A COMPARATIVE STUDY OF ENVIRONMENTAL CONDITIONS AND

THEIR RELATIONS TO ACHIEVEMENT, PERSONALITY,

AND INTELLIGENCE OF SEVENTH GRADE PUPILS

THESIS

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CHAPTER I

INTRODUCTION

Problem and Purpose of the Study

In the traditional school, a child's ability to learn was measured largely by his mental alertness and his biological inheritance. Within recent years the environmental influences have been recognized as playing an important part in determining not only learning activities but behavior mannerisms as well. Tests have been worked out by psychologists whereby the factors that influence a child's behavior and learning ability may be measured to a certain extent. The results of these tests, in many instances, have been revealing, and distinct correlations have been found between achievement and environmental factors, between achievement and personality, and between achievement and intelligence.

The alert teacher, alive to the fact that all behavior is caused, is anxious to avail herself of all the knowledge that science can offer to help her in understanding her children in order that she may better help them meet their needs. She hears about the results of certain tests in a school, and she wonders if these tests would help her any, would give her any needed information, or if they would be mere scraps of paper.

The purpose of this study is to give the results of a
testing program in the low seventh grade of an urban school
wherein intelligence, personality, achievement, and socio-
economic tests were given. The primary purpose of the tests
was to determine what influence, if any, the environmental
factors played in the individual learning process, but
attention was given to other phases of the learning process
as well.

Source of Data

Thirty-four low seventh grade pupils of the Pleasant
Mound School were used in making this study. More than
forty pupils were tested at various times during the year,
but for various reasons parts of some of the tests were not
filled out, and some of the students were absent on the
days when the tests were given. For these reasons, only
thirty-four pupils were selected and these had taken the
complete set of tests: intelligence, personality, achieve-
ment, and socio-economic.

In September, 1946, the group under consideration was
given the Kuhlmann-Anderson Intelligence Tests.[1] The
teacher, early in the year, got from these tests a fairly
clear picture of the material that she had to deal with,
from a mental standpoint. The group was given the Sims

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[1]Kuhlmann, F., and Anderson, R.G., Manual for Scoring
and Administering the Kuhlmann-Anderson Tests, p. 1.

Score Card for Socio-Economic Status in October.[2] This score card through an ingenious set of questions, developed the facts about the general cultural, social, and economic home background.

With this information in mind, the teacher kept a close watch on the development of the pupils throughout the year. An anecdotal record was kept of some of the children, and causes of behavior were looked for and examined. In May, an achievement test, the Unit Scales of Attainment developed by Branom and others, was given.[3] This was followed by an Adjustment Questionnaire furnished by the city school administration; this was also given in May.[4]

The information gathered in these tests and from the anecdotal records kept during the year served as a basis for the considerations contained in this study.

Conditions Existing in the School

The Pleasant Mound School had an enrollment of 500 pupils for the year 1946-47. There were twelve teachers in the school.

The school setting is unique in some respects. Pleasant Mound serves an area of Dallas which is suburban, and consists of moderate homes of the working class people. There

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[2]Sims, Verner M., The Measurement of Socio-Economic Status, p. 1.

[3]Unit Scales of Attainment, pp. 1-4.

[4]Adjustment Questionnaire, pp. 1-3. (Mimeographed).

are no extremely wealthy people in the district nor are there very poor ones. The majority of the wage earners are skilled tradesmen who have good jobs, but who have comparatively little cultural background from the standpoint of college education and professional skills. The district might be rated "middle class" by sociologists, and one of the distinguishing traits is the "sameness" of the people and the neighborhood. Such a group of children should make an interesting study to see if the "sameness" characteristics are repeated in the children.

Related Studies

There have been a number of studies made on the relationship of the environment to achievement, and other aspects of the learning process.

Hollingsworth made a study of the ways in which sociability can be developed in the elementary pupil. According to her, it is impossible to separate a pupil's intellectual functions from his motives, emotions, and social adjustments.[5] The main purpose of her study was to find out which boys and girls were accepted by the groups, and determine, if possible, what could be done to help the pupils who were not accepted. A secondary purpose was to determine what types of classroom activities were desirable for this purpose.

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[5]Lila Hollingsworth, "How Sociability Can be Developed in the Elementary School", Unpublished Master's Thesis, North Texas State College, 1940, p. 2.

Hollingsworth administered four standardized tests in evaluating the children, and her study was based on the results obtained from these tests. The study differs from the present one in that this study stresses the relationship of the socio-economic background to other phases of the educative process--personality, intelligence, and attainment.

In 1940 Clark made a study of a group of thirty-five children in the Albany school to determine the relationship of the socio-economic background to achievement, in particular, and personality and intelligence as secondary considerations.[6] Four standard tests were given the children and the correlation of one phase of the learning process to the other was made. Clark found that the socio-economic status played a large role in the personality development of the group studied, made a significant contribution to school achievement, and played a small part in determining the intelligence score of individual pupils.

This study parallels Clark's in many instances. Clark, however, had a more varied socio-economic group of pupils than are found in the Pleasant Mound group of pupils. The two studies should present some interesting comparisons.

[6]J. Frances Clark, "A Comparative Study of Environmental Conditions and Their Relation to Achievement, Personality, and Intelligence of Fifth Grade Pupils," Unpublished Master's Thesis of North Texas State College, Department of Education, p. 2.

Definition of Terms

Socio-economic simply means all the things that go to make up the child's environment—education of parents, type of home, occupation of parents, reading habits, and general environmental conditions.

Personality is the individual's own unique system of presenting himself to the world—the effect that a person creates upon other people.

Achievement is the thing accomplished; a child's achievement in school is the type of work that he accomplishes.

Procedure

The thirty-five pupils studied were given the Kuhlmann-Anderson Intelligence Tests in September, and the Sims Score Card for Socio-Economic Status in October. The results of these tests were recorded and analyzed for the purpose of determining, as far as possible, the reactions of the pupils to many school situations.

In May, an achievement test, the Unit Scales of Attainment was given the group, and an Adjustment Questionnaire was also given. The results of these tests were also tabulated and the relationship between the socio-economic status and other phases of the program studied. These data comprise the second chapter of this study.

A study was made also of the children during the year. Close observation was made on the group, and in a number of instances, anecdotal records were made. The study of the individual pupils comprises Chapter III. In the concluding chapter, the findings and conclusions of the study are given.

CHAPTER II

PRESENTATION AND ANALYSIS OF DATA SECURED FROM FOUR
TESTS GIVEN THE LOW SEVENTH GRADE PUPILS IN THE
PLEASANT MOUND SCHOOL

Purpose of the Chapter

The purpose of this chapter is to present the data and
interpretations of the four standard tests as given to
thirty-four students in the Pleasant Mound School, Dallas,
Texas, in 1946-47.

Data Secured From Environmental Studies

The data from the Sims Score Card for Socio-Economic
Status used in this study reveal the general cultural and
economic home background of the pupils.[1]

Table 1 shows the total socio-economic status score
and the class rank of each of thirty-four children in the
Pleasant Mound School in 1946-47. During the school year
more than forty pupils were enrolled in the low seventh
grade, but only the pupils who were present all year and who
had taken all the tests were evaluated in this study. One
of the first reactions to the table is that there is a large

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[1]Verner M. Sims, _The Measurement of Socio-Economic
Status_, pp. 11-12.

[2]_Ibid._

TABLE 1

THE TOTAL SOCIO-ECONOMIC STATUS SCORE AND THE CLASS
RANK OF THE THIRTY-FOUR PUPILS IN THE LOW SEVENTH
GRADE OF THE PLEASANT MOUND SCHOOL FOR THE YEAR
1946-47, AS DETERMINED BY THE SIMS SCORE CARD
FOR SOCIO-ECONOMIC STATUS

Pupil	Socio-Economic Score	Class Rank
A	11	29.5
B	17.1	11.5
C	23	3
D	11	29.5
E	8	22
F	15	17.5
G	18	28.5
H	27	1
I	12	27.5
J	14	21.5
K	17.1	11.5
L	13	25
M	18	8.5
N	5	34
O	13	25
P	15	17.5
Q	18	28.5
R	12	27.5
S	13.1	23
T	16	14.5
U	6	33
V	14.1	20
W	14	21.5
X	17	13
Y	13	25
Z	15	17.5
AA	18.2	6
AB	16	14.5
AC	21	4
AD	19	5

TABLE 1 (Continued)

Pupil	Socio-Economic Score	Class Rank
AE	18	8.5
AF	9	31
AG	23.1	2
AH	15	17.5

number of similar or closely related scores. The highest score was twenty-seven, and this, according to the manual of directions, is a relatively high score.[2] The second score was twenty-three and the third was twenty-two. Both of these scores were high.

A noticeable thing about the tests, however, was the large number of similar scores. Twenty-four of the children scored between ten and twenty. These scores bear out the statement in the early part of the study that the majority of the students were from the so-called "middle class" homes. The Manual of Directions for interpreting the score states that those ranging from ten to twenty are "medium low to medium high".[3]

There were only four low scores made in the entire group, and these ranged from five to nine. These records,

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[2]Ibid.

[3]Ibid.

according to the Manual of Directions for interpreting the socio-economic status, were very low.[4]

When the highest score was compared with the lowest, there was a difference of sixteen points. However, the median of twelve represented the medium group as described in the Manual of Directions.

Data Secured from the Intelligence Tests

Table 2 presents the data taken from the Kuhlmann-Anderson Intelligence Tests which were given to the students in September, 1946.[5]

TABLE 2

THE INTELLIGENCE SCORES AND THE CLASS RANK OF THE
THIRTY-FOUR PUPILS OF THE PLEASANT MOUND SCHOOL
AS DETERMINED BY THE OTIS SELF-ADMINISTERING
TESTS OF MENTAL ABILITY

Pupil	Intelligence Score	Class Rank
A	100	20.1
B	117	6.5
C	117	6.5
D	126	2.5
E	116	9
F	70	34
G	100	20.1
H	114	10.5
I	114	10.5
J	102	19

[4]Kuhlmann, F., and Anderson, H.G., Manual for Administering and Scoring the Kuhlmann-Anderson Tests, p. 4.

[5]Ibid.

TABLE 2 (Continued)

Pupil	Intelligence Score	Class Rank
K	97	25
L	112	13
M	127	1
N	84	30.5
O	103	17.5
P	74	32
Q	117	6.5
R	84	30.5
S	112	13
T	111	15
U	96	26
V	103	17.5
W	117	6.5
X	98	23
Y	120	4
Z	91	23
AA	112	13
AB	98	23
AC	90	29
AD	93	27
AE	73	33
AF	104	16
AG	98	23
AH	126	2.5

As indicated in the data, this particular group of children ranked high in these tests. According to the scale of measurement, a score of eighty-five is relatively low but a range of 100 to 127 is relatively high. In this group of thirty-four pupils, only thirteen fell below 100 in intelligence rating, and seven of these had scores of ninety or above. The lowest score made was seventy and the

highest score made was 127, which gives a range of fifty-seven points. Three of the girls were the same age and ranked 117, 117, and 116, respectively. The pupils under consideration, it is indicated, were medium high in intelligence qualifications.

Data Secured from Adjustment Questionnaire

Table 3 gives the scores the thirty-four pupils made on the Adjustment Test. These tests were made on the basis of 100 as a perfect score. The highest score made was ninety-three and the lowest was thirty-eight.

TABLE 3

THE TOTAL PERSONALITY SCORE AND THE CLASS RANK OF EACH
OF THE THIRTY-FOUR LOW SEVENTH GRADE PUPILS IN THE
PLEASANT MOUND SCHOOL FOR THE TERM 1946-47, AS
REVEALED BY AN ADJUSTMENT QUESTIONNAIRE

Pupil	Personality Score	Class Rank
A	77	28.5
B	93	2
C	93	2
D	86	15
E	92	5
F	38	34
G	92	5
H	92	5
I	91	7.5
J	81	20.5
K	85	17.5
L	77	28.5
M	78	25.5
N	89	12
O	90	10

TABLE 3 (<u>Continued</u>)

Pupil	Personality Score	Class Rank
P	86	15
Q	90	10
R	85	17.5
S	77	28.5
T	86	15
U	80	22.5
V	63	33
W	79	24
X	81	20.5
Y	80	22.5
Z	75	31
AA	91	7.5
AB	87	13
AC	90	10
AD	82	19
AE	74	32
AF	78	25.5
AG	77	28.5
AH	93	2

Of the thirty-four pupils, eleven made scores between ninety and ninety-three, twelve students made scores between eighty and ninety, and nine made scores between seventy and eighty. This accounts for thirty-two of the pupils. Of the remaining two students, one made a score of sixty-eight and the other a score of sixty-three. The majority of the pupils, it is seen, were closely grouped in the scorings.

F, the student who made the extremely low score of thirty-eight on the Adjustment Questionnaire, had a socio-economic score of fifteen and an intelligence score of

seventy-nine. His achievement score was 74.5. Special
attention has been given this pupil in the anecdotal study
which will be reported later.

Data from Achievement Tests

The achievement scores were figured from the Unit
Scales of Achievement.[6] Table 4 shows the results of the
tests.

TABLE 4

THE TOTAL AVERAGE ACHIEVEMENT SCORE, THE EDUCATIONAL
AGE, AND THE CLASS RANK OF EACH OF THE THIRTY-FOUR
PUPILS IN THE PLEASANT MOUND SCHOOL FOR THE TERM
1946-47, AS DETERMINED BY THE UNIT SCALES OF
ACHIEVEMENT TESTS

Pupil	Achievement Score	Educational Age	Class Rank
A	75	14.10	21.5
B	85.1	15	12
C	89	15	7
D	90	13	
E	90	13	
F	74.5	15.2	23
G	82	13	16
H	83	14	13
I	90	15	
J	72	13	28.5
K	73	12.8	25
L	82	13	16
M	93	13	2
N	72	13	28.5
O	69	11.5	31

[6]Unit Scales of Achievement.

TABLE 4 (Continued)

Pupil	Achievement Score	Educational Age	Class Rank
P	65	10	34
Q	94	16	1
R	75	15	21.5
S	89	14	
T	86	14.2	11
U	82	16	16
V	78	12	19
W	89	14	
X	76	13.8	20
Y	88	15	9.5
Z	82	13.8	16
AA	82	13.8	16
AB	72	13.5	28.5
AC	73	11.1	25
AD	68	12	32.5
AE	68	13	32.5
AF	72	13	28.5
AG	73	14	25
AH	88	15	9.5

The highest score made was ninety-four and the lowest score was sixty-five. Four of the students scored between ninety and ninety-three, and ten scored between eighty and ninety. Fourteen students had scores ranging from seventy to eighty. Only two of the students made scores below sixty. The students, in this instance, again showed a strong trend toward "sameness" in many respects.

The educational age of the students ranged from sixteen to ten years. Thirteen of the children, however, had an educational age of thirteen years, while six had fourteen

years or fractions thereof. Only four students were below

twelve years in educational age. The majority of the stu-

dents, it is indicated, were beyond their chronological age

in their educational achievement.

In figuring the total scores, it was found that the

students made an average socio-economic score of seventeen,

an intelligence quotient average of 103.1, an average per-

sonality score of 81.0, and an average achievement score of

79.3. In each instance these were what might be called

"middle class" rankings.

Correlation of Results

Table 5 gives the correlation, according to the Pearson

formula,[7] of the four factors affecting child development

that were considered in this study.

TABLE 5

CORRELATION OF FOUR FACTORS AFFECTING CHILD DEVELOPMENT

Basis for Correlation	Coefficient of Correlation
Personality--Socio-Economic Status	.-08
Personality--Achievement	.+05
Intelligence--Personality.	.+46
Achievement--Socio-Economic Status	.+05
Intelligence--Achievement.	.+91
Intelligence--Socio-Economic Status.	.+09

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[7]Pearson, _Product-Moment Coefficient of Correlation_,
p. 1.

From observing this table, it will be seen that the highest correlation was between intelligence and achievement. The correlation between personality and socio-economic status was a negative .-08 which did not indicate too great a relationship. The relationship between personality and achievement, too, was not close. The coefficient of correlation for intelligence and personality was .446, which was not a relatively high degree, but was much greater than some of the other relationships. When the relation of the environment, represented by the socio-economic status, and the achievement were considered, there was a coefficient of only .+05. The correlation between intelligence and socio-economic status was .+09 which was some higher than the relationships shown between some of the other traits.

If these figures indicate relationships to any reliable degree--and the possibility of error is not discounted-- there was a very close relationship between intelligence and personality. The fact that a large number of pupils had similar scores in all four factors and that in almost each instance the one with the highest score in intelligence ranked highest in achievement was noticeable throughout the analysis of the data. The high degree of relationship shown in this area, then, indicates that the other scores, perhaps, were indicative of the correlationship although they were very low in most respects.

Lindquist, in his A First Course in Statistics, has
the following word of caution in interpreting too objectively
measurements of traits:

> If...the student of statistics in education
> and psychology is to develop a sound statistical
> judgment, it is essential that he acquire a
> thorough appreciation of the limitations of the
> original data with which he will have to work.
> It is extremely important that he recognize how
> seriously measures of mental traits--skills,
> abilities, aptitudes, attitudes, and educational
> achievements--are characterized by error and
> ambiguity, and how inadequately we are able to
> control these errors or to describe their nature
> and magnitude by means of available statistical
> and research techniques.[8]

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[8]E.F. Lindquist, A First Course in Statistics, pp. 205-206.

CHAPTER III

CASE STUDIES OF PUPILS IN THE LOW SEVENTH
GRADE OF THE PLEASANT MOUND SCHOOL

During the school year of 1946-47 the teacher kept a
record of the children in many ways beside keeping a list
of their grades made in various subjects. For one thing, re-
cent studies have brought the realization that "behavior is
caused," and study has been given during the year to ascertain
the causes of different types of behavior observed. In the
studies given of the different pupils excerpts from the an-
ecdotal records kept of some of the children will be given.

Case Analysis of A

A was twelve years old and had spent four years, includ-
ing the year 1946-47, in the Pleasant Mound School.

In September, 1946, A was given the Kuhlmann-Anderson
Intelligence Tests. From these tests, it was determined that
his intelligence quotient was one hundred, which was average.
His class rank on these tests was 20.1.

A was an excellent pupil, very retiring and quiet, and
gave the teacher little trouble in matters of discipline. He
was weak physically and this prevented an active participation
in many of the school's activities.

The class rank of A on the Sims Score Card for Socio-Economic Status was seventeen with a score of 29.5. There were three other children in the family. His father was a mechanic and he owned his own shop. Neither of the parents had a college education. Three magazines, including Collier's, came into the home. A had a modern, comfortable home, and the family had a good income.

A had a good attitude toward all school activities, but his physical condition prevented him from taking an active part. He was well-liked by all his classmates. His hobby was building model airplanes, and he seemed to take a great interest in anything mechanical. This may have been due to the fact that his father was a mechanic and owned his own garage, but A appeared to have an aptitude for things mechanical.

On the Adjustment Test given in May, A scored seventy-seven, with a class rank of 28.5. He was average in this, and could be classified as more or less neutral--neither outstanding nor mediocre.

On the Unit Scale of Attainment Tests given in May, A made a score of seventy-five which gave him a class rank of 21.5 and an educational age of 14.1.

All of A's test scores showed a high degree of relationship except intelligence. His rank on this was 20.1, while his ranks on socio-economic status, personality, and achievement were 29.5, 28.5, and 21.5, respectively.

B

B was twelve years old and had attended Pleasant Mound School only one year. She had attended four other schools previously, which indicated that the family had moved from place to place a number of times.

In September, 1946, B took the Kulhmann-Anderson Intelligence Tests. Her intelligence quotient, as established by these tests, was 117, which was above average. Her class rank was 6.5.

B was an excellent student from the standpoint of assuming responsibilities and preparing her lessons. She learned with little effort, and had a great deal of idle time on her hands.

On Sims Score Card for Socio-Economic Status, B made a score of 17.1. This score gave her a class rank of 11.5. She was an only child. The father had a responsible position as a foreman of a group of more than ten men. The family of three lived in a six-room house, owned a modern automobile, and more than three magazines came into the home monthly. The father and mother were high school graduates. An average number of books was available for reading in the home. B was secure in the adequate income of her family, in the becoming clothes that she wore, and in the love and care of her parents.

B made a total of ninety-three on the Adjustment Test which gave her a class rank of two. She was well-liked by her classmates, and was popular in the group.

On the Unit Scales of Attainment Tests, B made a total average achievement score of 85.1. This gave her an educational age of fifteen and a class rank of twelve.

There was some variation in the relationship shown between the tests given B. On personality she ranked two and in intelligence her class rank was 6.5. However, the socioeconomic rank was 11.5 and the achievement rank was twelve.

C

C had attended two other schools before coming to Pleasant Mound, but she had been in this school four years.

She was given the Kuhlmann Intelligence Tests in September of 1946 and scored 117 with a class rank of 6.5. This was above the average.

She had good work habits and was always prompt in lesson preparation. However, she had to apply herself to learn the assignments and she worked hard. She was a leader in athletics, and did a great deal of extra-curricular work in this respect.

C was given a score of twenty-three on Sims Score Card for Socio-Economic Status. This gave her a class rank of three. Her father was a contractor and she was an only child. Both parents had attended high school but neither had gone to college. C's mother belonged to a number of clubs, they attended concerts occasionally, spent their summers away from home, lived in an eight-room house, and took a variety of magazines.

C was an acknowledged leader of her group. On the Adjustment Test she scored ninety-three, which gave her a class rank of two. She was well-liked and well-adjusted in every respect.

C was given an average achievement score of eighty-nine, which gave her a class rank of seven.

C showed a close relationship between all the scores made on the different tests. Her rank in intelligence was 6.5 and she was ranked three in socio-economic rating. She had a rank of two in personality and of seven in achievement.

D

D was thirteen years old and had attended Pleasant Mound School for six years. He had attended a school in another county when he first began going to school.

D scored 126 on the Kuhlmann-Anderson Intelligence Test, which gave him a rating of 2.5.

D was an excellent pupil in every respect. He was very studious and his hobby was reading.

The class rank of D on the Sims Socio-Economic Score Card was 29.4, with a score of eleven. There was one other child in the family. His father was a salesman and they lived in a three-room house. His father had attended high school but his mother had not. No magazines were subscribed for, and there were few books.

Notwithstanding the meagre library at home, D managed

to read a great deal. He scored eighty-six on the personality
test, and ninety in achievement average. This gave him a
ranking of fifteen and four, respectively, in these tests.

There was a close relationship between all of D's scores
except the one in the socio-economic score. This was 29.4,
while his other scores were fifteen and four, respectively.
In this instance, D's superior intelligence quotient enabled
him to overcome his lower socio-economic rating.

E

E was another little girl that ranked very close to B
and C. She had attended four other schools previous to
Pleasant Mound, and these had been at army bases scattered
throughout the country. She was almost thirteen years old.

E scored 116 in intelligence, and this gave her a class
rank of nine. B and C had scored 117 each in intelligence,
and they all had similar ranks. E scored ninety-two on per-
sonality, and ninety in achievement. Her socio-economic
status, however, was only eight, and she ranked twenty-two
in class in this respect.

The relationship between her scores was close except in
the socio-economic status score. In this instance, she ranked
far below the other girls. E, however, was ambitious, and
she was above the average in intelligence. She worked hard
at her books and made excellent grades in all subjects. She
was accepted by her group in spite of many such handicaps

as inadequate clothes and personal belongings. Superior in-
telligence, neatness, and ambition evidently compensated
for many other lacks in her case.

F

F was thirteen years old, and had attended Pleasant
Mound School all the time since he started to school. His
father was a contractor, and had attended college. His
mother was a high school graduate. His teacher described
him as a "poor, poor pupil," and one that had to be given
special promotions. His socio-economic status, according
to Sims Socio-Economic Status Score card, was eight and
his class rank was 17.5. His intelligence score was
seventy, the lowest in class, and his personality
score was also the lowest. It was only thrity-eight. In
achievement, however, F made an average of 74.5. He had
almost an uncanny talent for trading, and his achievement
tests in arithmetic, both fundamentals and problems, were
high. He made a score of ninety-five in elementary science,
and his reading score was eighty-six.

There was not a close relationship between any of F's
scores except in socio-economic status and intelligence.
His ranks in these were 17.5 and 20.1, respectively. His
personality rank was thirty-four and his achievement was
twenty-three in class rank. Because of these variations, the
teacher kept an anecodotal record of F which will be be
given later.

G

G was thirteen years old and had attended Pleasant Mound School for seven years. His socio-economic status was eighteen with a class rank of 28.5. His intelligence quotient was one hundred and his class rank here was 20.1. He had a class rank of five in personality with a score of ninety-three, and a rank of sixteen on an achievement average score of eighty-two.

G's father was a foreman for a Paint and Body Shop. His parents had attended high school but did not go to college. The family took no magazines, and had few books. G, however, had a great deal of dramatic talent, and he was well-liked by all his classmates. His personality score, it is seen, was high. The relationship between the different rankings he was given was varied. These rankings were ten in socio-economics, seven in intelligence, two in personality, and thirteen in achievement.

H

H was twelve years old and had been in the Pleasant Mound School for four years. He had a socio-economic score of twenty-seven, an intelligence score of 114, a personality score of ninety-two, and an achievement score of eighty-two. His rankings in these respective areas were 10.5, five, and thirteen respectively. There was a close relationship between the first three rankings, but a wider variance was found between the achievement rank and the others.

I

I was another pupil who had lived in war construction centers. Her father was a carpenter, and she had attended school at two other places before coming to Pleasant Mound where she had been attending four years. Her tests gave her a socio-economic score of twelve, intelligence score of 114, personality score of ninety-one, and achievement score of ninety. Class rankings in these different fields were 27.5, 10.5, 7.5, and four, respectively. The relationships between the last three were very close, but there was a wide variation from the socio-economic status rank with the others.

J

J had attended Pleasant Mound School for two years. She was large for her age of thirteen years, and showed little interest in the school. Her father was a molder, and they lived in a nice six-room house. The family, however, had few books, and belonged to no clubs or organizations.

The scores of J on the different tests were as follows: socio-economic status fourteen, intelligence quotient, eighty-one, personality rating, 102, and achievement performance, seventy-two. Class rankings in these tests were 21.5, nineteen, 20.5, and 23.5. There was a wide variation between the personality and other class rankings, but the relationship between others was not far apart.

K

K had been in the Pleasant Mound School for two years
and had attended two other schools before coming to this
one. His father was a carpenter, and K was the only child.
The family of three lived in a nice three-room house. K's
scores on the different tests were as follows: 17.1 on
socio-economic status, ninety-seven in intelligence rating,
eighty-five on personality, and seventy-three average
achievement score. Class rankings in these were 11.5,
twenty-five, 17.5, and twenty-five, respectively. Person-
ality and intelligence, it is seen, were the same, but the
other scores varied widely, especially in the achievement
ranking.

L

L has attended Pleasant Mound School for seven years
and is twelve years old. His father was a machinist and had
recently retired from the navy. They lived in a nice five-
room home.

The scores that L made on the different tests were as
follows: Socio-economic status, thirteen, intelligence
quotient, 112, personality rating, seventy-seven and aver-
age achievement score was eighty-two. Class rankings for
these were twenty-five, thirteen, 28.5, and sixteen, respect-
ively. The relationship between these areas was close in all

except the intelligence quotient. This was at variance with the other scores.

M

M was an adopted child, and had the highest intelligence quotient in the school. He had attended Pleasant Mound School for two and one-half years. His foster father was an electrician. M was an excellent pupil, but he was a sickly child and attended school irregularly. His scores in the different tests follow: Socio-economic status, eighteen, intelligence quotient, 127, personality, seventy-eight and achievement, ninety-two. Class rankings in these tests were 8.5, one, 25.5 and two, respectively. There was a close relationship between intelligence and achievement, but the other scores varied considerably. M's personality score was low, because he did not associate very freely with the other children.

N

N was thirteen years old and had attended Pleasant Mound School for two years. His father was a floor sander, and owned part of the business. The family lived in two rooms, had no books, and took no magazines. Neither of his parents had attended high school; they went to few places away from home, and did not belong to any clubs.

N's scores on the tests were as follows: Socio-economic status, five; intelligence quotient, eighty-four; personality

score, eighty-nine; and average achievement score, seventy-
two. Class rankings in these tests were thirty-four, 30.5,
twelve, and 38.5, respectively. In this respect, a close
relationship between socio-economic status and achievement
are noticeable.

O

O was thirteen years old, and had attended school eight
years. Her father was a truck driver, and the family of ten
people lived in an eight-room house. Neither father nor
mother had attended high school. The family had a number
of books and took one magazine.

O's scores on the different tests were as follows:
Socio-economic, thirteen, intelligence quotient, 103; per-
sonality score, ninety; and average achievement score, sixty-
nine. Class rankings on these tests were twenty-five, 17.5,
ten, and thirty-one, respectively. The relationships be-
tween the scores varied widely, but was closest between per-
sonality and intelligence.

P

P had attended Pleasant Mound School for seven years.
Her father was a carpenter, and the family of three lived in
a five-room house. Her scores on the different tests were
as follows: Socio-economic status, fifteen; intelligence
quotient, seventy-four; personality score, eighty-six; and

average achievement score, sixty-five. Class rankings for
these tests were 17.5, thirty-two, fifteen, and thirty-four,
respectively. There was a close relationship between the
rankings for socio-economic status and intelligence, but
the other rankings were at variance. The rank for average
achievement score was very low. An anecdotal study was
made of this pupil.

Q

Q was thirteen years old, was an orphan, and was a ward
of the county. She lived with foster parents in a nice home
but had few opportunities. She had a bad case of osteomely-
tis and was absent from school a great deal. However, she
was a willing pupil and was considered unusually reliable
by the teachers.

Q's scores on the different tests were as follows:
Socio-economic score, eighteen, intelligence score, 117,
personality score, ninety, and achievement score, ninety-
four. Class rankings for these respective scores were 28.5,
6.5, ten, and one. There was an extremely close relation-
ship between intelligence, personality, and achievement.
The socio-economic score, in this instance, had little re-
lationship.

R

R had been in the Pleasant Mound School for only one
year. Her father was a butcher, and the family of five

lived in a five-room house. R was a weak pupil, and lacked background for her work. Her scores in the different tests were as follows: Socio-economic score, twelve, intelligence quotient; eighty-four, personality score, eighty-five; and average achievement score, twenty. Class rankings in these different areas were 27.5, 30.5, 17.5, and 21.5, respectively. The closest relationship shown here was between intelligence quotient and personality, but the relationship between socio-economic status and achievement was significant.

S

S had attended the Pleasant Mound School for seven years. His father was a mechanic, and there were two other children. The family lived in a five-room house, and had a comfortable income, but no savings.

S's scores on the different tests were as follows: socio-economic status, 13.1; intellectual quotient, 112; personality score seventy-seven; and average achievement score, eighty-nine. Class rankings on these tests were twenty-three, thirteen, 28.5, and seven, respectively. There appears to be a close relationship between intellectual quotient and achievement in this instance, and a relationship between socio-economic status and personality.

T

T had attended Pleasant Mound School for seven years. He was a model pupil, and did good work at all times. His

father was a carpenter, and the family of four lived in a
four-room house. T's scores on the different tests were as
follows: Socio-economic status, sixteen; intellectual quo-
tient, 111; personality score, eighty-six; and average
achievement score, eighty-six. Class rankings on these
tests were fourteen, five, fifteen, fifteen, and eleven,
respectively. There was a close relationship between all
these ranks, especially the last three.

U

U was thirteen years old and had attended school eight
years. He had been attending Pleasant Mound School for five
years. His socio-economic status was only six, but his in-
telligence quotient was ninety-six. His personality score
was eighty, and his average achievement score was eighty-two.
U was handicapped in many ways; his father was a carpenter
and made an adequate income, but the family had little cul-
tural background. Class ranking on these tests were thirty-
three, twenty-six, 22.5 and sixteen. There appears to be
a direct relationship here between the socio-economic status
and achievement and personality.

V

V was one of the problem children of the room. She
was thirteen years old, and had attended Pleasant Mound School
for five years. Her father was a carpenter, and a family of

seven lived in a three room apartment. Her mother had attended high school, but her father had not. The mother belonged to the Hub-Cap Club. There were few books and no magazines in the home.

V's scores on the different tests were as follows: Socio-economic status, 14.1; intelligence quotient, 103; personality score, sixty-three; and average achievement score, seventy-eight. Her class ranks in these tests were twenty, 17.5, thirty-three, and nineteen. The relationship between the socio-economic status and the personality and achievement scores appears to be very decided. In this instance, V has a fairly high intelligence quotient; other factors prevent her complete adjustment. Her attendance at school was poor. She was liked by the other pupils.

W

W was an excellent pupil, and was considered an excellent student by her teachers. She was well-liked by the group, and was a hard worker and was very painstaking. There were eight members of the family and they lived in a five-room house. The scores she made on the different tests were as follows: Socio-economic status, fourteen; intelligence quotient, 117; personality score, seventy-nine; and average achievement score, eighty-nine. Class rankings on these scores were 21.5, 6.5, twenty-four, and seven. In this

instance there is revealed a close relationship between socio-economic status and personality, and intelligence and achievement.

X

X was eleven years old, had been in the Pleasant Mound School for five years, and was what the State classifies as an exceptional child. She had a speech impediment, and was very timid and backward about participating in the group activities. Her father worked in a hat factory, and the family of five lived in a four-room house. Her scores on the different tests were: Socio-economic status, seventeen; intelligence quotient, ninety-eight; personality score, eighty-one; and average achievement score, seventy-six. Class rankings on these scores were thirteen, twenty-three, 20.5, and twenty. The realtionship was closest between socio-economic status and personality.

Y

Y was twelve years old, had been in Pleasant Mound School one year, and the family of six people lived in a six-room house. His father worked at Holland's Publishing Company. The parents had attended high school but not college. Y's scores on the different tests were as follows: Socio-economic status, thirteen; intelligence quotient, 120; personality score, eighty; and achievement score eighty-eight.

Class rankings in these tests were twenty-five, four, 22.5, and 19.5. A close relationship between socio-economic status and personality are revealed and between intelligence and average achievement scores.

Z

Z was fifteen years old, had attended school in three other places, and his hobby was steer-riding and hunting. His father was a machinist and was head of his shop. There were seven people in the family, and Z had a comfortable, seven-room home. The boy was a fair pupil, but only developed a liking for school the past year. He lacked home training, but could be influenced through kindness to give cooperation. His scores on the different tests were as follows: Socio-economic status, fifteen; intelligence quotient, ninety-one; personality score, seventy-five; and average achievement score, eighty-two. His class rankings in these scores were 17.5, twenty-eight, thirty-one, sixteen. A close relationship is apparent between all these scores.

A-A

A-A was thirteen years old, had attended Pleasant Mound School for six years, and was a leader in his group. He had artistic talent. His father was a machinist, and the family had little cultural background. His scores on the different tests were as follows: Socio-economic status, eighteen; intelligence quotient, 112; personality score, ninety-one; and

average achievement score, eighty-two. Class rankings in these scores were six, thirteen, 7.5, and sixteen, respectively. Close relationship between intelligence and personality is indicated, with a wider variance between socio-economic status and average achievement scores.

A-B

A-B was twelve years old and had lived in Pleasant Mound community all her life. She had little initiative, was lazy, and did not fit into the group activities of the school. Her scores on the different tests were as follows: Socio-economic status, sixteen; intelligence quotient, ninety-eight; personality score, eighty-seven; and average achievement score, seventy-two. Class rankings in these scores were 14.5, thirteen, 28.5, respectively. In this instance the close relationship was between intelligence and personality. The low score in achievement was due to lack of effort.

A-C

A-C had attended Pleasant Mound School for seven years. He was a poor pupil, but was cooperative. His father was a carpenter and the family had a comfortable living, but little cultural background. His scores on the tests were as follows: Socio-economic status, twenty-one; intelligence quotient, ninety-eight; personality score, eighty-two; and average achievement score, sixty-eight. Class rankings on these tests

were four, twenty-three, ten, and twenty-five, respectively.
Lack of initiative caused the low achievement score rather
than lack of ability.

A-D

A-D was thirteen years old and had attended school in
Pleasant Mound for six years. His father was a grinder.
Both father and mother had attended college. The mother be-
longed to a number of clubs, attended concerts frequently,
and the family of four people lived in a seven-room house.
His scores on the tests were as follows: Socio-economic
status, nineteen; intelligence quotient, ninety-five; per-
sonality, eighty-two; and average achievement score, sixty-
eight. Class rankings in these tests were five, twenty-
seven, nineteen, and 32.5, respectively. The poor showing
in achievement was due, perhaps, to A-D's extreme timidity.
He was very shy and retiring.

A-E

A-E's father was a foreman in the big steel plant near
Dallas. The family had little cultural background, but a
good income. A-E was a dreamer and was the problem child of
the class and the school--had always shown this disposition.
His scores made on the different tests were: Socio-economic
status, eighteen; intelligence quotient, seventy-three; per-
sonality score, seventy-four; and average achievement score,

sixty-eight. Class rankings in these scores were 8.5,
thirty-three, thirty-two, and 32.6. There is a close rela-
tionship between intelligence and personality, but the other
scores vary rather widely.

A-F

A-F had never lived anywhere else except in Dallas. Her
father was a mechanic, and had not attended high school. Her
mother had attended high school. A-F was an only child. She
was fourteen years old, and a year behind her group on ac-
count of a serious major operation. Her scores on the tests
follow: Socio-economic status, nine; intelligence score, 104;
personality score, seventy-eight; and average achievement
score, twenty-three. Class rankings in these scores were
thirty-one, sixteen, 25.5, and 28.5, respectively. Definite
relationship between the socio-economic status and the aver-
age achievement score is indicated. Personality, too, has
a close relationship between the socio-economic status.

A-G

A-G has attended three other schools besides Pleasant
Mound. He has been in this school one year. His father is
an electrician. His parents attended high school, but did
not go to college. His scores on the different tests follow:
Socio-economic status, 23.1; intelligence quotient, ninety-
eight; personality score, seventy-seven, and average achieve-
ment score, seventy-three. Class rankings on these scores

were two, twenty-three, 28.5, and twenty-five, respectively.
A-G's achievement score was related to his personality score
in this repect, more than to the others.

A-H

A-H's father was a minister and the family had moved a
number of times. A-H had attended four different schools.
His scores made on the different tests follow: Socio-eco-
nomic status, fifteen; intelligence quotient, 126; personal-
ity, ninety-three; and average achievement score, eighty-
eight. Class rankings for these scores were 17.5, 2.5, two,
and 9.5, respectively. The relationship between personality
and intelligence is very close, but varies between other
factors.

Anecdotal Record of Some Students

The information learned in the different tests indicates
the wide variety of problems with which the teacher had to
deal. These tests are valuable, but to the teacher who
really desires to understand child behavior, they are only
surface indications of real causes. Many factors enter in-
to the situation--home influences, socio-economic conditions,
peer relationships, and the like. An anecdotal record kept
of the child from day to day, if the teacher knows how to re-
cord anecdotal information, will provide the answers to many
such difficult problems.

The teacher of the Pleasant Mound School did not keep anecdotal records of all the children, but she did study them all. The "problem boy" of the school, the fourteen year-old girl who could not be induced to study, the three girls who had almost the same intelligence quotient but different backgrounds--all of these were material for the teacher's anecdotal record. Excerpts from three case records are given.

Anecdotal Record of P

October 21

P came to school today in a new dress. It fit too snugly, and was a bright carmine red. She wore red lipstick, and had tried to do her hair up on top of her head. I saw the other girls looking at her. P saw them, too, and she just tossed her head. I saw her talking to one of the boys in the upper grade at the noon recess.

November 2

P is not doing good work in her studies. I managed to walk with her on her way home yesterday, and she "bragged" about how much money her father was making. She told me also about an older sister, and a party they had been to the night before.

November 18

P had another new dress today, and a pair of new shoes that were high-heeled with a lot of fancy trimming on them. She forgot to bring up her geography lesson, and did not seem concerned that she did not have it. "Lessons are a lot of bother," she nonchalantly explained. Later in the day she told me about a party the family had had the night before at the house.

January 3

The Christmas holidays are over. P talks constantly

about the number of presents that she received and how much money they cost. She chews gum every chance she gets, and makes fun of the girls that study.

May 5

The end of the school year is approaching. P has merely drifted along in her work. Her intelligence quotient might deter brilliant work, but she does not apply what ability she has. She is interested mainly in attracting the attention of the opposite sex, and bragging before the other girls.

I have studied P all year, and my hypotheses for her case is that P is not accepted by her group. The other girls frown on her loud talk, her gaudy clothes, and her general air of braggadocio. P, in her efforts to ignore them, goes deeper into her undesirable behavior.

Case Studies of B C and E

September 15

Three of the girls made almost the same intelligence scores--B and C made 117 and E made 116. They are all the same age, but E does not have many of the opportunities that the other girls have. I think they would be good material for study in many different respects.

October 10

This morning the weather was real cool, and there was a feeling of winter in the air. B and C both had on new fall dresses, and they were much admired by the other pupils. E was wearing a summer print, but it was freshly laundered, and her hair was brushed until it had a "satiny" look. She did not seem envious of the other girls, but I noticed her studying her lessons very intently.

November 12

The class discussed Christmas parties yesterday. E did not say very much, but the class nominated her for a part in the Christmas pageant that the school will give. C and B were also nominated.

I saw B and C and E playing together at the noon hour. B and C appear to be well-adjusted personalities. They have a good time, but do not appear to envy anyone or to try to impress others with their importance.

May 15

I have watched the personality tests and the achievement scores of B, C and E. I think I will put them all down where I can look at them together and compare them.

Scores of B, C and E

Pupil	Socio-economic Status	I.Q.	Personality	Average Achievement
B	17.1	117	93	85.1
C	23	117	93	89
E	8	116	92	90

I knew the girls had been close together in their work all the year, but the similarity of the scores was surprising. My hypotheses of the higher achievement score that E made over the others is that she worked harder to overcome what she felt to be an inferior socio-economic condition. Observation of E, and visits to her home, however, brought the belief that the low socio-economic rating was due almost wholly to the lack of money. E's family were intelligent, proud, and "put their best foot forward."

The Case of F

September 15

The children talked about starting a savings account today and adding to it through the winter. A said he did not have any money, but that he could get some from his father. F was contemptuous; he said he had his own money.

I was somewhat surprised. F has been very "say-nothing," and he is careless in his appearance. I have not had time to get well acquainted with the pupils yet.

But he took out his pocketbook and I saw a ten dollar
bill and some change. He said he did not want to put
any money in the bank, though. Said he used his money
to trade on. He seemed very sure of himself in this
respect.

October 15

F does not take much interest in his school work.
He does not care whether anyone likes him or not. He
swaggers in his walk, and is indifferent.

October 30

F asked today about the bank. He said he had made
five dollars on a trade and that he might put this in,
and let his other capital work for him. I talked to him
some after school. His father is a contractor, and is
entirely a self-made man. F's intelligence score is low,
but he is a wizard with figures. He can count faster
than any of the other pupils and seems to have a good
understanding of problems. He does not like English
or reading.

November 20

F has been trading again. He put five more dollars
in the school bank today. He said he still had some money
"to work with." I asked him what he traded. He said he
bought and sold calves. He would get them out in the
country from the large dairies, and he had a cow at home
that he let them feed on. When they got up any size he
would sell them and go get others. I asked him what the
cow thought about this, but he said cows couldn't think.
He is a shrewd boy in things like that, but he surely
does not like his books.

December 20

F brought the teacher a Christmas present today.
It was a fancy box of candy. I suspect that he got it
from some kind of a machine. He likes to play the mar-
ble machines at the restaurants in the neighborhood.

January 20

F is still not making any progress in school. He
does not like the other children and they do not like
him. He is not accepted in the group.

February 14

F brought the teacher a Valentine. It was one of the elaborate "lacy" affairs that are bought at the five-and-ten cent store. The teacher does feel that she has accomplished a little with the boy; he does like her if he does not like the other pupils.

May 27

F has made poor grades all year except in his arithmetic. He has been promoted "on condition." I hope his teacher next year will be good to him, and can find out more how to help him than I have been able to.

The Case of A-E

September 15

A-E came to school with a long scratch across his face today, and with one hand bandaged. I was about to ask what had happened when the boys in the room began to "razz" him for getting thrown the night before. Questions developed the fact that A-E had been to a rodeo and had gotten thrown off of a steer while trying to "bull-doze" it. A-E was indifferent to the teasing, but I saw him try to trip one of the boys at recess.

September 30

A-E is a continual problem in discipline. He does not come to school regularly, and when he does come he forgets to bring an excuse. His lessons are seldom prepared, but he does not seem to care. He pays little attention to the girls, and all his attention seems to be for animals. He has a big, black, curly dog that is named Bud. Bud does not come to school with him, but is waiting each afternoon at the bicycle rack for his master.

October 12

I found an excuse to drive out by A-E's house this afternoon. The family has a nice home, but the house has a run-down and ill-kept appearance. A-E was playing with his dog, and he waved at me. I would like to meet his people.

October 27

      We had a social at the school this afternoon, but none of A-E's people were there. A-E wore his old blue denim trousers, and a checked shirt. Nearly all the other children wore their "Sunday-clothes" for the event. He took no part in any of the program.

December 20

      The group was discussing Christmas parties today. A-E got out his geography and started to looking at pictures. He seems interested in travel.

January 11

      A-E has been absent from school for three days. I went out to the house this afternoon. He was away from home, but his mother said he had had the "flu." She said he would be at school tomorrow. She acted as if she was afraid I was going to send the truant officer.

March 3

      A-E seemed almost happy today. I tried to get him into the conversation, and he finally told us that his father had bought him a horse. He is going to train it. He seems to have a way with animals; I saw him feeding part of his lunch to a stray cat the other day.

May 27

      A-E has made such low grades that I can't promote him to another grade. He doesn't seem to care, but I am afraid he will not come to school any more if he has to stay in the same grade. He will be much larger than the other children. I am going to give him some special work this summer, and then conditionally promote him in the fall. I feel like he could do good work in some field if we could reach him. My hypothesis of his case is that he has lived to himself a great deal. His father is gone from home a great part of the time, and the mother seems afraid of people. There are reasons for A-E's bad behavior, I believe.

In evaluating the work of the pupils for the year, it

was surprising to the teacher to learn how much help the

various tests were in understanding the different children. She is convinced that a more detailed study and a greater care in keeping anecdotal records will be of much benefit in the program for another year. She is convinced that there are many factors besides that of intelligence that effect the achievement scores of the pupils.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of the study has been to make a statistical study through standard tests of the socio-economic status, intelligence quotient, personality score, and average achievement record of thirty-four pupils in the low seventh grade of the Pleasant Mound School of Dallas, Texas. The data as taken from four standard tests were tabulated and the class rankings of the students worked out. The Pearson formula for correlation of relationships between various areas was used to determine the relationships between the various factors. An individual case study was made of the pupils, and anecdotal records were given to show the extent of teacher-understanding of child behavior.

Conclusions

The following conclusions have been drawn from the data given in the foregoing chapters:

1. The relationship between intelligence and achievement was very close, and it was indicated that intelligence, perhaps, was the most important factor in achievement as a whole.

2. The pupils were on the same level in a great many instances, with little variation in any factor. The relationships between different factors, then, could be expected to vary little, and this was found to be true.

3. The data showed a negative correlation between the socio-economic status and personality. In the individual studies that were made of the children, it was found that a high intelligence score overcame much of the unfavorable socio-economic background, but a low intelligence score and a low socio-economic score combined, resulted in a low achievement score.

4. Intelligence and personality had a low score of correlation. Some of the students with the highest scores in intelligence made the lowest scores in personality. The medium group, according to the individual studies, was uniform in this respect.

Recommendations

After the analysis of the data in the foregoing chapters, the following recommendations are made:

1. A teacher can learn a great deal about her pupils and know more about how to aid them if she gives these standard tests and makes a follow-up study of anecdotal case records. The students in this group who were in what could be called the "medium group" were uniform in their reaction to class situations to a large degree. The students

with the high intelligence score and the low socio-economic
score did not present any particular problem, but the ones
with low scores in both these areas were problem pupils.
In order to better aid all the pupils, it is recommended
that the teacher give tests and supplement them with anec-
dotal records.

2. Few teachers, it is believed, know and understand
little about the use of statistical tests and measurements,
and the part that psychology plays in the learning process
of the child and of his behavior. It is recommended that
every teacher take courses in these subjects at some
teacher-training institution, not for gaining credit toward
graduation or a raise in salary, but for aiding her in
evaluating and helping the children in adjusting themselves
to life situations. The experience of the writer in making
this study has convinced her of its value, and has also
brought a realization of how much the teacher needs to know
if her work is to be valid and possess significance.

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