then opened up on the family's domestic problems as if she had never been able to discuss it with anybody before. Her final statement was, "And two weeks ago the bank foreclosed on us and we had to sell all our cattle, machinery and some of our land. We have only eight cows now and I don't know what is going to happen."

The counselor said that the girls all had inferiority complexes. The other students, even though many came from farms themselves, were cruel and teased them about their poor clothing and the "barnyard smell." She said that the two older girls were very pretty and the one in the twelfth grade had natural long blond hair and was now, for the first time, accepted by the school's "in-group." The girls had always been close and protected one another. Virginia was labeled a "loner" and really had no close friends other than her sisters. To the counselor's knowledge she had never had a date and did not relate well with boys.

Virginia's school records showed the latest I.Q. measurement of 97, which was taken during the first semester of the tenth grade. Her DAT percentile scores were: Verbal Reasoning 55, Numerical Ability 65, VR and NA 60, Abstract Reasoning 65, Clerical 35, Mechanical 40, Space Relations 95, Spelling 15 and Grammar 30.

The counselor felt that Virginia's 5.40 grade point average for the first semester of the ninth grade was lower than it should have been. This she blamed on the domestic problems at home which reached a peak at this time. However, when considering the many hardships the girl experienced she was working up to her potential when she earned C's and B's and "deserved an honest pat on the back."

Report cards were being handed out that afternoon and the counselor mentioned that Virginia had dropped from a C to a D+ in Biology. She reported that the Biology teacher's report showed that the girl had not done one assignment for the past three weeks. It was three weeks ago that the family experienced the difficulty with the bank which necessitated selling their livestock, equipment and land.

Virginia's home responsibilities, lack of adequate study area and time, parental bickering, and the family's financial crisis certainly had a detrimental effect on her personal attempt to structure an adequate self-concept. The fact that her two older sisters had been endowed with natural beauty and that she had not, prevented her from obtaining similar social acceptance and recognition. And most importantly, her dread of being the stereotyped image of a farmer plus insufficient funds for adequate clothing added to her problem.



The Michigan M-Scales and Virginia's counselor labeled her as being low-motivated and this could not be disputed. But in this incident, being low-motivated was not a matter of personal infliction as much as it was a result of the negative factors of an environment.

Case #5--Carol

Carol was a fifteen-year-old sophomore in a rural Class B high school. The school had an upper four grade enrollment of 465 with one new full-time counselor. Up until two years ago there was a small Class D parochial school in the same town. This school was no longer in operation and all local children now attended the public school.

Carol was a pretty, petite brunett with flashing eyes and an infectious smile. She had two brothers, ages thirteen and twenty-three, and nine sisters, whose ages ranged from eight to twenty-seven. Carol's father was fifty-four year old and worked in a factory. In his spare time and when factory work was not available he operated the 160 acre farm on which they lived. He quit school in the eighth grade. Carol's mother was forty-seven years old, a housewife, and like the father, she too quit school in the eighth grade.

The school counselor insisted on having a meeting prior to the interview with Carol. He gave the impression that he was very familiar with the family and that certain

points should be brought to light before the girl was brought to the office.

The counselor stated that he knew the reason Carol's grades dropped from a 5.70 to a 3.20 for the eighth and ninth grades. "She started to date a senior boy with a low academic record at the start of the ninth grade. This boy was in an accident and his buddy was killed. He subsequently felt badly, dropped Carol and started dating another girl. This disturbed Carol for some time." The second causative factor involved Carl's sister who was in the eleventh grade. According to the counselor, "the sister had a bad record, both academically and socially." Carol had started out the same way but since had done an about face. Carol developed a stigma toward the older sister's reputation. This was amplified by their physical resemblance and the fact that many people mistook Carol for her sister. It was the counselor's opinion that these two factors caused Carol's ninth grade point average to drop.

Carol seemed like a happy girl with a pleasant personality. When asked what she wanted to do if she could do anything of her choice, she said, "I want to graduate from school and become a waitress in a small restaurant." Carol implied that she would not drop out of school for anything and was perfectly satisfied if she could get all C's. In fact she would take any grade as long as she could graduate with her class.

When asked if she could explain the drop in academic performance in the ninth grade, she immediately said, "You bet! Have you ever transferred from a small Catholic school to a public school?" She implied that she was really frightened at the time. She lived five miles out of town and had few friends at the public school prior to transferring. She was placed in a Spanish class and according to Carol, the teacher picked on her for the entire year. "I could always tell when it would be my turn to translate, because she always made me do the biggest paragraphs. The only reason she passed me on a D- instead of giving me an E was because I received extra credit for bringing in current event articles."

Carol's academic record (based on a 12 = A to a 1 = E scale) was: first semester eighth grade - 4.50, second semester eighth grade - 5.70, first semester ninth grade - 3.20, second semester ninth grade - 4.50, and first semester tenth grade - 7.00.

When asked if she knew why her tenth grade academic performance reflected such an improvement she said, "I am used to this school now and have many good friends. Also I went steady last year but I only date on weekends now." She mentioned that she liked her male teachers but not her female teachers.

When asked how her parents had reacted to the change in academic performance she stated, "Dad has always

hollered at us if we didn't get good grades and Mother doesn't dare take sides." She then said that her sister, who was in the eleventh grade, was a poorer student than she was and was always in trouble with her father.

When asked about home responsibilities she said, "I am only home every other week because my sister and I have a full-time baby sitting job in the neighboring town." It appeared that the two girls alternated weeks on this job. They prepared the breakfast and the supper and helped get the children off to school. At home Carol worked in the kitchen and helped her mother as much as possible. She liked to bake and sew and assumed these responsibilities when at home. She did not do farm work for her father.

When asked if she were close to her sisters and parents she said, "If I have a problem I go to one of my older sisters first, then to Mom. I never go to Dad." She then inferred that her father hit them when he was angry. When specifically asked if he actually physically struck her, her eyes lit up and she said, "Why just last week I made two lemon pies and when supper was over and I finished the dishes I noticed that there was one piece left over. I asked Mom if I could have it and she said, 'Yes,' so I ate it. Dad came in in a few minutes and asked where the pie went. When I told him I had eaten it, he slapped me so hard that I fell down." When asked

if she talked back to her father, she quickly answered, "Would you sass someone who has a mean temper and weighs 295 pounds?"

Carol then started a long discussion about her father. He had a 70 per cent loss of hearing. This partially explained why he shouted all the time. In Carol's words, "He is always hollering and if we say something that he doesn't hear, then he thinks we are talking behind his back and we really get it!" He was laid off for three months last spring and consequently worried about the bills and the crops. According to Carol he took all of his frustrations out on the girls. She said, "Dad had the T.V. turned on so loud that you couldn't even stand to be anywhere in the house. It was just impossible to study at home."

At the time of the interview Carol's father was working nights so life was bearable at home when she was not staying in the neighboring town. Carol said, "When he is home we use any excuse we can to get out of the house and when this sitting job came along it was like a gift from heaven."

The mother was a close friend of the girls and tried to protect them but the father's abuses were often released on her. When asked how her father reacted to grades and to their social activities, Carol said, "He really hollers at us when we get lower than a C and he

is awfully strict on what we can and can't do." At this point Carol said, "Really, I don't care about what marks I get, just so I graduate on time and get away from here."

When asked if she remembered the MEMO: project she replied in the affirmative. She said that she took the student letter home and her mother and sisters discussed it when her father was not home. She felt it made good sense but that it really applied to those students who either wanted to quit school or who planned on pursuing additional education after graduating from high school. She said that she was not aware that the parents had received a letter. Her mother had not said anything to her about receiving one and she imagined that her father had thrown it away.

When asked again why her grades had improved she said, "If I really tell you the reason you will just laugh." After receiving assurance that this would not be the case she said, "It is the ridiculously simple matter of a hearing aid." Much to her father's disgust he had gone to a doctor and was fitted with a hearing aid that past summer. That was just prior to the start of Carol's tenth grade. Carol said that the results really were astonishing. "He doesn't holler nearly as much now--the television can be on without driving everybody to the barn--he doesn't fight with Mom so much--and he is getting along better at work." She implied that the hearing aid made life much more bearable for everybody in the family.

After Carol left the office, the principal brought in her file. There were no records available on her through the sixth grade. She had a seventh grade Thorndike I.Q. score of 88. According to the principal she was just average for her peer group. She seemed to be socially accepted and had many friends. The principal suggested talking to her biology teacher since she did mention that he was her favorite. In talking to him it was revealed that the biology sections were divided into three levels and Carol was in the lowest level. "She has a nice personality and isn't any trouble in class but she sure is a scatter-brain." The biology teacher felt she definitely had the ability to do C work but was working just hard enough to accomplish the goals she had set for herself. It was also his opinion that her peers were at the same academic level as Carol and they would make it through high school on the general education program.

This seemed to be the case of an average ability girl now doing average school work. The effect of transferring from a familiar setting to a strange setting was noticeable by a drop in grade point average. However, now she had established herself in a new school, had a group of friends and had set up a realistic goal for herself. Her every-other-week baby sitting job had relieved an awkward home situation and provided a place where she could study if she so desired. Her father's physical

affliction had been eased to a degree which should have a stabilizing influence on the home.

At the time of the MEMO: M-Scale study, she was not performing up to her ability, but it was her principal's and teachers' opinions that this had changed and now she was working nearly to the level which was expected of her.

Case #6--Susan

Sue was a sixteen-year-old sophomore at a Class C Catholic high school. The upper four grade enrollment was 441. The high school student body was made up of two Catholic elementary school systems from two different parishes. The high school was located in the central urban section of a city which had a population in excess of 200,000.

Sue had no brothers but did have one older sister who was in the twelfth grade. Sue's father died, after a long illness, in February of her freshman year. Her mother, age 40, had completed two years of college and was presently employed as a legal secretary.

Sue's school interest included the Future Teachers Club and the Future Nurses Club. She worked eight hours a week in the pediatric ward in one of the city hospitals. Her ultimate goal was to be an elementary teacher.

Sue was an active girl and played on the school's girls basketball team. She also enjoyed tennis and



swimming. Her pride and joy was her stuffed animal collection. Many of the animals in this collection were given to her by her father.

Sue was on a college preparatory program with an emphasis on business courses. She was not good in mathematics but enjoyed bookkeeping. In her own words, "Bookkeeping is great because the calculator does all the math for you." She planned on taking extra business courses during her junior year in the city evening program. When asked why the emphasis on business courses when she wanted to be an elementary teacher above anything else, she replied, "I am afraid I can't get into college and I must have some skill so I can get a job." She then said, "My sister has been turned down by three colleges so far this year, so what chance do I have?"

Sue's academic record for the past five semesters (based on an A = 12 and an E = 1 scale) was: first semester eighth grade - 4.60, second semester eighth grade - 4.60, first semester ninth grade - 3.50, second semester ninth grade - 5.50, and first semester tenth grade - 7.00.

When asked why her grade point average fell during her first period of the ninth grade she replied that life was just terrible at home. "Daddy had been awfully ill for several years and he died in February." She continued by saying, "Daddy became the human guinea pig at the hospital. They tried everything on him and he

suffered something terrific. I was close to Daddy and my sister is close to my mother. We fought constantly --especially Daddy and Mother." Sue's father was a salesman for a pharmaceutical firm. They lived ten miles from the high school and drove their own car for transportation to and from school.

"When Daddy died, Mother gave my sister her car and she took Daddy's new Oldsmobile. How would you like to have to beg your sister for a ride anytime you wanted to go someplace?" It was interesting to note that Sue did not call her sister by name at any time but just referred to her as her sister.

Sue continued, "After Daddy died my mother wouldn't even talk to me. She really hates me! Last summer she took my sister with her on a trip to California and made me stay home alone." Later the school counselor confirmed that the mother had identified with the older daughter. "The older girl is pretty and effervescent like the mother, whereas Sue is more reserved, a little heavy and not nearly as attractive. The older girl is often seen with the mother at social events but Sue is never with them. The mother is very active in church and social affairs since the death of the father."

Sue was then asked what changes in attitude brought about the improvement in grade point average for this current year. She said, "I just made up my mind to get

good marks for Daddy--that sounds funny to you doesn't it?" She went on by saying that the best way to get away from her home situation was to get better grades so she could either go away to college or to a business school when she graduated from high school.

"I wouldn't leave home now and I definitely won't quit school because it would really hurt my mother. But, as soon as I graduate I am going to pull up stakes in one big hurry." When asked how her mother has reacted to her improvement in school work she answered that up till this year her mother "rode her constantly" but now she left her alone. She seemingly was pleased that Sue's grades were better but did not compliment her for her success.

In the past the mother had always pushed Sue regarding her marks. Sue's academic record was equal to her sister's but the mother's attention certainly was not equally distributed. The sister had no vocational aspirations but desperately wanted to go to college for the social prestige. The school counselor felt that it was important to the mother for her older daughter to go away to college. At the present time the sister was in the "in-group" in the school and according to the counselor thrived on this type of attention.

Sue was then asked to describe her peers. It appeared that two different groups were involved; one at home consisting of boys and girls who attended the local

public high school and one at the parochial high school which she attended. Sue said that she knew she was not in the "in-group" at school because she was heavy and not pretty like her sister. She then said, "I like the gang at home because with them you don't have to pretend --you can just be yourself. Here at school, life is one big farce with everybody saying and doing one thing but thinking just the opposite." She then said that her mother resented her public school friends but there was not much she could do about it.

Next she began talking about the school's "in-group." "It doesn't take brains or a good personality to be popular in this school, just as long as you have looks and plenty of money."

The subject was then switched to school work. Sue said that she really liked her teachers, especially the nuns. However, she did not like her male biology teacher. When asked why, she replied, "He ridicules me in front of the other kids." She then said, "He is always saying, 'Hey big mouth, pay attention' and this just kills me." She gave the impression that her biology marks were dropping and that she planned on taking it again this summer from a different teacher. And again she emphasized that she was doing this for her father not for her mother.

She then started describing her biology lab partner who was also her best girl friend in school. "Rita is

Puerto Rican and is just brilliant. She is not in the 'in-group' because she is heavy like me. She is real wealthy but most of the kids don't like her because she is sort of different."

Since Sue failed a course in the eighth grade the topic of difficult subjects was discussed. She immediately identified mathematics as being her downfall. "Why I even got a D in the 'dumb kid' math course in ninth grade. We used an eighth grade general math book and I about died. If I have to take one more math course, then goodbye college."

When asked if she remembered the MEMO: study she replied, "I remember taking the test and getting a letter from the counselor. I took it home (this was approximately six weeks after her father had passed away) and Mom really yelled at me and said that I had better straighten up or I was going to get kicked out of school. Later Mother mentioned that she had received a letter from a MEMO: outfit but didn't show it to me." Prior to this time Sue's mother made her study at night and constantly pressured her to do her homework. Sue noticed a change in this attitude towards the end of the second semester of the ninth grade. This had also been true during tenth grade. "Mom just leaves my studying up to me now--no nagging but no affection either." Sue felt that now everything was going well in school. School

had taken on a new meaning for her and she was starting to have more friends. She liked this year's classes, except for biology, and was looking forward to next year.

Sue's records showed an eighth grade measured I.Q. of 108. Her DAT percentiles were: Verbal Reasoning 35, Numerical 05, VR and NA 15, Abstract Reasoning 35, Clerical 25, Mechanical 75, Spacial Relations 30, Spelling 25, and Grammar 25. Her scores on the SRA were: English 73, Mathematics 15, Social Studies 50, Natural Science 42, Word Usage 80, and Composite 54.

The counselor was of the impression that Sue had found herself this year. She had talked to Sue on various occasions and could see a marked change in her attitude. In the counselor's opinion, Sue had accepted her mother's treatment and had organized her own life. Her goals were twofold; first, to accomplish something worthwhile so her father would have been proud of her, and secondly, to get sufficient training so she would be able to get away from the home environment when she was graduated.

Sue impressed this observer as being quite mature and very sincere for a sixteen-year-old girl. She had carefully planned her activities and goals for the next two years and was striving to accomplish them. She was highly aware of the situation but outwardly was not letting it ruin her life. She had the support of her

counselor and the majority of her teachers and should be able to successfully complete high school.

### Summary

The primary purpose of the abbreviated case studies was to allow the observer an opportunity to familiarize himself with some of the traits, problems, and general activities of identified low-motivated students. A secondary purpose was to substantiate the value of the MEMO: treatment.

Students with an academic gain were selected in hopes of identifying some of the causative factors which stimulated their improvement. The actual interviews were conducted on a familiar and informal conversational level. Many of the statements in the preceding pages were taken directly out of the context of the interviews. The purpose behind including the often used colloquialism was to emphasize that the interviews were nonstructured.

Time was spent with each student in hopes of establishing a rapport which would allow the student to speak freely. This goal was reached to a satisfactory degree with all students interviewed except in case number three.

The procedure at each school consisted of first talking to the building principal and then to a counselor. Next the student was interviewed. This was followed by discussions with counselor(s) and involved classroom

teachers. The sessions were concluded in the principal's office.

An information form (Appendix K) was completed for each student. Specific comments were recorded and later transcribed. The reason for this was to get as many exact quotes as possible. Students were assured that they and the school would not be identified by name and that their parents would not be informed of the interview. In all but one case, the students reacted favorably and gave the impression that they appreciated having an outsider show some interest in them.

It was explained to each student that no individual help would come to them as a result of the interview. And that the purpose of the interviews was to obtain information that might be helpful to other students. One student commented, "You know, you said that this interview was really to help other kids, but I disagree. I think it has been most helpful to me and I am thankful that you selected me."

No direct evidence was gathered which credited MEMO's letters for the resulting improvement in academic performance. However, the following points were brought out in the interviews.

1. All subjects remembered taking the M-Scales and could recall some of the information contained in the "student letter."



2. In case #1, the "letters" stimulated a family discussion.
3. In case #1, the father met with the school counselor and expressed concern over his son's under-achievement.
4. In case #2, the section in the "student letter" on quotes by high school seniors regarding the subject of dropping out of school assisted the boy to reinforce his own ideals.
5. In case #2, the MEMO: study brought the boy and an overworked counselor together for the first time.
6. In case #5, the father identified the mother as being "overbearing and constantly on the girls to do better." This identification followed the receipt of the "parent letter."
7. In case #5, "something" did cause the mother to become more considerate and less impatient. As stated by the girl, this was noticeable in the latter part of the second semester of the ninth grade.
8. In case #5, the "student letter" did initiate a family conference involving the mothers and daughters.
9. In case #6, the subject definitely felt the mother had "stopped riding her." In the girl's own words, "This may have been due to the MEMO:

letters and maybe not, but I sure am glad it happened."

10. In case #6, the MEMO: project brought the girl and the school counselor together. There is now an excellent rapport established between the two of them.

It was interesting to note that in four of the six cases the interviewed youngsters stated that the MEMO: letters had caused the parents to immediately reprimand them for doing inferior work. In only half of the cases were the students advised by the parents that they too received a letter from Project MEMO:. Two of the six students still had the "student letter" and had read it again during the tenth grade. Three of the students felt the "student letter" was definitely helpful. The other three felt that it did not pertain to them but would be most helpful to students who planned on some form of post-secondary schooling.

In all cases the school personnel were most gracious and cooperative. It was the general consensus that the problem of low-motivated youngsters was an immediate one of critical nature and that any work, suggestions, or assistance in this area would be most gratefully accepted.

## CHAPTER VI

### SUMMARY, DISCUSSION OF RESULTS, CONCLUSIONS, AND IMPLICATIONS

#### Summary

The primary purpose of this study was to determine if a "paper treatment" by an outside agency could stimulate an improvement in academic performance among ninth grade students who had been identified by a reliable instrument and school officials as being low-motivated.

This treatment consisted of letters to high school personnel confirming the identification of low-motivated youngsters, letters to the students themselves describing ten ways to improve grades, and letters to the parents of the students requesting their help in this critical problem. The letters originated with Project MEMO: (a United States Office of Education Talent Search Project) and were personally distributed by high school counselors.

Three hundred and thirty-four Michigan schools involving 51,998 ninth graders participated in the original MEMO: study. A "low-ten" group (bottom 10 per cent of all ninth graders as determined by scores on Farquhar's M-Scales) was selected to receive the treatment. The

"low-ten" M-Scale cut-off scores were 79 for the males and 65 for the females.

All males and females scoring below 79 and 65, respectively, received the letters. To establish a comparison group for this study the investigator selected all males scoring 80-81 and females scoring 66-67 for a nonequivalent control group. Males scoring 78-79 and females with scores of 64-65 were selected from the "low-ten" students for the treatment group. The treatment was given in the early stages of the second semester of the ninth grade. The pretest measurement was the grade point average for each student for the first semester of the ninth grade. The posttest measurements included the grade point averages for the second semester of the ninth grade and the first semester of the tenth grade. The dependent variable was the gain score in grade point average (Gain 1 = first semester ninth from second semester ninth and Gain 2 = first semester ninth from first semester tenth) for each student. The grade point averages were determined on a twelve point scale, i.e., A = 12, A- = 11, B+ = 10 . . . E = 1.

The hypotheses were based on the following possible trends:

1. Lasting results from treatment (significant improvement in Gain 1 and in Gain 2).
2. Short-term results from treatment (significant improvement in Gain 1 only).

3. Delayed results from treatment (significant improvement in Gain 2 only).

### Null Hypotheses

Null hypothesis Ho:1. No difference will be found in grade point averages for Gain 1 and/or Gain 2 between the total treatment and total non-treatment groups.

Null hypothesis Ho:2. No difference will be found in grade point averages for Gain 1 and/or Gain 2 between male (female) treatment and male (female) non-treatment groups.

Null hypothesis Ho:3. No difference will be found in grade point averages for Gain 1 and/or Gain 2 between treatment and non-treatment groups independently in Class A, Class B, Class C or Class D schools.

Null hypothesis Ho:4. No difference will be found in grade point averages for Gain 1 and/or Gain 2 between treatment and non-treatment groups when these groups independently consist of Male-Class A, Male-Class B, Male-Class C, Male-Class D, Female-Class A, Female-Class B, Female-Class C and Female-Class D.

The analysis of data was first tested with an analysis of variance using unequal cells. The results of this are summarized in Table 7. The independent variables were the gain scores in grade point average for each student.

TABLE 7.--Summary of F-ratio's and respective significance levels for Gain 1 and Gain 2.

	Gain 1		Gain 2	
	F-Ratio	Signifi- cance	F-Ratio	Signifi- cance
Main Effect of:				
Treatment	0.179	0.676	0.501	0.486
Sex	0.124	0.723	0.613	0.440
School Size	4.431	0.004	2.284	0.076
Interaction of:				
Treatment and Sex	1.148	0.284	2.269	0.128
Treatment and School Size	1.168	0.321	0.238	0.869
Sex and School Size	0.859	0.464	1.373	0.248
Treatment, Sex and School Size	0.738	0.533	0.367	0.779

Secondly, a one-way analysis of variance was computed to determine cell frequencies, cell mean grade point averages, and Gain 1 and Gain 2 mean grade point averages. The results of this analysis are found in Table 8.

No significant differences were found in either analysis of variance, and null hypotheses 1, 2, 3, and 4 were accepted in their entire forms.

TABLE 8.--Cell frequencies and cell mean grade point averages for the first semester ninth grade, second semester ninth grade, first semester tenth grade, Gain 1 and Gain 2.

Treatment	Sex	School Size	Frequency	1st 9th	2nd 9th	1st 10th	Gain 1	Gain 2
Control	Male	A	143	5.364	5.280	5.160	-.083	-.203
		B	108	5.306	5.244	5.181	-.062	-.125
		C	53	5.124	5.335	5.209	.211	.084
		D	16	4.834	4.828	4.893	-.006	.058
	Female	A	82	6.054	6.012	5.737	-.041	-.317
		B	59	5.739	5.798	5.704	.058	-.035
		C	35	6.151	6.162	6.478	.011	.327
		D	10	6.434	6.706	6.686	.271	.251
Treatment	Male	A	116	5.084	4.805	5.371	-.278	.286
		B	63	5.036	5.081	5.006	.045	-.029
		C	34	4.784	5.037	4.993	.252	.208
		D	15	4.837	5.093	5.446	.256	.609
	Female	A	77	6.252	6.062	5.886	-.189	-.365
		B	44	5.664	5.784	5.631	.119	-.032
		C	29	5.599	5.686	5.807	.087	.208
		D	14	6.163	5.946	6.124	-.217	-.038

NOTE: Grade point averages determined by twelve point scale: A = 12, A- = 11, B+ = 10 . . . E = 1.

Statistically speaking, these results tend to disprove the educational value of the "paper treatment." However, by means of individual case studies with involved students and interviews with high school principals, counselors and teachers, several incidences of definite value were uncovered. Some boys and girls did benefit, as evidenced by an increase in academic performance and by a noticeable improvement in their overall attitude in school. Some parents also benefitted by becoming aware of the concept of low-motivation as related to their son or daughter, and by subsequent discussions with high school counselors.

The known examples, where the MEMO: treatment did have a positive effect, represent the minority and did not significantly alter the statistics in favor of this type of superficial treatment. However, some students did measureably profit from this attempt by an outside agency to affect the academic performance of low-motivated ninth graders. Perhaps the improvement in these isolated cases made the entire project worthwhile.

### Discussion of Results

Within the limitations imposed by the nature of this study, the nature of the samples, and the temporal considerations of the study, the following conclusions were reached:



1. An outside agency cannot significantly influence the level of academic performance in an entire population of low-motivated ninth graders by instituting a letter treatment approach to schools, students, and parents.

The significant results of this study indicated that the treatment was not effective in improving the academic achievements of students who had been identified as being low-motivated. Specific cases, or individuals who might be considered exceptions to the rule, were noted but the over-all statistical evidence was insufficient to substantiate the educational value of the treatment. This is not to say that the treatment had no educational value, but that the results of the statistical analysis for the entire population were not significant.

2. The treatment did not affect one sex more than another, one size school more than another, nor was there any interaction between treatment, sex and school size.

The amount of academic achievement recorded by treatment males over non-treatment males; treatment females over non-treatment females; Class-A, Class-B, Class-C, or Class-D schools; or a combination of treatment and sex; treatment and school size, sex and school size; and treatment, sex, and school size was insufficient to be statistically significant. This conclusion is based on the

results of both the analysis of variance of unequal cells for grade point average gain scores and the one-way analysis of variance for the establishment of cell grade point average means, Gain 1 cell means and Gain 2 cell means.

3. An outside agency, by means of a "paper treatment," can motivate some low-motivated Michigan ninth graders to improve their academic performances.

Even though the two separate analysis of variance studies showed no significant improvement for academic performance for the entire population, many individual exceptions were brought to the writer's attention. In case study #1 in Chapter V, Paul's parents came to his school for the first time, and requested counseling assistance. In case #2, Tom's feeling of the need for a high school education was reinforced by the MEMO: student letter in a time of real decision. In case #4, Virginia stated that the "parent" letter had played an important part in a change in her mother's attitude toward the girls' (including sisters) school performances. In case #6, Susan had been brought together with the high school counselor for the first time when the MEMO: student letters were distributed. Her father had just died and her relationship with her mother was strained. She needed an adult friend and since the initial counseling

contact has been to see the counselor several times. During this same period her academic performance has made a significant improvement. There were also cases of the investigator receiving positive letters and telephone calls from principals, counselors and classroom teachers. The letters did not specifically credit the treatment but they did imply that certain students had improved in actual academic performance; had improved in attitude; were better accepted by their peers; and that parents who had never made any effort to correspond with any school officials had either called or had come in for personal conferences.

In all of the above cases, there was a definite improvement in academic performance following the MEMO: letter treatment. Something, someone or somehow, these students became motivated.

4. Low-motivated ninth grade boys and girls can be successfully identified by an outside agency.

The credit for this identification is given directly to the validity and reliability of the Michigan M-Scales. In the beginning of the MEMO: Project a majority of the participating school officials were skeptical that an outside agency could identify their low-motivated students without studying the school records. Examples of such statements from counselors and principals are:

"The method of selection of these students without the knowledge of their abilities is one question we had. Even without this knowledge on your part, the list of names seemed accurate in almost 100% of the cases."

"Your analysis of our students is amazingly accurate."

"Personally I am very favorably impressed with the accuracy of the instrument used to identify our low-motivated ninth graders."

5. Michigan schools recognize the critical nature of the problem of low-motivated boys and girls and are eagerly seeking assistance to arrest this growing problem.

When first discussing the proposed Project MEMO: study, many educators felt that high schools would be hesitant to release actual academic performance records to an outside agency. Just the opposite was true: 83 per cent of the schools contacted provided complete subject records for the eighth grade, ninth grade and first semester of the tenth grade. In the incidents of the case studies, every school visited provided the investigator with the complete academic records of the student in question. Comments received in writing from high school officials supporting this feeling are:

"Thank you so much for permitting our school to participate in such a worthwhile project."

"I definitely feel that if financially feasible this program should be continued. Every student we help saves a future."

Comments such as these provide evidence of the insight and concern that our high school people have regarding the problem of low-motivation.

### Conclusion

The low-motivated student is a challenge to all educators. This type of student, with an inadequate self-concept and a below average academic record is a prime candidate for the school drop-out list. Being an under-achiever, he is apt to become discouraged and quit the most important venture of his life. He is low-motivated --but not incapable of learning--and he has the academic potential to learn. The problem is to stimulate him--to find the proper source of motivation which will encourage him to strive for self-accomplishments.

Project MEMO: attempted to increase this motivation factor by writing to the school, to the student, and to the parents of identified low-motivated youngsters. Team-work was essential if the low-motivated students were to improve in academic performance. Understanding between school and pupil, between parents and pupil, and even of self was necessary if the low-motivated were to awaken to the potential of the learning process.

Project MEMO: sought the interest and cooperation of high school administrative personnel in an effort to offer another direction of attack on this ever-present educational problem. It was believed that an outside agency could use a more direct approach than many of the school systems could. It was hypothesized that interest from an outside source may, in itself, be a motivating factor for some students and some parents. And it was firmly believed (supported by a successful pilot study) that the "paper treatment" could be effective in causing an increase in academic performance among the low-motivated ninth grade girls and boys in Michigan.

Farquhar and Stewart<sup>1</sup> state that low motivation is a symptom generated from and associated with many forces. They see the important dimensions as:

1. Hostility: the low-motivated adequate ability student uses his under-achievement as a device to punish significant adults.
2. Intolerance of Delayed Rewards: the low-motivated student has little desire or tolerance for delayed academic rewards.
3. Negative Reflected Self Concept: the low-motivated student feels that teachers view him with negative terms.
4. Persistent Syndrome of Under-Achievement: the

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<sup>1</sup>Farquhar and Stewart, op. cit.

syndrome extends way back into their school history.

5. Low Job-Task Involvement: the low-motivated student's task of involvement extends to other commitments of life.
6. Low Academic Involvement: the lowly-motivated student either rejects the goals of school or passively endures their intrusion into his life.
7. Unique Versus Common Accomplishment: doing the unusual, standing out from the crowd, and identifying with the teacher are rejected by the low-motivated male.

Further research by Farquhar<sup>2</sup> has presented evidence which empirically demonstrates that academic motivation is a syndrome composed of non-intellectual factors such as need for academic achievement, self-concept, occupation aspirations and academic personality factors.

It is this investigator's opinion that the key to low-motivation is directly related to the student's concept of self. Brookover<sup>3</sup> states that the student learn what he perceives he is able to learn, and significant others, particularly teachers, have important influences on the development of a student's self-concept. Brookover continues by stating that self-concept is developed

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<sup>2</sup>Farquhar, Motivation . . ., op. cit.

<sup>3</sup>Brookover, "A Social Psychological . . .", op. cit., pp. 84-87.

through interaction with significant others which in turn influences one's behavior and that parents are the most important significant others.

It was with the ideas of motivation, self-concept, and significant others that Project MEMO: formulated the letters treatment plan which included:

1. The child had to be identified as being low-motivated by a reliable instrument.
2. The school had to identify the students as being low-motivated.
3. A counselor, classroom teacher, or coach had to personally recognize the identified low-motivated student and conscientiously work with him to establish a communicable rapport.
4. The student had to know that an outside agency was interested in him and had identified him as one of those students who had more ability than his grades showed.
5. The parents had to be told that their child seemed to have more ability than his grades showed but needed help and support--not merely from teachers and counselors but from the parents. It was emphasized by MEMO: that the parents might make the difference between a successful student and an unsuccessful one.



In isolated cases the treatment worked. Sometimes it was school personnel who aided the student to find himself. Sometimes the student himself was actively searching, and just needed "outside interest" to push him in the right direction; more often it was the parents who made the difference. Project MEMO: identified parents who hindered rather than assisted the process of low-motivation as follows:

1. The High Pressure-Nagging Type.  
Some parents simply put too much pressure on their children to do well in school. They emphasize high performance too much. They are the ones who insist the student make top grades in every subject, regardless of his ability. They nag and rant and fuss, and keep at this even when it doesn't produce results. So what happens? Over the years, the child comes to resent this pressure and learns that one way to 'get back' at his parents is to get low grades. Net result: everyone loses.
2. The Low Pressure-Leave Them Alone Type.  
Some parents rarely show any interest in what their child does in school. They ask few questions about what has happened in school. They let the child merely 'wander' around and through school without any support from home. They aren't displeased with poor grades or pleased with good ones. They live their own lives apart from the child, so the child must live an independent life entirely too early. The child feels 'If no one else cares, why should I?' Net result: everyone loses.

In most cases "high pressure and low pressure" parents did little to change a child's grades, but went a long way toward creating a bad relationship between themselves and their child. The real goal of MEMO: was for the parents to build a closer personal and family relationship any way

they could. It was hypothesized that whatever helped improve the way in which parents and student got along with each other generally, also would improve the academic performance of this low-motivated youngster.

It cannot be denied that the investigator was unable to reject a single null hypothesis, and statistically speaking, the "paper treatment" was a failure. However, who can specifically say how many young lives have to be altered before a treatment can be judged as a "success" or a "failure." On paper, Project MEMO:'s letters failed to demonstrate significant results. In actuality some lives were changed for the better, and possibly several more did benefit and will benefit in the future.

As one principal wrote, "The real effects of this program will probably not be known, but I like to think that you initiated some positive thinking on the part of the parents and youth in this community and this makes it all worthwhile."

And as one counselor wrote, "One of our boys returned to me the next day and stated that he had done a lot of thinking about this and that he intended to get serious. I believe this could well be a turning point in his life."

#### Implications

Because of the complexity of modern day life and the demands which are placed on our young people, the

schools of our nation are consistently faced with low-motivated boys and girls. These students have limited academic skills, low self-concepts and a limited amount of home support, and are destined to unhappy experiences, social and emotional pressures and most importantly, failures. This predictable continuation of unpleasant educational experiences, for low-motivated students, does not project many positive things about our American educational system.

This study was conducted for the purpose of substantiating the value of a project which attempted to improve the academic performances of low-motivated youngsters. The statistical outcome of this study indicates that the need is there, but a different type of treatment or method of treatment must be devised so that many rather than few students will be released from the increasingly heavy burden of being low in motivation. In most cases the student recognizes that he could do better but lacks the necessary concept of self, the support from school personnel, the proper influence of acceptable peers, and the need for love, understanding and loyal support from the home. The student needs to be motivated! He needs to have that spark of enthusiasm kindled within him. He needs to want to learn, to want to study, to want to take advantage of the educational opportunities which are his for the asking.

The problem is not one of identification of the youngsters that fall in this category. Test results, grade point averages, classroom teacher evaluations and instruments such as the Michigan M-Scales can provide positive identification of the low-motivated youngster.

In the MEMO: study, where improvement was noted in a student, it was due simply to the fact that the student and counselor or teacher came together for the first time to discuss a problem other than one of discipline. The student found that someone cared what he did and how he did it. Not only a teacher, but an outside agency as well, cared about him. The evidence provided by the school personnel and students themselves indicates that the key to the problem is in the home. This is the "Achilles tendon" of low-motivation. This must be the focal point of concentrated effort if this problem is to be lessened.

#### Implications for Further Research

The limitations of this study present a whole host of implications for further research in the area of low-motivation. Since there has been very little progress in this area of effecting change in low-motivated students, the value of this study may be more positive in its implications for more research than it is in its general findings.

The implications for further study have been categorized and numbered for ease of presentation.

1. The same treatment that was made available to ninth graders is also worthy of consideration for other grades. The problem of low-motivation is also prevalent in the lower grades, and perhaps younger low-motivated students would respond to the treatment more readily than did the second semester ninth graders.
2. The treatment subjects involved in this study were students who scored a specific number on the M-Scales motivation inventory. The control group was nonequivalent and was composed of students scoring the next two scores higher than the treatment group. This study may have had different results if a true experimental situation could have been utilized. It is also possible that students scoring on the lower end of the M-Scale "low-ten" category would have been more susceptible to change than those who scored on the top end of this range.
3. The possibilities of using several letters, plus informal gatherings could reinforce the feeling of outside interest and, in turn, stimulate the school, student, and parents to respond to the challenge and accomplish the

goal set before them. These discussion-meetings could be specifically for teachers-counselors, students and parents and/or a combination of these important figures.

4. This study was based on the independent variable of gain in grade point average. This grade point average included all grades received by any one particular student. The implication is that the non-academic subjects and academic subjects should be checked separately. It would seem that one area might improve more than the other. Also, the use of grade point average gain is challenged as being a realistic measurement. An achievement test may prove more satisfactory for the pretest and posttest measurements.
5. This study was concerned only with the academic performance of the subjects. Yet, changes in social acceptance and social adjustment were reported by counselors. Perhaps by using a "sociogram" or some similar instrument, the value of the "paper treatment" could be studied as to the social and emotional growth of the subjects.
6. There seems to be a need to study the identified low-motivated youngsters over a longer period of time. In this study, the treatment took

place in the middle of the ninth grade school year. Pretest measurements consisted of grade point averages for one previous semester.

Posttest measurements included the semester of treatment and one additional semester marking period. The academic success at the end of two years would be more meaningful than at the end of one complete semester. Perhaps there would be some significant changes in self-concepts over a longer period of time. And, perhaps the pretest should be over a similar longer period of time.

7. The relative success of the letters sent to the parents in this study indicates further possibilities for studies in the effectiveness of "outside agency" correspondence. By relative success the writer refers to the phone calls, letters from parents, and personal appearances made by parents at the schools. A single letter generated this response. If an outside agency can be more direct and forceful than any one specific school system, perhaps a sequence of letters, could stimulate the parents of low-motivated students more successfully than one single contact.

An area of concern is given by the writer to those persons who may wish to replicate this study: insight

into the student sample, approaches, instrumentation, M-Scale reliability and analysis techniques is mandatory. Any changes in these areas must be understood as contamination of the replication.

The general results of this study did not support the MEMO: "paper treatment" as a means whereby the problem of low-motivation can be eliminated in a large group of students. A few individuals did benefit, but the majority are still under-achieving because they are not properly motivated.

It is nationally recognized that our country loses much talent via the drop-out route from its high schools, and that often the school drop-out has the potential to excell but lacks proper or adequate motivation. What is the key to motivating these youngsters? Whose responsibility is it to see that they are properly identified and then properly treated? What are the reasonable responsibilities of the typical American school to assist its most highly potential drop-outs toward a successful educational experience? Does the "American Plan" of education carry with it some moral obligation to provide a realistic curriculum and supportive student personnel program for the student with low-motivation?

This study concludes that the low-motivated student is a part of the problem facing parents, educators and the public in general today. It is believed that proper



attention and stimulation can have a favorable influence on the academic success of students with low self-concepts and matching low academic records.

The Project MEMO: letters are not the answer to this problem but they did provide a departure point. Now someone else must accept the challenge which, if properly faced, can provide the key to locked educational achievement doors for thousands of American girls and boys, thousands of potential school drop-outs, thousands of potential unemployed adults, and thousands of restless, dissatisfied American citizens.

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## APPENDICES

APPENDIX A

DESCRIPTION OF PROJECT MEMO:



### Project MEMO: Description and Goals

Project MEMO: was a cooperative venture of twenty-six Michigan collegiate institutions which attempted to find new and more effective ways to help two different audiences: (1) the potential high school drop-out, and (2) the graduating senior who had no plans for any type of post-secondary educational training.

MEMO: stood for "More Education = More Opportunity," the basic theme of the project. It was financed by the United States Office of Education under the "talent search" provision of the Higher Education Act of 1965, and by the twenty-six cooperating institutions of higher education, and by the contributed time and services of representatives of many of Michigan's more than 700 public and private high schools.

The collegiate institutions involved were the twenty-five public community colleges of Michigan and Michigan State University. All were equal partners. Each institution contributed the equivalent of thousands of dollars worth of personnel time and services to the project so that the limited MEMO: budget was spent as directly as possible on influencing the students MEMO: served.

Half of Michigan's high school graduates do not go on for education beyond high school. Some cannot afford more, some think they cannot afford any more, some never have been motivated to study more. For these, MEMO: attempted to provide the interest and inspiration to continue for as much learning as each individual could absorb.

In general, Michigan high schools have a fine record of retaining students until graduation, but there still are some students who become school drop-outs before graduation. Project MEMO: sought to encourage potential drop-outs to remain in high school through graduation.

The goals of MEMO: were the same as the goals of educators and the Michigan educational system. Only the methods were different. Both mass media and individual approaches were made to students and parents identified by high school faculty and officials as deserving attention.

Project MEMO: did not offer any courses or provide any financial aid, but did help refer students to appropriate schools for additional study after high school, and also referred students to sources of financial aid, both state and federal.

APPENDIX B

MALE M-SCALE



# The M-Scale for BOYS

## Part I.

### THE GENERALIZED SITUATIONAL CHOICE INVENTORY

The questions on this inventory refer to the spaces on your answer sheet numbered from 1 through 53.

This is a survey of your choices. There are no right or wrong answers. The results will in no way affect your grades in school.

The inventory is made up of pairs of statements. Read each pair carefully.

Answer all questions as honestly and frankly as you can. Only in this way will the results be meaningful. Remember this inventory is about you and you alone. This is not a survey of what you can do, but of what you would like to do.

Do Not Write On This Booklet. You have an answer sheet, which is to be marked with a No. 2 pencil (do not use a pen). Mark between the two small lines beside the answer of your choice. If you prefer "1", mark "1"; if you prefer "2", mark beside "2".

#### EXAMPLE:

Question Sheet	Answer Sheet
Which would you prefer to do? 1. 1) Go to a party, or 2) Read a book	1. 1 = 2 = 3 = 4 = 5 = (Ignore columns 3, 4, and 5)

This student marked beside the number "1" on the answer sheet which means that he would rather go to a party than read a book. Ignore columns "3", "4", and "5".

If you have any questions, raise your hand. If not, proceed now to answer all the questions. Do Not Skip Any Questions! Work as rapidly as you can and do not spend too much time on any one item.

This is not a survey of what you can do but of what you would prefer to do.

Remember the questions in this inventory refer to the spaces on your answer sheet numbered from 1 through 53.

### PLEASE DO NOT WRITE ON THIS QUESTION SHEET

\*\*\*\*\*

I would prefer to:

- 1) Avoid failing in school, or  
2) Do well in school
- 1) Receive a grade on the basis of how well I did on the teacher's test, or  
2) Get a grade on the basis of how hard I tried
- 1) Have the best teachers in the state in my school, or  
2) Have a large recreation center in my school
- 1) Buy a car, or  
2) Continue my education

- 1) Be well prepared for a job after graduation from high school, or  
2) Be well prepared to continue learning
- 1) Have the teacher give everyone the same grade at the beginning of the term and know I had passed, or  
2) Take chances on getting a higher or lower grade at the end of the course
- 1) Develop a new product which may or may not be good, or  
2) Make a product as good as the best one available
- 1) Receive money for my good grades, or  
2) Be allowed to take any course I wanted because of good grades
- 1) Be successful in finishing a job, or  
2) Finish a job
- 1) Get excellent grades because I have a great deal of ability, or  
2) Get average grades because I have average ability

I would prefer to:

- 1) Be graded at the end of a course with the possibility of making an "A", or  
2) Get a "C" at the beginning of a course along with everyone else
- 1) Make quick decisions and sometimes be right and sometimes wrong, or  
2) Deliberate over decisions and usually be right
- 1) Be allowed to take extra courses before or after school, or  
2) Just take courses offered during the school day
- 1) Complete a job which I recognize as difficult, or  
2) Complete a job which others recognize as difficult
- 1) Do as well as most of my classmates, or  
2) Do better than most of my classmates
- 1) Be considered as being strong but not very smart, or  
2) Be considered as being weak but smart
- 1) Be known as a person with much ability, or  
2) Be known as a person with adequate ability
- 1) Work at many less important jobs which I know I would finish, or  
2) Work at one very important job which may never be entirely finished in my life-time
- 1) Be paid for how well I did a job, or  
2) Be paid the same amount no matter how I did the job
- 1) Work rapidly just "skimming" along, or  
2) Work slowly with great thoroughness

I would prefer to:

- 1) Have a better job than my father has, or  
2) Have a job like my father has
- 1) Have a great deal of money, or  
2) Be an expert in my favorite school subject

Continued on the next page.

23. 1) Have average ability and be liked by many people, or  
2) Have superior ability but not be liked by as many people
24. 1) Have everybody in the class get a "C" at the beginning of the course, or  
2) Be graded at the end of the course with the possibility of getting a higher or lower mark
25. 1) Receive a grade on the basis of how much my teacher thinks I have learned, or  
2) Take a course from an instructor who gives "C"'s
26. 1) Be paid for the amount of work I did, or  
2) Be paid by the hour
27. 1) Study my assignments during study hall, or  
2) Wait to study until the mood strikes me
28. 1) Think of an idea that nobody has ever thought of, or  
2) Set a world's speed record
29. 1) Do what I think is right, or  
2) Do what others think is right
30. 1) Work overtime to make more money, or  
2) Get more schooling to make more money

I would prefer to:

31. 1) Inherit a great deal of money, or  
2) Earn a great deal of money
32. 1) Wait until I had finished college and make a better salary, or  
2) Get a job right after high school and make a good salary
33. 1) Plan my life in advance, or  
2) Live my life from day to day
34. 1) Study to go to college, or  
2) Study to get out of high school
35. 1) Have a great deal of influence over people, or  
2) Have a great deal of ambition
36. 1) Carry out the plans of others, or  
2) Create something of my own
37. 1) Be known as being a "good guy" or a "good gal", or  
2) Be known as a person who "does things well"
38. 1) Be very happy, or  
2) Have lots of money
39. 1) Be known as a person who knows his own mind, or  
2) Be known as a person who gets help in making decisions
40. 1) Do something like everyone else, or  
2) Do something outstanding

I would prefer to:

41. 1) Put together a new object, or  
2) Develop new ideas
42. 1) Be demanding on myself to do good work, or  
2) Be demanding on my friends so that they will do good work
43. 1) Do something that I have done before, or  
2) Do something that I never have done before

44. 1) Discover a gold mine, or  
2) Discover a new medicine
45. 1) Have one of my children win a beauty contest, or  
2) Have one of my children win a college scholarship

I would prefer to:

46. 1) Be thought of as being a studious person, or  
2) Be thought of as being a carefree person
47. 1) Be well prepared for a job after graduation from high school, or  
2) Be well prepared to continue learning
48. 1) Receive money for good grades, or  
2) Have my picture in the paper for good grades
49. 1) Do a less recognized but complete job, or  
2) Do a recognized but incomplete job
50. 1) Be known as a person who doesn't let problems worry me, or  
2) Be known as a person who can solve problems well
51. 1) Be known as a good group member, or  
2) Be known as a leader
52. 1) Enjoy myself at a museum, or  
2) Enjoy myself at a night-club
53. 1) Discover a gold mine, or  
2) Discover a new medicine

Now go on to Part II on the next page.

# Part II.

## WORD RATING LIST

The questions in this rating list refer to the spaces on your answer sheet numbered 54 through 121.

Following is a list of words teachers may use to describe students. You are to rate yourself on each word as you think your teachers would rate you.

Be sure to describe yourself as your teachers would, not as you would describe yourself.

Read each word carefully, then decide which of the following ratings would be chosen by your teachers to describe you.

Rating Number	Meaning of Number
1	This word would <u>never</u> describe me
2	This word <u>sometimes</u> describes me
3	This word <u>usually</u> describes me
4	This word <u>always</u> describes me

After you decide how your teacher might rate you, mark the special answer sheet. Make heavy marks. Ignore column "5".

### EXAMPLE:

Question Sheet

Answer Sheet

1. Happy 1 2 3 4

1. 1=2=3=4=5=  
(Ignore Column "5".)

This individual has chosen the rating number "2" for the word "happy". This means that he feels that his teachers think that the word "happy" sometimes describes him.

If you have any questions, raise your hand. If not, begin rating all of the words. Do Not Skip Any Words. Work as rapidly as you can and do not spend too much time on any one word. Remember, you are not to use column "5".

The questions in this rating list refer to the spaces on your answer sheet numbered 54 through 121.

PLEASE DO NOT WRITE ON THIS QUESTION SHEET

\*\*\*\*\*

Ratings: 1.Never 2.Sometimes 3.Usually 4.Always

Ratings: 1.Never 2.Sometimes 3.Usually 4.Always

Teachers feel I am: N S U A	Teachers feel I am: N S U A
64. orderly 1 2 3 4	94. inconsistent 1 2 3 4
65. purposeful 1 2 3 4	95. teachable 1 2 3 4
66. uninterested 1 2 3 4	96. impatient 1 2 3 4
67. studious 1 2 3 4	97. passive 1 2 3 4
68. different 1 2 3 4	98. efficient 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
69. responsible 1 2 3 4	99. easily distracted 1 2 3 4
70. original 1 2 3 4	100. reliable 1 2 3 4
71. consistent 1 2 3 4	101. serious 1 2 3 4
72. intelligent 1 2 3 4	102. smart 1 2 3 4
73. in-the-know 1 2 3 4	103. successful 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
74. rebellious 1 2 3 4	104. "blah" 1 2 3 4
75. nervous 1 2 3 4	105. careful 1 2 3 4
76. systematic 1 2 3 4	106. thorough 1 2 3 4
77. reckless 1 2 3 4	107. orderly 1 2 3 4
78. dependable 1 2 3 4	108. purposeful 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
79. a person who postpones 1 2 3 4	109. creative 1 2 3 4
80. exacting 1 2 3 4	110. intelligent 1 2 3 4
81. lazy 1 2 3 4	111. in-the-know 1 2 3 4
82. stubborn 1 2 3 4	112. decisive 1 2 3 4
83. carefree 1 2 3 4	113. systematic 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
84. intellectual 1 2 3 4	114. intellectual 1 2 3 4
85. alert 1 2 3 4	115. sociable 1 2 3 4
86. above average 1 2 3 4	116. a thinker 1 2 3 4
87. productive 1 2 3 4	117. concerned 1 2 3 4
88. a thinker 1 2 3 4	118. a planner 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
89. ambitious 1 2 3 4	119. reserved 1 2 3 4
90. contented 1 2 3 4	120. easily distracted 1 2 3 4
91. an achiever 1 2 3 4	121. serious 1 2 3 4
92. a planner 1 2 3 4	
93. competent 1 2 3 4	

Turn to back page for Part III



### Part III.

#### HUMAN TRAIT INVENTORY

The questions in this inventory refer to the spaces on your answer sheet numbered 122 through 154.

GENERAL DIRECTIONS: PLEASE READ CAREFULLY!

Following is a list of statements about YOU. Read each statement carefully! Then decide whether this statement is how you always feel, usually feel, sometimes feel or never feel.

Number	Meaning of Number
1	This statement would <u>never</u> describe the way I feel
2	This statement <u>sometimes</u> describes the way I feel
3	This statement <u>usually</u> describes the way I feel
4	This statement <u>always</u> describes the way I feel

Answer each statement -- Do not leave any blank.

There are no right or wrong answers. The answers apply only to you. The way you answer these statements will not affect your school marks in any way. Mark between the lines beside the number that best describes how you feel.

#### EXAMPLE:

##### Booklet

1. I feel it is a good thing to be honest.

##### Answer Sheet

1. 1=2=3=4=5=  
(Ignore Column "5")

This individual has chosen number "2" for the statement "I feel it is always a good thing to be honest." This means he feels that this statement sometimes describes him.

In marking your answers on the separate answer sheet, be sure that the number of the statement in the booklet is the same as the number on the answer sheet. It is best to mark your first impression; try not to change your answer. If you change an answer, erase completely your first choice and then blacken between the lines beside the other column.

The questions in this inventory refer to spaces on your answer sheet numbered 122 through 154.

Remember to answer the statements as they apply to you!

PLEASE DO NOT WRITE ON THIS QUESTION SHEET

\*\*\*\*\*

Ratings: 1. Never 2. Sometimes 3. Usually 4. Always

	N	S	U	A
122. I worry about my grades			1	2
123. I have been quite independent and free from family rule			1	2
124. When I have an opinion, I stand up for it			1	2
125. It is difficult for me to keep interested in most of my school subjects			1	2
126. I have difficulty working under strict rules and regulations			1	2
127. I flirt			1	2

Ratings: 1. Never 2. Sometimes 3. Usually 4. Always

	N	S	U	A
128. Most of my school subjects are a complete waste of time			1	2
129. Most of my school subjects are useful			1	2
130. I find it difficult to find the time to study my assignment for the next day			1	2
131. I have done something that is considered dangerous just for the thrill of it			1	2
132. When I was a youngster, I stole things			1	2
133. Even when I do sit down to study, I find that my mind tends to wander			1	2
134. I have to be in the mood before I can study			1	2
135. I like to make the best grades possible			1	2
136. I like to study			1	2
137. I like to plan very carefully what courses I will take in school			1	2
138. I have played hooky from school			1	2
139. I plan my activities in advance			1	2
140. I want very much to be a success			1	2
141. I work under a great deal of tension			1	2
142. I have trouble waiting for a class to be over			1	2
143. I get disgusted with myself if I don't do as well as I should			1	2
144. I feel that I haven't any goals or purpose in life			1	2
145. I like to be consistent in the things I do			1	2
146. I like to go to the movies more than once a week			1	2
147. I would like to belong to a motorcycle club			1	2
148. I sweat very easily, even on cold days			1	2
149. I can read a long while without tiring my eyes			1	2
150. A college education is unimportant to me			1	2
151. I like fiction stories more than I do factual novels			1	2
152. I would feel satisfied if one of my papers was read to the class in school			1	2
153. I feel I would make a good leader if given the chance			1	2
154. I like being with people in social gatherings			1	2

Now return both the Question Sheet and the Answer Sheet to the teacher.



APPENDIX C

FEMALE M-SCALE

# The M-Scale for Girls

## Part I.

### THE GENERALIZED SITUATIONAL CHOICE INVENTORY

The questions on this inventory refer to the spaces on your answer sheet numbered from 1 through 46.

This is a survey of your choices. There are no right or wrong answers. The results will in no way affect your grades in school.

The inventory is made up of pairs of statements. Read each pair carefully.

Answer all questions as honestly and frankly as you can. Only in this way will the results be meaningful. Remember this inventory is about you and you alone. This is not a survey of what you can do, but of what you would like to do.

Do Not Write On This Booklet. You have an answer sheet, which is to be marked with a No.2 pencil (do not use a pen). Mark between the two small lines beside the answer of your choice. If you prefer "1", mark "1"; if you prefer "2", mark beside "2".

#### EXAMPLE:

##### Question Sheet

Which would you prefer to do?

1. 1) Go to a party, or  
2) Read a book

##### Answer Sheet

1. 1 = 2 = 3 = 4 = 5 =  
(Ignore columns 3, 4, and 5)

This student marked beside the number "1" on the answer sheet which means that he would rather go to a party than read a book. Ignore columns "3", "4", and "5".

If you have any questions, raise your hand. If not, proceed now to answer all the questions. Do Not Skip Any Questions! Work as rapidly as you can and do not spend too much time on any one item.

This is not a survey of what you can do but of what you would prefer to do.

Remember the questions in this inventory refer to the spaces on your answer sheet numbered from 1 through 46.

PLEASE DO NOT WRITE ON THIS QUESTION SHEET

oooooooooooooooooooooooooooo

I would prefer to:

1. 1) Work hard for what I get, or  
2) Just get what I want
2. 1) Work hard to be smart, or  
2) Take it easy and become rich
3. 1) Be thought of as being a studious person, or  
2) Be thought of as being a carefree person
4. 1) Have the best teachers in the state in my school, or  
2) Have a large recreation center in my school

5. 1) Buy a car, or  
2) Continue my education
6. 1) Be well prepared for a job after graduation from high school, or  
2) Be well prepared to continue learning
7. 1) Pass a usual classroom examination, or  
2) Pass a college entrance examination
8. 1) Have the teacher give everyone the same grade at the beginning of the term and know I had passed, or  
2) Take chances on getting a higher or lower grade at the end of the course
9. 1) Develop a new product which may or may not be good, or  
2) Make a product as good as the best one available.
10. 1) Get excellent grades because I have a great deal of ability, or  
2) Get average grades because I have average ability.

I would prefer to:

11. 1) Be known to my parents as an intelligent person, or  
2) Be known to my parents as a practical person
12. 1) Be a person of leisure, or  
2) Be a person of action
13. 1) Receive money for good grades, or  
2) Have my picture in the paper for good grades
14. 1) Have someone show me the solution to a problem, or  
2) Take a long time to figure out a problem for myself
15. 1) Be known as a person with much ability, or  
2) Be known as a person with adequate ability
16. 1) Be an able person, or  
2) Be wealthy

I would prefer to:

17. 1) Work hard in everything I do, or  
2) Work at things as they come along
18. 1) Study my assignments during study hall, or  
2) Wait to study until the mood strikes me
19. 1) Perform well in class, or  
2) Watch television
20. 1) Save enough money to buy something with cash, or  
2) Buy something on credit and pay for it as I use it.

I would prefer to:

21. 1) Inherit a great deal of money, or  
2) Earn a great deal of money
22. 1) Wait ten years and receive fame throughout the nation, or  
2) Receive fame in my community overnight
23. 1) Wait until I had finished college and make a better salary, or  
2) Get a job right after high school and make a good salary

Continued on the next page.

24. 1) Study to go to college, or  
2) Study to get out of high school
25. 1) Enjoy myself at a museum, or  
2) Enjoy myself at a night-club
26. 1) Be known as being a "good guy" or a "good gal", or  
2) Be known as a person who "does things well"
27. 1) Do something like everyone else, or  
2) Do something outstanding
28. 1) Study for an exam one night and know that I would receive an "A", or  
2) Go to a party on this night and take a chance on a lower grade
29. 1) Work hard enough to be outstanding, or  
2) Work hard enough to pass my courses
30. 1) Learn by defeating an experienced player, or  
2) Learn by losing to an expert

I would prefer to:

31. 1) Have no outstanding abilities, but be liked by others, or  
2) Be able to do things well even though others didn't like me for it
32. 1) Buy a car, or  
2) Continue my education

I would prefer to:

33. 1) Pass a usual classroom examination, or  
2) Pass a college entrance examination
34. 1) Draw a freehand picture which may or may not be good, or  
2) Trace an excellent picture drawn by someone else
35. 1) Be thought of as a person with usual ideas, or  
2) Be thought of as a person with unusual ideas
36. 1) Make quick decisions and sometimes be right and sometimes wrong, or  
2) Deliberate over decisions and usually be right
37. 1) Be a person of leisure, or  
2) Be a person of action
38. 1) Be paid for the amount of work I did, or  
2) Be paid by the hour
39. 1) Work hard in everything I do, or  
2) Work at things as they come along
40. 1) Be known for what I could do, or  
2) Be known for what I do

I would prefer to:

41. 1) Memorize someone else's poem, or  
2) Create a poem of my own
42. 1) Work overtime to make more money, or  
2) Get more schooling to make more money
43. 1) Wait until I had finished college and make a better salary, or  
2) Get a job right after high school and make a good salary

44. 1) Study to go to college, or  
2) Study to get out of high school
45. 1) Be able to say I had successfully completed a task, or  
2) Be able to say I had attempted a difficult task
46. 1) Do something like everyone else, or  
2) Do something outstanding

**Now go on to Part II on the next page.**

## Part II.

### WORD RATING LIST

Questions in this rating list refer to the spaces on your answer sheet numbered 47 through 126.

Following is a list of words teachers may use to describe students. You are to rate yourself on each word as you think your teachers would rate you.

Be sure to describe yourself as your teachers would, not you would describe yourself.

Read each word carefully, then decide which of the following ratings would be chosen by your teachers to describe you.

Rating Number	Meaning of Number
1	This word would <u>never</u> describe me
2	This word <u>sometimes</u> describes me
3	This word <u>usually</u> describes me
4	This word <u>always</u> describes me

After you decide how your teacher might rate you, mark the special answer sheet. Make heavy marks. Ignore column "5".

#### EXAMPLE:

Question Sheet	Answer Sheet
1. Happy 1 2 3 4	1. 1 = 2 = 3 = 4 = 5 = (Ignore Column "5".)

If an individual has chosen the rating number "2" for the word "happy". This means that he feels that his teachers think that the word "happy" sometimes describes him.

If you have any questions, raise your hand. If not, begin rating all of the words. Do Not Skip Any Words. Work as quickly as you can and do not spend too much time on any one word. Remember, you are not to use column "5".

Questions in this rating list refer to the spaces on your answer sheet numbered 47 through 126.

#### EASE DO NOT WRITE ON THIS QUESTION SHEET

\*\*\*\*\*

Ratings: 1.Never 2.Sometimes 3.Usually 4.Always	Ratings: 1.Never 2.Sometimes 3.Usually 4.Always
Teachers feel I am: N S U A	Teachers feel I am: N S U A
1. talented 1 2 3 4	57. studious 1 2 3 4
2. practical 1 2 3 4	58. different 1 2 3 4
3. average 1 2 3 4	59. discontented 1 2 3 4
4. logical 1 2 3 4	60. flighty 1 2 3 4
5. smart 1 2 3 4	61. responsible 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
6. successful 1 2 3 4	62. consistent 1 2 3 4
7. thorough 1 2 3 4	63. intelligent 1 2 3 4
8. orderly 1 2 3 4	64. distractable 1 2 3 4
9. purposeful 1 2 3 4	65. nervous 1 2 3 4
10. a procrastinator 1 2 3 4	66. systematic 1 2 3 4

### Ratings: 1.Never 2.Sometimes 3.Usually 4.Always

Teachers feel I am: N S U A	Teachers feel I am: N S U A
67. daring 1 2 3 4	97. logical 1 2 3 4
68. a person who postpones 1 2 3 4	98. successful 1 2 3 4
69. exacting 1 2 3 4	99. careful 1 2 3 4
70. stubborn 1 2 3 4	100. thorough 1 2 3 4
71. perfectionistic 1 2 3 4	101. purposeful 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
72. accepting 1 2 3 4	102. studious 1 2 3 4
73. carefree 1 2 3 4	103. energetic 1 2 3 4
74. competitive 1 2 3 4	104. responsible 1 2 3 4
75. intellectual 1 2 3 4	105. creative 1 2 3 4
76. alert 1 2 3 4	106. consistent 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
77. above average 1 2 3 4	107. intelligent 1 2 3 4
78. productive 1 2 3 4	108. energetic 1 2 3 4
79. persuadable 1 2 3 4	109. "sharp" 1 2 3 4
80. a thinker 1 2 3 4	110. exacting 1 2 3 4
81. ambitious 1 2 3 4	111. accepting 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
82. contented 1 2 3 4	112. persistent 1 2 3 4
83. concerned 1 2 3 4	113. intellectual 1 2 3 4
84. an achiever 1 2 3 4	114. sociable 1 2 3 4
85. a planner 1 2 3 4	115. alert 1 2 3 4
86. competent 1 2 3 4	116. adventurous 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
87. teachable 1 2 3 4	117. productive 1 2 3 4
88. reasonable 1 2 3 4	118. relaxed 1 2 3 4
89. impatient 1 2 3 4	119. optimistic 1 2 3 4
90. friendly 1 2 3 4	120. a thinker 1 2 3 4
91. efficient 1 2 3 4	121. determined 1 2 3 4
Teachers feel I am: N S U A	Teachers feel I am: N S U A
92. easily distracted 1 2 3 4	122. an achiever 1 2 3 4
93. reliable 1 2 3 4	123. a planner 1 2 3 4
94. serious 1 2 3 4	124. inquisitive 1 2 3 4
95. curious 1 2 3 4	125. fault-finding 1 2 3 4
96. confident 1 2 3 4	126. reliable 1 2 4 4

Turn to back page for Part III.

# Part III.

## HUMAN TRAIT INVENTORY

The questions in this inventory refer to the spaces on your answer sheet numbered 127 through 164.

GENERAL DIRECTIONS: PLEASE READ CAREFULLY!

Following is a list of statements about YOU. Read each statement carefully! Then decide whether this statement is how you always feel, usually feel, sometimes feel or never feel.

Number	Meaning of Number
1	This statement would <u>never</u> describe the way I feel
2	This statement <u>sometimes</u> describes the way I feel
3	This statement <u>usually</u> describes the way I feel
4	This statement <u>always</u> describes the way I feel

Answer each statement -- Do not leave any blank.

There are no right or wrong answers. The answers apply only to you. The way you answer these statements will not affect your school marks in any way. Mark between the lines beside the number that best describes how you feel.

### EXAMPLE:

#### Booklet

1. I feel it is a good thing to be honest.

#### Answer Sheet

1. 1=2=3=4=5=  
(Ignore Column "5")

This individual has chosen number "2" for the statement "I feel it is always a good thing to be honest." This means he feels that this statement sometimes describes him.

In marking your answers on the separate answer sheet, be sure that the number of the statement in the booklet is the same as the number on the answer sheet. It is best to mark your first impression; try not to change your answer. If you change an answer, erase completely your first choice and then blacken between the lines beside the other column.

The questions in this inventory refer to spaces on your answer sheet numbered 127 through 164.

Remember to answer the statements as they apply to you!

PLEASE DO NOT WRITE ON THIS QUESTION SHEET

\*\*\*\*\*

Ratings: 1. Never 2. Sometimes 3. Usually 4. Always  
N S U A

127. Many times I become so excited I find it hard to go to sleep	1 2 3 4
128. I daydream frequently	1 2 3 4
129. I work things out for myself rather than have a friend show me how	1 2 3 4
130. It is difficult for me to keep interested in most of my school subjects	1 2 3 4
131. I flirt	1 2 3 4
132. Most of my school subjects are useful	1 2 3 4
133. I like just about everything about school	1 2 3 4
134. I have a hard time concentrating on the subject during class periods	1 2 3 4

Ratings: 1. Never 2. Sometimes 3. Usually 4. Always

135. Even when I do sit down to study, I find that my mind tends to wander	1 2 3 4
136. I like to make the best grades possible	1 2 3 4
137. I like to study	1 2 3 4
138. I like to plan very carefully what courses I will take in school	1 2 3 4
139. I am said to be quick tempered	1 2 3 4
140. I learn slowly	1 2 3 4
141. It would be worthwhile to belong to several clubs or lodges	1 2 3 4
142. I plan my activities in advance	1 2 3 4
143. I think I would like the work of a teacher	1 2 3 4
144. I want very much to be a success	1 2 3 4
145. I would be uneasy if some of my family were in trouble with the police	1 2 3 4
146. I get disgusted with myself if I don't do as well as I should	1 2 3 4
147. I like to plan my activities in advance	1 2 3 4
148. I like being with people in social gatherings	1 2 3 4
149. Some subjects are so unpleasant to me that I can't talk about them	1 2 3 4
150. I like to be consistent in the things I do	1 2 3 4
151. I would like to belong to a motorcycle club	1 2 3 4
152. It does not bother me to speak before groups or people	1 2 3 4
153. I enjoy cooking	1 2 3 4
154. While in trains, buses, etc., I strike up a conversation with a stranger	1 2 3 4
155. When I have an opinion, I stand up for it	1 2 3 4
156. I enjoy reading the editorials in the newspaper	1 2 3 4
157. If several friends and I were in trouble, I would rather take the whole blame than give them away	1 2 3 4
158. I like just about everything about school	1 2 3 4
159. Even when I do sit down to study I find that my mind tends to wander	1 2 3 4
160. Unimportant thoughts keep running through my mind and bothering me	1 2 3 4
161. I enjoy social activity	1 2 3 4
162. I like to plan my activities in advance	1 2 3 4
163. I like being with people in social gatherings	1 2 3 4
164. I like to be consistent in the things I do	1 2 3 4

Now return both the Question Sheet and the Answer Sheet to the teacher.

APPENDIX D

SOURCES OF ADDITIONAL INFORMATION

ON M-SCALES

- Farquhar, W. W., and Payne, D. "Factors in the Occupational Motivation of High School Under- and Over-Achievers," APGA Journal (November, 1963).
- \_\_\_\_\_. "A Classification and Comparison of Techniques Used in Selecting Under- and Over-Achieving Students," APGA Journal (May, 1964).
- Farquhar, W. W. Motivation Factors Related to Academic Achievement. United States Office of Education, Project 846, ER 9, Office of Research and Publications, College of Education, Michigan State University, East Lansing, Michigan, 1963. 506 pp.
- Green, R. L., and Farquhar, W. W. "Negro Academic Motivation and Scholastic Achievement," Journal of Educational Psychology, LVI, No. 5 (1965).
- Payne, D., and Farquhar, W. W. "The Dimensions of an Objective Measure of Academic Self-Concept," Journal of Educational Psychology, LIII, No. 4 (1962).
- Taylor, R. G., and Farquhar, W. W. "Personality, Motivation, and Achievement: Theoretical Constructs and Empirical Factors," Journal of Counseling Psychology, XII, No. 2 (1965).
- \_\_\_\_\_. "The Validity and Reliability of the Human Trait Inventory Designed to Measure Under- and Over-Achievement," Journal of Educational Research, LIX, No. 5 (1966).

APPENDIX E

LETTER TO PRINCIPAL IDENTIFYING  
THE "LOW-TEN" STUDENTS



Dear Principal:

Thank you very much for participating in the Project MEMO: study of 9th graders' academic motivation. Results for your school are enclosed, but before you start working with them, please note these important items:

1. The M-Scales your students completed last month are carefully-validated instruments. They identify student motivation more accurately than any other approach so far developed, but remember: No test is infallible. Your students on the list below are most likely to be the lowest-motivated among your 9th graders who participated in this study, but there could be some individuals so identified who should not be on the list.

2. Please interpret your list of "low-ten" students against the background of your own knowledge and judgment. If for any reason you believe a named student should not be on the list, by all means delete that student. Throw away the letters addressed to the student and his parents.

3. The letters to parents and student do not identify students as "lowly-motivated." All they indicate is that the student "probably could be making better grades." In the unlikely event that a student on your list already is making very high grades--i.e., A- or better average--that student should be deleted, too.

4. Enclosed are extra copies (not in envelopes) of the letter to students and the letter to parents. Teachers and counselors who work with your "low-ten" students well could read these, so they will be familiar with the contents, should there be queries. Additional copies of these letters are available in any quantity, and without charge.

5. If some answer sheets are enclosed, they were "non-scorable" (meaning the student either didn't finish or so failed to follow instructions he produced an unusable answer sheet). "Non-scorables" are not counted as usable returns, and did not affect the composition of the "low-ten" group. We return these merely for your information, without comment or interpretation.

6. The 9th grade study included 334 different schools, and 51,998 different students. There were 50,661 usable returns. Names on the list are your students scoring in the lowest 10% of the 50,661 total, with boys and girls grouped separately. Your number in the "low-ten" group

Page 2

may be smaller or larger than 10% of your 9th graders, depending on the particular audience you serve.

7. The following list is in random order. Students are not "ranked"--all are in the "low-ten" group.

Male students

Female students

After you review the students on your list, and read the letters to students and parents, please have home addresses added to the letters addressed to parents. Place these in the United States mail, and that same day or the next day, deliver the student letters while the students are in school. This timing is important to gain maximum impact.

9. The one remaining part of this study comes at the end of the school year this spring, when we'll ask for the grades for each student on your "low-ten" list. We'll initiate this.

10. Anything your teachers or counselors now can do to provide extra support for the "low-ten" group will be very important and very influential. How you do this will depend on your local situation, but even a little extra attention will go a long way.

If you have questions, suggestions, or comments, I'll be pleased to hear from you.

Sincerely,

David V. Schultz  
Director, Project MEMO:

APPENDIX F

STUDENT "SHINGLE" LETTER

XI. If you could, would you drop out of school? If so, read this:

X. Are you outside the "in" group at school? If you are, read this:

IX. Do you put school work off? If you do, read this:

VIII. Do you sometimes feel that nothing ever will go right? If so, read this:

VII. Do your parents "ride" you too hard about school work? If so, read this:

VI. Do you feel your parents really don't care about you or how you do in

V. Do you feel teachers have a low opinion of you? If you do, read this:

IV. Do you have trouble concentrating? If you do, read this:

III. Do you blow up when a teacher criticizes you? If you do, read this:

II. Are you so busy with "other things" you don't have time for school work?

I. Do you expect too much from your teachers? If you do, read this:

# PROJECT MEMO:

MORE EDUCATION, MORE OPPORTUNITY

Post Office Box 6366  
East Lansing, Michigan 48823  
AC 517 / 353-6366

Dear Student:

Ever wondered whether you could earn better grades in school? Would you like to?

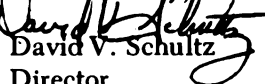
You probably can. According to the way you scored on a test you took in school recently, you're one of those students who have more ability than their grades show.

The purpose of this letter is to help you raise those grades. That's if *you* really want them to improve just to please *yourself*. Of course, it's easy to decide to do better (but really tough to bring it off). But if you're interested, so are we, and we have some ideas that we think can help you.

Attached are several questions. Find one that fits you, then read the suggestions on that page. Try putting some of the suggestions into action.

The more suggestions you apply, the higher grades you'll get. The sooner you start, the sooner they'll go up. Good luck.

Most sincerely,

  
David V. Schultz

Director

Project MEMO:

# PROJECT MEMO: □

MORE EDUCATION, MORE OPPORTUNITY

Post Office Box 6366  
East Lansing, Michigan 48823  
AC 517 / 353-6366

Dear Student:

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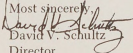
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Attached are several questions. Find one that fits you, then read the suggestions on that page. Try putting some of the suggestions into action.

The more suggestions you apply, the higher grades you'll get. The sooner you start, the sooner they'll go up. Good luck.

Most sincerely,



David V. Schultz

Director

Project MEMO:

I. Do you expect too much from your teachers? If you do, read this:

1. Not all teachers and not all classes are going to be interesting all the time—any more than you can say bright, clever things all the time, or be attractive to every other student in every class every day.
2. Usually you can gain something from any class you take. It's only natural that for some classes, you have to work harder than for others.
3. Teachers have problems, too. They get tired, they worry about things, and sometimes they feel no one thinks very much of them. Try to understand them the way you want them to understand you; it helps.
4. There is only one person in the entire world who is responsible for your learning. That's you. Not your teacher, not your counselor, not your principal, not your parents. Just you. All the others can help, but in the final analysis the responsibility rests on your shoulders.
5. The best way to help is to be a partner. **Join with** your teacher (instead of picking a fight with someone who is trying to help you). What the two of you could accomplish together might surprise you.

**II. Are you so busy with "other things" you don't have time for school work?  
If you are, read this:**

1. Athletics, cheerleading, shows, TV, talking — you name it, there are a lot of interesting things to do if you really want to ignore school and studies.
2. Most of us would rather have fun than work — but there's a limit to everything, and a rich life really means study, then fun and games.
3. In the 9th grade, you have only a little more than three more years of high school and then you'll be graduated. You can prepare for a happier life tomorrow by doing "first things first" today.
4. You want to make something of yourself, to make others proud of you? You have to work at this all through high school. You can't just suddenly decide at age 18 and then be an instant success.
5. Athletics and cheerleading, and shows and TV, and talking — all these are good. The trick is to fit them into your schedule the right way. Your health comes first, your school work comes second — and then comes the fun. Put things in that order with balance, and you'll have fewer troubles.

III. Do you blow up when a teacher criticizes you? If you do, read this:

1. Most of us have trouble learning how to "handle" criticism.
2. When you goof, and get criticized for it, you really have these choices:
  - a. you can "pick up your marbles" and go home (in other words, quit).
  - b. you can stamp your foot in anger and blame someone else.
  - c. you can think there's not much about yourself that is worth anything.
  - d. or you can say to yourself, "What is there I can learn from this experience?"
3. We learn to handle criticism by trying to find what it is we can change — so we won't be criticized for that same thing again.
4. Find the *very specific thing* that you did wrong. Change it. At least *try* the teacher's way — it just might be better than whatever you did first (and besides, it might calm her down.).
5. Don't expect you'll never again be criticized or that all criticism will be fair. Most teachers try to be fair, but they have their moments, too, you know. We all are criticized — to our faces or behind our backs. But the most successful persons are those who learn from experience, who know that blowing up doesn't help, and who discover that many times a little change can make life a lot more pleasant.



IV. Do you have trouble concentrating? If you do, read this:

1. No one is born with the automatic ability to concentrate. We all have to learn it.
2. All that concentration means is doing just one thing at a time and ignoring everything else.
3. You probably can concentrate better than you think — on something you really like. Eating, for example, or watching a good show.
4. Learning to concentrate on school work means thinking about *nothing* but a particular part of a particular assignment, for whatever time you're concentrating. But don't kid yourself into thinking you can do your homework with the radio, phono, or TV on. Sure, you always have, and when you turn off the sound or picture you have problems. *Removing a distractor can also be distracting.* You have to learn to do your work without the distractor.
5. Five minutes? That's good for a start. Then stretch it to ten. You'll find you can get more done in ten minutes of *concentrated* study than you could in an hour of fiddling around, paying just half-attention.
6. Concentrating is a way of getting more "pay" for your "work" — getting more learning for the time you put in. And you control your own pay raise.

V. Do you feel teachers have a low opinion of you? If you do, read this:

1. How good is your evidence of this "low" opinion? Or have you let a few incidents bug you?
2. Just because *one* teacher doesn't have a good opinion of you is no sign that *all* teachers don't have a good opinion of you. Be fair to yourself; don't assume that because one teacher thinks one way, all teachers think the same way. They don't—but they might if you force them to.
3. Just because a teacher doesn't have an outstandingly *good* opinion of you is no sign that teacher automatically has a *bad* opinion of you. There's such a thing as being neutral, you know.
4. Honestly now, have you given any teacher a reason for disliking something you've done?
5. Have you gotten pretty mad about being criticized? Do you suppose this could be what the teacher dislikes, rather than disliking you as a person?
6. Have you clowning around, knowing good and well that you were making things difficult?
7. Have you caught the teacher in some mistake and used this against the teacher?

VI. Do you feel your parents really don't care about you or how you do in school? If so, read this:

1. You want to be able to love your folks, and you want them to love you, too, and to be interested in you, and to care about you, and to be proud of you when you do something well and to be disappointed for you when things go wrong.
2. That's the way nearly all parents feel about their children, too — only some parents don't let a son or daughter know this is the way they feel.
3. Some parents find it very hard to "show" their love. That doesn't mean they don't care; it just means they have trouble talking about it.
4. Some parents have so many worries they may not seem to pay much attention to their children. That's probably more because they're trying to solve a problem than it is because they don't care.
5. In a separate letter, we are asking your folks whether this "don't care" attitude might be one of their problems, and suggesting how to improve the way you and they get along.
6. If you see even the faintest glimmer of a new interest from your parents, help them along all you can, won't you? They may stumble a bit at first, so you'll have to be very patient and very understanding.
7. If you and your folks start to get along better, do everything you can to keep up that good relationship. It's a great thing. Doing better in school will help a lot, so do your best.

VII. Do your parents "ride" you too hard about school work? If so, read this:

1. Some parents are the "High Pressure-Nagging" type. They're all the time fussing and griping and nagging and asking whether you've finished this or done that and threatening to "ground" you or take away some privilege if you don't straighten up and fly right.
2. This is fairly common (in fact, you'll have to watch out you don't do the same things to your own children).
3. This pressure is high because parents think it is the best way to help you. Yes, they really want to help — they know how much a good education can mean, and they want to be sure you get the best. It's just that sometimes they over-do.
4. In a separate letter, we are writing your parents to ask whether they have this problem, and to suggest how to improve the way you and they get along.
5. Try giving your folks a fresh start, won't you? If they try to be more understanding, meet them half way. If they get off your back about school work, see what you can do on your own. Most likely you've resented their not treating you like an adult, so how about acting in a way that will make them sit up and take notice (good notice) of you? You know—be careful, more action, less bellyaching.
6. If for the first time in a long time your parents tell you straight out they love you, try telling them how you love them. Your parents may be embarrassed—yes, really—as they try to change their ways and to let you know how much they really feel for you. Help them all you can.

VIII. Do you sometimes feel that nothing ever will go right? If so, read this:

1. Most people, adults and students alike, feel like this at one time or another. When this happens, what we all need is a chance to share our feeling with someone else, and a chance to look at the brighter side of things.
2. When this feeling hits you, pick out some adult you especially like — a teacher, a counselor, a principal, a parent, your third grade teacher from way back, a clerk in a store, just someone you like—and see whether the two of you can have a talk together.
3. One way to start a conversation like this is to ask: What do you do when you're feeling "down" all over, and just can't seem to see anything good in life?
4. Listen hard. Maybe your friend has problems, too. See whether you can be of any help to him or her (yes, 9th graders frequently can help adults).
5. What can you learn from your friend's experience? Is there some good pick-me-up method you, too, can try? Or some mistake you can avoid?
6. Watch out if you're tending to blame someone else for all your troubles. See whether there isn't at least one place where maybe *you're* the cause of the trouble. And if you're the cause, then you can also be the solution. Correct even that one item, and things will be just a little better.
7. If your world continues to be all "down" for too long a time, you might think about consulting a doctor. Maybe even a visit to the school nurse might get you started toward feeling better quickly.

IX. Do you put school work off? If you do, read this:

- Most of us are "putter-offers" at one time or another. We—
- think we have more time than we really do have to do a job;
  - always let anything else that comes up get done first;
  - think there will be some magic moment when we'll feel just like pitching in and getting the job done (there never is);
  - let things build up until finally we cannot possibly recover;
  - don't want to do the job in the first place.

Sound familiar? Of course, but how do you improve? Do these things:

1. Recognize how "put-off" works in you. It can be licked by breaking big tasks into small ones.
2. Pick out *one* school job—some homework, or some reading, or any kind of assignment (even the easiest one, if you wish) and get it done before tomorrow. You can do just *one* where you might not be able to finish everything.
3. When you're doing this one job, concentrate on it. Force yourself to finish it. Don't let anything else interfere. And don't worry about other assignments—get this first *one* done first.
4. After you finish the *first* job, make a list of all the others that have to be done for tomorrow. See how many of these you can finish before school starts tomorrow. Concentrate on *one* assignment at a time, and and be sure it's done before you move on to the next.
5. When you actually complete all you can for tomorrow, congratulate yourself. This is a fine start. If you can make this kind of a start, you can keep going for another day. So keep going. After you've kept up for two days straight, try stretching them to a week. In the end you won't be playing games with yourself about what you *need* to do.

X. Are you outside the "in" group at school? If you are, read this:

1. Have you ever analyzed just what it is that makes certain students popular and others unpopular?
2. Studies show that the most popular students are cheerful, happy, co-operative, helpful, enthusiastic but self-controlled, friendly, considerate, honest, unselfish. The least popular students are show-offs, disinterested in others and their activities, shy, rebellious, or boastful.
3. Look the list over carefully. Notice how many of the words describe you. Notice how many are changeable characteristics. Of course, only in fairy tales can you become handsome or beautiful overnight; but you can show interest in others, be concerned about their successes or failures, or curb your sharp tongue. You also can stick your neck out so that people know you care. Popular people take chances, and when they are ignored, shrug it off as the other person's problem. Sure, looking nice counts, too, but it is only one small part of relating to other human beings.
4. It's said that to have a friend, you must be one. If you don't have as many friends as you'd like, could you gain one more by being friendly to someone you'd like to know better? If this means sticking your neck out, OK. It will be worth it.
5. Building friendships and close relationships is something most of us have to work on. These things don't "just happen" all by themselves, you have to help them along.
6. Don't try to rush friendships. If you can build up a new one every month or so, you'll be doing great.
7. Whatever your number of close friends, don't ever break your own personal standards just to be popular. Always be able to be proud of yourself.

You're not the first to think of this. For some comments, let's go to some students who are seniors in Michigan high schools this year. In a separate study, Project MEMO: asked these seniors for their opinions about what causes school drop-outs, and what could be done about this problem, and why they themselves weren't among the drop-outs. Here are some of their actual answers to that last question:

"I have some friends who are dropouts, they can't hold a job, and if they do get one, it's Mickey Mouse."

"I know dropouts don't have a prayer in today's world."

"I was a dropout last year. I quit and then came back because you can't get a good job without a high school diploma."

"Knowing a dropout, I would not forsake my education for temporary thrills and heartache and insecurity."

"I know what kind of job I'd have if I was a dropout. Shoveling manure. You can't raise a family on that."

"I dislike school very much but I won't drop out because I saw what it did to five guys on my block alone."

"My mother and father were dropouts. To this day they regret it. I'm never going to."

"No one will hire a dropout. They feel that if you can't stay in school and stick it out how can you stick a job out? They're right."

"Dropouts won't amount to anything in this world today. You have to have an education if you want to be anything."

"I'm not fond of digging ditches."

"If I don't go to school now, I'll only end up sweeping floors and taking night classes somewhere, or else getting blown up in Viet Nam."

"My older brothers. They were both dropouts and they told me if I left school they would kill me."

"It pleases my father that I'm in school. Sometimes I wish I were out but I can't hurt my father by telling him this."

"I wouldn't know what to do if I did drop out. I'd lose lots of my friends."

"I am a Negro; it has been harder for me in the past and will be harder yet in the future. Being Negro I have to strive twice as hard as the average white student. This main thought with the help and encouragement of my mother has kept me working in school."

"I don't plan to go to college, so I figure I might just as well learn all I can in high school."

"When I was in the tenth grade I had a chance to tour a motor company. I watched the men on the assembly line and decided I wanted something better than that."

"I am not real smart or rich so I need my diploma."

"I have seen people who have dropped out of school and they are never going to be anything. If you know the suffering they are doing now at ages 17-18-19, it would keep anyone in school."

"I've always been made to feel no good but I decided I would prove people wrong by making something of myself."

"A girl who is not well educated could not support a family if necessary."

"I see people living in run-down houses with a bunch of dirty kids running loose and I want more for my family than that."

• • •

That's what seniors say. Think about it.



APPENDIX G

PARENT LETTER (BLUE-SON)

# PROJECT MEMO:

MORE EDUCATION, MORE OPPORTUNITY

Post Office Box 6366  
East Lansing, Michigan 48823  
AC 517 / 353-6366

Dear Parent:

Have you ever wondered whether your 9th grade son could do better in school than he is doing? You're probably right. According to a recent test of his desire to do school work, he seems to have more ability than his grades show.

But your son cannot improve these grades alone. He needs help and support--not merely from his teachers and counselors at school but also from you. Parents are very important to a student's work at school, as many research studies have shown. The parents can't do the whole job, of course, but they well can make the difference between a successful student and an unsuccessful one.

As the first step toward improving grades, please read the statements below. See whether you find yourself described there. If you do, you can help your son by following the suggestions that we are making as we work for your school and your student on this problem.

Sincerely,



David V. Schultz  
Director

---

## CAN YOU FIND YOURSELF HERE?

There are two kinds of parents who may hurt, rather than help, their students in school. They are:

### 1. The High Pressure-Nagging Type.

Some parents simply put too much pressure on their children to do well in school. They emphasize high performance too much. They are the ones who insist the student make top grades in every subject, regardless of his ability. They nag and rant and fuss, and keep at this even when it doesn't produce results. So what happens? Over the years, the child comes to resent this pressure and learns that one way to "get back" at his parents is to get low grades. Net result: everyone loses.

### 2. The Low Pressure-Leave Them Alone Type.

Some parents rarely show any interest in what their child does in school. They ask few questions about what has happened in school. They let the child merely "wander" around and through school without any support from home. They aren't displeased with poor grades or pleased with good ones. They live their own lives apart from the child, so the child must live an independent life entirely too early. The child feels "If no one else cares, why should I?" Net result: everyone loses.

What you can do about this:

--Please turn over--

1. If you are the High Pressure-Nagging type, ask yourself this question: "Just what good is all this doing me? Or my son?"

In most cases, your high pressure does little to change a child's grades, but goes a long way toward creating a bad relationship between parent and son.

So why not give up a method that is a proven failure? Why not remove the pressure at home, and let the school provide it, normally and naturally?

Your son must come to realize he is responsible for his own learning. He is--and no one else. Once he really understands this, he'll make better use of his ability.

When you take off the pressure, you still must show interest. Let your son know you are pleased for him (not with him) for what he does, but don't say "I told you so" or "I knew you could do it all along." If you say these things, you make your son feel that his accomplishments are yours, not his, and that loses you all you have gained.

2. If you are the Low Pressure-Leave Them Alone type, don't change overnight into the "high pressure," but work on building up the ways your son knows you are interested in him and everything he does.

Ask about the school work -- the content, and what is being taught. See whether your 9th grader is learning about some things that weren't a part of school when you attended, and point out where he is "ahead" of you in this learning.

Discuss with your son the importance of education. Point out examples of people you know for whom education has been a big advantage. If you need help, ask your student's teachers and counselors; they'll be pleased to join with you, because your son is important to them, too.

Be interested in your son in other ways as well. Build a closer personal and family relationship any way you can. Whatever helps improve the way you and your son get along with each other generally, also will improve his grades.

\* \* \*

Whichever type you are -- or even if you're neither of these extreme types -- remember these basic points:

Every boy wants to love and respect his parents more than anyone else in the world. As parents, we owe it to our children to give them that chance to love us.

AND

You know you love your son, but does he know this? He must be sure that you love him, clearly, and openly, and specifically. (This is one subject we ought to be very direct about, because when we're too indirect, the youngster may doubt us.)

Project MEMO: is a cooperative effort on the part of 26 Michigan colleges to work with the junior and senior high schools of the state to help their students get all the education they possibly can use.

MEMO: is financed through the U.S. Office of Education "talent search" program.

APPENDIX H

PARENT LETTER (PINK-DAUGHTER)

# PROJECT MEMO:

MORE EDUCATION, MORE OPPORTUNITY

Post Office Box 6366  
East Lansing, Michigan 48823  
AC 517 / 353-6366

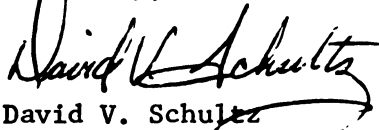
Dear Parent:

Have you ever wondered whether your 9th grade daughter could do better in school than she is doing? You're probably right. According to a recent test of her desire to do school work, she seems to have more ability than her grades show.

But your daughter cannot improve these grades alone. She needs help and support--not merely from her teachers and counselors at school but also from you. Parents are very important to a student's work at school, as many research studies have shown. The parents can't do the whole job, of course, but they well can make the difference between a successful student and an unsuccessful one.

As the first step toward improving grades, please read the statements below. See whether you find yourself described there. If you do, you can help your daughter by following the suggestions that we are making as we work for your school and your student on this problem.

Sincerely,



David V. Schultz  
Director

---

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There are two kinds of parents who may hurt, rather than help, their students in school. They are:

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Some parents rarely show any interest in what their child does in school. They ask few questions about what has happened in school. They let the child merely "wander" around and through school without any support from home. They aren't displeased with poor grades or pleased with good ones. They live their own lives apart from the child, so the child must live an independent life entirely too early. The child feels "If no one else cares, why should I?" Net result: everyone loses.

What you can do about this:

--Please turn over--

1. If you are the High Pressure-Nagging type, ask yourself this question: "Just what good is all this doing me? Or my daughter?"

In most cases, your high pressure does little to change a child's grades, but goes a long way toward creating a bad relationship between parent and daughter.

So why not give up a method that is a proven failure? Why not remove the pressure at home, and let the school provide it, normally and naturally?

Your daughter must come to realize she is responsible for her own learning. She is-- and no one else. Once she really understands this, she'll make better use of her ability.

When you take off the pressure, you still must show interest. Let your daughter know you are pleased for her (not with her) for what she does, but don't say "I told you so" or "I knew you could do it all along." If you say these things, you make your daughter feel that her accomplishments are yours, not hers, and that loses you all you have gained.

2. If you are the Low Pressure-Leave Them Alone type, don't change overnight into the "high pressure," but work on building up the ways your daughter knows you are interested in her and everything she does.

Ask about the school work -- the content, and what is being taught. See whether your 9th grader is learning about some things that weren't a part of school when you attended, and point out where she is "ahead" of you in this learning.

Discuss with your daughter the importance of education. Point out examples of people you know for whom education has been a big advantage. If you need help, ask your student's teachers and counselors; they'll be pleased to join with you, because your daughter is important to them, too.

Be interested in your daughter in other ways as well. Build a closer personal and family relationship any way you can. Whatever helps improve the way you and your daughter get along with each other generally, also will improve her grades.

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Whichever type you are -- or even if you're neither of these extreme types -- remember these basic points:

Every girl wants to love and respect her parents more than anyone else in the world. As parents, we owe it to our children to give them that chance to love us.

AND

You know you love your daughter, but does she know this? She must be sure that you love her, clearly, and openly, and specifically. (This is one subject we ought to be very direct about, because when we're too indirect, the youngster may doubt us.)

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APPENDIX I

LETTER TO PRINCIPALS REQUESTING  
PARTICIPATION IN RESEARCH  
PROJECT

Dear

You may recall that a year ago as the director of Project MEMO:, I was writing to you to ask your help in a state-wide motivation study of 9th graders.

You did help, and in a very important way...

Our goal in this study was to see whether we could help the under-motivated student obtain better grades. The study was too limited to produce clear results, so now I have undertaken an additional study (a personal one, since MEMO: has ended) that will take a closer look at the grades of these same students for a longer period of time--for all of the 8th, 9th, and the first half of the 10th grades.

In your school, this involves students, some of whom were followed-up in the earlier study, some of whom (a control group) were not. Individual sheets for each of these students are enclosed. I will very much appreciate it if you can have someone record the grades and return the sheets to me in the enclosed addressed and stamped envelope within the next two weeks.

What's in this for you? If the results prove that the MEMO: "paper-treatment" did assist in improving academic performance, then score one for education. Thousands of boys and girls may then receive similar assistance. Your personal cooperation is of vital importance if we are to find a way of helping our boys and girls who have the ability but for some reason are not producing.

No school or student will be identified by name anywhere in this study. If you have any questions please feel free to call me collect at AC 517/353-6366.

Thank you very much indeed.

Sincerely yours,

David V. Schultz



APPENDIX J

GRADE POINT AVERAGE REQUEST FORM

## GRADE POINT AVERAGE REQUEST FORM

Please record the frequency of letter grades for all courses earned in the 8th, 9th, and first half of the 10th years for Student Code Number \_\_\_\_\_, School Code Number \_\_\_\_\_.

If your school is on the semester plan, use BOX I and record only the final semester marks for all subjects attempted.

If your school does not give semester grades, use BOX II. This is for schools marking on the three, four, or six period systems. Use only those periods that apply to you. Omit the final grade.

If you use numerical grades, please change the numbers to letter grades and fill in accordingly.

If the student is no longer with you, please provide what grades you have and complete the following:

\_\_\_\_\_ MOVED \_\_\_\_\_ DROPPED \_\_\_\_\_ GRADUATED

Name of new school \_\_\_\_\_,  
Address of new school \_\_\_\_\_.

EXAMPLE:

A student earned 2 B-'s, 1 C+ and 3 C's for the 1st semester of the 8th grade.

EIGHTH GRADE		
	1st Sem.	2nd Sem.
A		
A-		
B+		
B		
B-	//	
C+	/	
C	///	

## BOX I

	EIGHTH GRADE		NINTH GRADE		TENTH GRADE	
	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	1st Sem.	
A						
A-						
B+						
B						
B-						
C+						
C						
C-						
D+						
D						
D-						
E						

## OFFICE USE ONLY

\_\_\_\_\_ E \_\_\_\_\_ C  
 \_\_\_\_\_ M \_\_\_\_\_ F  
 \_\_\_\_\_ P \_\_\_\_\_ PR  
 \_\_\_\_\_ A \_\_\_\_\_ B  
 \_\_\_\_\_ C \_\_\_\_\_ D  
 \_\_\_\_\_ H \_\_\_\_\_ L

## BOX II

	EIGHTH GRADE						NINTH GRADE						TENTH GRADE		
	1st	2nd	3rd	4th	5th	6th	1st	2nd	3rd	4th	5th	6th	1st	2nd	3rd
A															
A-															
B+															
B															
B-															
C+															
C															
C-															
D+															
D															
D-															
E															

Thank You

APPENDIX K

CASE STUDY GENERAL INFORMATION SHEET

School Code Number\_\_\_\_\_ Student Code Number\_\_\_\_\_ Date\_\_\_\_\_

Sex: \_\_\_M\_\_\_F Age\_\_\_\_\_ Race\_\_\_\_\_ Religion\_\_\_\_\_

Physical Attributes\_\_\_\_\_

Academic Record 1st 8\_\_\_ 2nd 8\_\_\_ 1st 9\_\_\_ 2nd 9\_\_\_ 1st 10\_\_\_

Father: \_\_\_L\_\_\_D\_\_\_S\_\_\_D Educ. \_\_\_8\_\_\_12\_\_\_College

Age\_\_\_\_\_ Occupation\_\_\_\_\_

Mother: \_\_\_L\_\_\_D\_\_\_S\_\_\_D Educ. \_\_\_8\_\_\_12\_\_\_College

Age\_\_\_\_\_ Occupation\_\_\_\_\_

Male Siblings No.\_\_\_\_\_ Age\_\_\_\_\_ Education\_\_\_\_\_

Female Siblings No.\_\_\_\_\_ Age\_\_\_\_\_ Education\_\_\_\_\_

Home Inner\_\_\_\_\_ City\_\_\_\_\_ Suburb\_\_\_\_\_ Rural\_\_\_\_\_

Extra Curricular Activities\_\_\_\_\_

Outside Interests\_\_\_\_\_

High School Program\_\_\_\_\_ Dif. Subject\_\_\_\_\_

Future Goals\_\_\_\_\_

College\_\_\_\_\_ Vocational School\_\_\_\_\_

Student's Reason for Academic Improvement\_\_\_\_\_

Counselor's Reason for Academic Improvement\_\_\_\_\_

Reaction to MEMO: Study\_\_\_\_\_

School Size\_\_\_\_\_ Enrollment\_\_\_\_\_ Community\_\_\_\_\_

Number of Counselors\_\_\_\_\_ Records\_\_\_\_\_

General Comments:

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