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Student Achievement Effort as Related To Achievement and Self Concept

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STUDENT ACHIEVEMENT EFFORT AS RELATED TO ACHIEVEMENT AND SELF CONCEPT

by

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Michael L. Maughan

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TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

Student Achievement Effort as Related

To Achievement and Self Concept

by

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This study was designed to investigate more completely the variable of achievement effort (effort in school) as related to self rating, teacher rating, student self concept, actual achievement, and sex differences.

A group of 198 sixth grade students were used as the experimental subjects. Five sets of data were obtained on the students: (a) students' self ratings on an achievement effort rating scale, (b) teachers' ratings of their students on the same achievement effort rating scale, (c) students' scores on a self concept scale, (d) students' performances on an achievement test, and (e) students' performances on an intelligence test. Partial correlation, product-moment correlation, and chi-square were the statistical techniques used to analyze the data.

The results showed that the correlations which were not significantly different than zero were: (1) achievement with self concept, and (2) achievement with achievements effort as rated by the student. The correlations which were significantly greater than zero were: (1) achievement effort as rated by the student with self concept, (2) achievement with

achievement effort as rated by the teacher, and (3) achievement effort as rated by the student with achievement effort as rated by the teacher.

(43 pages)

INTRODUCTION

According to the "self" theorists of personality, the evaluation of a student's motivation and possible achievement success could be done more accurately by the student himself (providing he has a stable and realistic self concept) than by another person like his teacher. Some recent studies have provided information which challenges this theoretical construct. Students with stable and realistic self concepts sometimes did not assess their own motivation and ability to succeed academically as accurately as their teachers. These studies have raised questions about the significance of the relationship among self concept, motivation and achievement as seen from the viewpoint of the student and the teacher.

This study was an attempt to help clarify the relationship among self concept, motivation, and achievement. The influence of teacher and student evaluations on the two variables of motivation and achievement was investigated. The other variable of self concept was considered in the context with student evaluation only. It was recognized that sex difference has a good deal of influence on these three variables; consequently, this factor was considered in the experimental design. The influence of intelligence on self concept, motivation, and achievement was controlled by the use of certain statistical techniques.

It was hoped that the results of this study would have beneficial educational application by providing further insight into the teacher's assessment of the student's motivation. It was felt that the more accurate a teacher can be in assessing the student's motivation to achieve

academically, the more the teacher will be able to help the student succeed in his or her school work.

REVIEW OF LITERATURE

Introduction

Student achievement in the classroom is the result of a combination of variables. Of these many variables, motivation of the student seems to be of utmost importance. Recent experiments have shown that a person's motivation to achieve in school depends largely on his self concept. These experiements stem from the theories of men working with self concept and learning. Coombs (1958, p. 315) has stated that, "How any person behaves at any moment . . . is dependent upon two things: how he sees himself and how he sees the world in which he lives." He also felt that many people in our society are unfortunate victims of their self concepts. Even though these people may have the capacity to learn or perform something, they fail to do so since they believe they are inadequate.

Landsman (1961-62, pp. 290-291) added further support to the idea of learning having a direct connection with self concept. He said that ". . . learning is internalized more rapidly as it is perceived by the learner as being related to positive aspects of his self . . .material which is meaningful to the learner is learned more rapidly and retained longer in contrast to the learning of nonsense material." Other researchers, such as Brookover (1958) and Cottle (1965), have also stated that the functional limits of one's ability to learn and his desire to learn are determined by his self concept. The more stable and realistic a person's self concept, the more energy and desire a person will have to attain those goals set forth in an academic setting.

The individuals just mentioned suggested in their writings that there is a positive relationship among motivation, self concept, and learning. It was with these variables that this present experiment was concerned. The major emphasis of this study pertained to a student's motivation in school (achievement effort) as related to his actual achievement and his self concept. The scope of this study was a limited segment in the vast field of information on motivation and achievement; consequently, the reviewed literature concerned itself mainly with: (a) self concept and academic achievement, (b) self concept and achievement effort, (c) sex differences and academic achievement, and (d) self ratings and teacher ratings on the variables of self concept, ability, motivation, and achievement. This review of the literature was intended to give some of the background of past experimental studies which relate to the present experiment.

Self concept and academic achievement

Many experiements have been constructed to investigate the relationship between self concept and learning or achievement. Most of them have compared a student's reported self concept with his academic achievement as measured by an objective test or his past grades. Bruck and Bodwin (1963) reported a study where they compared self concept with grades on students in the 3rd, 6th, and 11th grades. Using a draw-a-person test as a measure of self concept, they found a positive and significant relationship between self concept and grades at each of the three grade levels. Alexander (1963) confirmed the findings of Bruck and Bodwin and reported a significant relationship between self concept and grades for some 250 secondary school students. Alexander also found that self

concept was independent of intelligence and that boys had a more consistent self concept than girls. A third investigation, reported by Ball (1963), also proclaimed a positive and significant relationship between students' self concepts and their grade point averages.

Not all experiments comparing self concept with grades have yielded positive relationships. For example, Jervis (1959) selected a large sample of 850 students and found no significant relationship between self concept scores and academic grades. Another study which found similar results was reported by Kempf (1965). His work with sixth graders led to the conclusion that academic achievement as measured by grades had no significant relationship with self concept. Whereas Jervis used the Self Description Inventory (SDI) as a measure of self concept, Kempf used the Index of Adjustment and Values.

Objective test measures also have been used in comparing academic achievement with self concept. Bowman (1963) used the California Achievement Test and a self concept scale in testing 4th, 6th, and 8th graders. He found positive and significant correlations between achievement and self concept for the eighth graders and positive but non-significant correlations for fourth and sixth grades. This might have been an indication that a student could more realisitically evaluate his self concept the older he got. White (1964) used a similar procedure to Bowman's although with a limited number of students. She found academic achievement to be in general harmony with self concept. White also substantiated the fact that academic achievement was hindered by the lack of social adjustment even when one's self concept seemed to be extremely high. Another study showing a positive relationship between self concept and achievement was reported by Nicholson (1965).

Once again, however, as with those studies dealing with grades and self concept, not all results have been in the positive direction. Of those experiments yielding no significant correlation between self concept and academic achievement, the one performed by Nemeroff (1965) is of interest. Nemeroff tested 229 eighth graders and found not only no relationship between self concept and achievement but a slight negative relationship between self acceptance and academic achievement. The Index of Adjustment and Values was used to get the measure of self concept and self acceptance and the Science Research Associate Achievement Series was utilized to get achievement scores. Other investigators who have found non-significant results when comparing self concept and academic achievement as measured by tests were Eubank (1962-63) and Webb (1955).

The studies considered in this section of the review, and other studies dealing with self concept and academic achievement, showed no unanimous agreement in their results. The results did, however, show self concept to be generally associated with academic achievement in a positive, but not always significant, way. An authority in the field who confirmed this viewpoint was Ruth Wylie. In her extensive review of the literature in this area (1961), she concluded that self concept has a positive but not always significant relationship with academic achievement.

Self concept and achievement effort

An important aspect of student achievement is the effort made by the student when given school tasks or assignments. Since self concept seemed to correlate in a positive way with academic achievement, it could be assumed that a stable self concept also would positively

correlate with effort made in school. This assumption remains to be validated, however, as there is little research dealing with self concept and effort in school. In one study that has been reported, Chickering (1958) found a slightly positive, but not significant, relationship between a stable self concept and effort in school. The variable of "effort in school" was obtained through teacher ratings of the student's achievement effort in general. Chickering did, however, find a positively significant relationship between stable self concept and academic achievement. This latter finding supports the previous studies mentioned which dealt with self concept and achievement.

A study which pertained to self concept and achievement effort was reported by Borislow (1961). Instead of having a non-student rate the students on achievement effort, Borislow had the students rate themselves on their intention to work toward scholastic achievement. The distinction should be made here between the student rating how well he would do on a certain task (as many studies have investigated) and the student rating how much effort he would put forth to scholastically achieve. Borislow's study dealt with this latter idea of student effort to achieve. The study compared the variable of the student's intended effort to achieve with the student's general self evaluation or self concept. Borislow found that the student's intention to strive for achievement was significantly related to general self concept only when scholastic achievement was a prime goal.

It can be seen that the studies of Chickering and Borislow gave no conclusive evidence as to whether or not self concept was related to achievement effort. There is a need for more research in clarifying this relationship.

Sex differences and academic achievement

Besides considering the dynamics of achievement from the aspects of self concept and motivation (effort to achieve), sex differences must be examined to obtain a more complete picture of the factors contributing to achievement. Past studies have shown the importance of the sex of the person on his or her scholastic achievement. One of the earliest systematic investigations dealing with sex difference and school achievement was done by Stroud and Lindquist (1942). Through their work, they concluded that girls in the elementary and secondary schools had maintained a consistent, and on the whole, significant superiority over boys in all academic subjects except arithmetic. These results coincided with those of Corliss (1964) in which elementary school children were once again tested. The results from standardized achievement tests showed girls invariably scoring higher than boys on the same grade level. More of the same information was reported by Eichorn and Jones (1952) in their work with third graders. Over 2300 students were tested in reading and arithmetic skills and girls were found to be consistently superior to boys. The superiority of girls in general academic achievement was also reported by such investigators as Phillips (1962), Dizney and Fleming (1964), and Wisenthal (1965).

Most of the studies just mentioned compared achievement between boys and girls on the same grade level. A more complete picture of this comparison could be obtained by comparing boy and girl achievement over different grade levels. Clark (1959) had performed such an investigation by considering achievement on grade levels 3, 5, and 8. He used a random sample of students from across the country and found that girls were

superior to boys in English and spelling but not in reading and arithmetic. His results did not totally confirm those mentioned which showed girl superiority in all academic areas. Another study across grade levels was done by Wozencraft (1963). Third and sixth grades were tested with numerous tests encompassing language arts (word meaning, reading, etc.). At the third grade level, girls out-performed boys in all areas but at the sixth grade level boys had approached the point of almost catching up with the girls in arithmetic skills. Such a finding may go to support Hoedel's (1965) conviction that girls were more academically oriented in their early school years.

The studies just reviewed favored the academic performance of the girl over the boy. There are, however, a few studies which portrayed different conclusions on this research subject. Such an experiment was explained by Parsley, Powell, O'Connor, and Deutsch (1963) where some 5021 students in the second through eighth grades were tested. This was one of the most extensive studies which had been done in examining sex differences and achievement. Components of reading and arithmetic were tested through the use of two standardized achievement tests. The conclusion reached was that there was no significant difference between the sexes within a particular grade level for any of the achievement areas studied. Since the results of these authors conflicted with many other studies dealing with the same subject, Parsley, Powell, and O'Connor (1964) set up another investigation. The California Achievement Test was used on students in grades four through eight. In this experiment, the authors found that girls excelled in all areas but arithmetic reasoning. These results were more in harmony with previous studies by other researchers. The superiority of boys in arithmetic but not in

other areas was also reported by Jarvis (1964).

The studies mentioned here on sex differences and achievement, and others in the literature, support the general assumption that girls achieve higher academically when measured by standardized tests than boys of the same grade level. There are exceptions to this assumption, however, and this leaves some question as to there being any distinct relationship between sex difference and academic achievement.

Self ratings versus teacher ratings

Most of the studies conducted with self concept as a variable call for a self rating on the part of the subject. There have been researchers in the field of motivation and learning who have questioned self report as a valid procedure for obtaining a person's true self concept. They have suggested that other criteria such as teacher, peer, and parental ratings of the subject's self concept be compared with the self rating of the subject. As a result of this emphasis, teacher evaluations and student evaluations have been compared with respect to the student's future achievement and the student's self concept. Russell (1953) was one of the first men to collect all available experimental findings pertaining to the comparison of teacher and student ratings of the student. He found that most of the studies to that date reported that students tended to rate themselves higher in academic skills than their teachers would rate them. However, when a teacher's rating of a student's academic achievement was compared with the student's rating of his achievement, there tended to be a low positive relationship. He also found that when a student's rating of his own personality was compared with a teacher's rating of the student's personality, there was again a low positive relationship. With reference to the factors of a person's

personality, Perkins (1958) investigated a student's self concept as seen from the viewpoint of the student and his teacher. A large sample of fourth and sixth graders used a Q sort instrument in rating their self concept. Teachers' preceptions of the students' self concepts were found to be in general positively and significantly related to the students' expressed self concepts. This similarity of student and teacher rating of the student's self concept was further confirmed by the work of Gordon and Wood (1963). These two researchers explored teacher and student ratings of the student's self concept, achievement estimates, and actual achievement. Instead of using a Q sort technique to measure self concept, Gordon and Wood had the teachers rank their students from highest to lowest on a 5 point scale dealing with the above mentioned variables. The results were put into stanines and compared with student ratings of themselves on the same scale. There was a positive and significant relationship between the student's and teacher's ratings on the self concept scale. In the same study, Gordon and Wood also found that there was no relationship between teacher and pupil ratings of the student's ability to achieve. They found that teachers were actually closer to estimating the student's scores on a standardized achievement test than were the students.

As surprising as this last finding by Gordon and Wood was, Pearson (1965) added evidence to support this fact in his experiment which used the Henmon-Nelson Tests of Mental Ability. Teachers and students estimated the student's ability to achieve before the test was given and these estimations were compared with the test results. Teachers were found to more accurately estimate the student's own ability than the student himself. A high positive correlation was found between teacher

estimates and the student's actual performances. Another study executed by Robertson (1960) further supported the idea that students have difficulty in realistically evaluating their scholastic ability.

These findings raise some interesting questions since a student was supposedly able to accurately see his self concept when compared with a teacher's rating, but was not able to realistically evaluate his ability to achieve academically. Is a teacher better able than the student to assess the factors (like ability and motivation) that determine the student's academic achievement? In reference to past studies which dealt with student ability, there seemed to be general agreement that teachers were better judges than the students themselves. But as to the variable of student motivation, there was no conclusive evidence as to whether or not teachers were more accurate judges than students. Of the studies which have even dealt with evaluation of student motivation, many obtained a need for Achievement score on the student and compared this with some criteria of achievement. This was usually done by utilizing a projective test. Using this technique, a person's motivation was inferred by assessing his need toward ahicevement in an indirect fashion. Few studies have dealt with motivation toward achievement through direct self appraisal of motivational factors. There does, however, seem to be a recent emphasis on this technique of determining one's motivation toward achievement by direct self report. Meacham (1965) used such a procedure and ran an experiment using a newly constructed self concept index of motivation. Correlations were computed to elicit both self appraisal and self ideal scores with respect to motivation. His results showed that self appraisal of motivation was significantly related to academic achievement while showing no correlation with academic aptitude.

Correct self appraisal of one's motivation toward achievement should be an important aspect of how one will succeed academically. In talking about achievement motivation, Atkinson (1964) stated that a student's knowledge of his own relative ability is one of the most important determinants of his expectancy of success in schoolwork.

Accurate assessment of one's motivation toward achievement, one's ability to achieve, and one's actual achievement hinges upon the total self concept of the individual. If he has a positive and stable self concept, he should be able to more realistically and accurately evaluate his motivation and possible achievement success than an outside figure like his teacher. It can be seen from some of the studies reviewed, however, that students with stable self concepts were not always able to predict their academic success as well as their teachers.

Summary

This review has shown that: (1) there was generally a low positive relationship between self concept and academic achievement, (2) there was little information about the relationship between a student's self concept and his achievement effort (effort in school), (3) girls generally achieved higher academically than boys of the same grade level, (4) teacher and student ratings of the student's self concept were positively and significantly related, (5) teachers were generally better able to predict a student's ability to achieve than the student himself, and (6) more research is needed to establish the relationship between student and teacher judgments concerning a student's motivation in achieving academically.

Relationships which still need to be substantially verified include teacher and student judgments as related to student achievement and

motivation, self concept as related to achievement and motivation, and sex difference as related to self concept, motivation, and achievement.

DEFINITIONS

To help clarify the variables used in this study, the following definitions have been established:

1. Achievement effort--a motivational variable describing the amount and quality of effort made by an individual to accomplish a task or achieve a goal in a school situation.

2. Achievement--the numerical scores obtained by the student on the Stanford Achievement Test.

3. Self concept--the self concept score a student obtained on the Lipsitt Self-Concept Scale for Children.

4. Intelligence--the I.Q. score a student obtained on the California Test of Mental Maturity.

HYPOTHESIS

In order to investigate more completely the variable of achievement effort as related to self rating, teacher rating, student self concept, actual achievement, and sex difference, the following null hypotheses were tested:

1. A student's achievement will not be related to his self concept. Sex differences will not be evident in this comparison.

2. A student's achievement effort, as rated by himself, will not be related to his self concept. Sex differences will not be evident in this comparison.

3. A student's achievement will not be related to his self perceived achievement effort.

4. A student's achievement will not be related to his teacher's rating of the student's achievement effort.

5. A student's self rating of his achievement effort will not be related to his teacher's rating of the student's achievement effort.

METHODS AND MATERIALS

Selection of subjects

The subjects for this study were students from nine 6th grade classrooms in the Logan City School District. The original sample consisted of 119 boys and 135 girls. After eliminating those subjects who had missed at least one of the testing sessions, the working sample was reduced to 93 boys and 105 girls. The nine teachers, one from each of the nine classrooms, were also used in the study. All experimental subjects were chosen and tested the first two months of 1968.

Experimental design

The experimental procedure can be best described in terms of the basic design used in correlation research. This involved collecting two or more scores on the same group of subjects and computing correlation coefficients. The purpose behind this method was to determine whether or not there was a relationship between experimental variables and to find out the degree of the relationship. The variables correlated in this study were obtained by securing five different test scores on the subjects.

Description of tests

The testing materials utilized in the experiment were: (1) the Stanford Achievement Test, (2) the California Test of Mental Maturity, (3) the Lipsitt Self-Concept Scale for Children, (4) and a newly constructed Achievement Effort Rating Scale. The scores on the Stanford Achievement Test and the California Test of Mental Maturity were obtained

from the Logan City School District Pupil Personnel Office. These two tests had been given to the students 11 months and 2 months, respectively, prior to the present experiment. The Lipsitt Self-Concept Scale and the Achievement Effort Rating Scale were both administered during the present experiment.

The Lipsitt Self-Concept Scale consisted of 22 adjectives describing self concept. The adjectives were listed in a column where the student rated his present feelings on each word. An example is: "I am friendly." The adjectives were also listed in a column where the student rated what he would desire to be with respect to each word. An example is: "I would like to be friendly." A 5 point rating scale (1 = not at all and 5 = all of the time) was used on both columns.

The Achievement Effort Rating Scale was constructed especially for this experiment. It was a compilation of statements about the student's amount of effort expended in his school work. The items which comprised this rating scale were selected from Chickering's (1958) effort in school work scale, statements from current school teachers, and a personal list of the experimenter's. The rating scale consisted of 19 items on which the student rated himself on a 5 point scale (1 = never and 5 = always). Statements on the scale were selected for the purpose of obtaining a measure of the student's motivation in expending effort toward academic achievement. Both the Lipsitt Self-Concept Scale and the Achievement Effort Rating Scale are reproduced in the appendix.

Procedure

The Lipsitt Self-Concept Scale and the Achievement Effort Rating Scale were administered to all of the 6th grade students in a two-week period. The self concept scale was given to the students on a different

day than the Achievement Effort Rating Scale. Instructions for both tests asked the students to do their best in answering the test items and told them that no one would see their answers except the experimenter. The students also were told that there were no time limits on the tests but they should work rapidly. If the students had any questions about understanding word or statement meanings, the experimenter made it known that he would gladly answer their questions.

The Achievement Effort Rating Scale also was given to the nine teachers with instructions to fill out one scale for each of their students. The teachers returned these rating scales within a couple of weeks after receiving them.

Test scores for each student on the Stanford Achievement Test were obtained from the Logan City School's Pupil Personnel Office. The mean of all nine sub-test scores was recorded for each student. Student scores on the California Test of Mental Maturity were also secured from the same office. The total I.Q. score was recorded for each student.

Five sets of data were obtained from the above mentioned tests: (1) students' self ratings on an achievement effort rating scale, (2) teachers' ratings of their students on an achievement effort rating scale, (3) students' scores on a self concept scale, (4) students' performances on an achievement test, and (5) students' performances on an intelligence test. These data were collected and prepared for statistical analysis to test the experimental hypotheses. All students who were missing one or more sets of test data were eliminated from the working sample.

RESULTS

The statistical method of partial correlation was used to test the first four null hypotheses. In each instance, the influence of the variable of intelligence (as measured by the CTMM) was removed from the other variables being compared. The fifth null hypothesis was tested using the product-moment correlation statistical method. To test the sex differences in the first and second null hypotheses, the partial correlation coefficients of both sexes were transformed to Fisher's z_r's and put in the formula testing the difference between two correlation coefficients for independent samples. All of the correlation coefficients obtained were tested for statistical significance.

The first null hypothesis was supported. There was no significant relationship between a student's achievement and his self concept (Table 1). This finding held for both sexes although the boys had a somewhat greater relationship between achievement and self concept than did the girls (Table 2). Achievement and self concept were also treated statistically

Table 1. Partial correlation analysis for student achievement (SA) and student self concept (SC)

Sex	Number	Mean on SC	S.D. on SC	Mean on SA	S.D. on SA	Partial r coeff.	t test value
Boys	93	81.44	7.77	6.11	1.39	.065	.890
Girls	105	83.51	6.75	6.12	1.24	-.026	.361

Table 2. Correlational analysis comparing sex differences on student achievement (SA) and student self concept (SC)

Sex	Partial r coefficient	Fisher's z_r transformation	t test value
Boys	.065	.065	
Girls	-.026	-.026	.6276

using chi-square. This was done in order to see what relationship there would be for high and low self concept students as compared with high and low achievement students. Using chi-square, it was found that no significant relationship existed between high self concept students being the high achievers and low self concept students being the low achievers (Table 3).

The second null hypothesis was not validated. The results of this study showed a student's self concept to be highly related to the student's achievement effort as rated by himself (Table 4). This relationship reached the significance level of .001. Both boys and girls had high correlations between their achievement effort and self concept as there were no significant sex differences in this relationship

Table 3. Chi-square analysis for students with high and low self concept (SC) as compared with students with high and low achievement (SA)

	High SA High SC	High SA Low SC	Low SA High SC	Low SA Low SC	Total
Number of students	56	45	44	53	198

Degrees of freedom = 1 Chi square = 2.013 (not significant)

Table 4. Partial correlation analysis for student achievement effort (SAE) (as rated by the student) and student self concept (SC)

Sex	Number	Mean on SAE	S.D. on SAE	Mean on SC	S.D. on SC	Partial r coeff.	t test value
Boys	93	72.83	7.81	81.44	7.77	.635	11.339*
Girls	105	76.43	7.35	83.51	6.75	.506	8.161*

*Significant at the .001 level.

(Table 5). Once again, however, this relationship favored boys over girls to a slight non-significant degree. As with achievement and self concept, high and low achievement effort students were compared to high and low self concept students by using the statistic of chi-square. The results showed a highly positive significant relationship between high self concept students being the highly motivated students and the low self concept students being the lowly motivated students (Table 6).

The student's achievement was found not to be significantly related to the student's achievement effort as rated by the student (Table 7). Thus, the third null hypothesis was upheld. However, the student's

Table 5. Correlational analysis comparing sex differences on student achievement effort (SAE) (as rated by the student) and student self concept (SC)

Sex	Partial r coefficient	Fisher's z_r transformation	t test value
Boys	.635	.750	
Girls	.506	.557	1.331

Table 6. Chi-square analysis for students with high and low self concept (SC) as compared with students with high and low achievement effort (SAE) (as rated by the student)

	High SAE High SC	High SAE Low SC	Low SAE High SC	Low SAE Low SC	Total
Number of students	73	34	27	64	198
Degrees of freedom = 1			Chi square = 29.24*		

*Significant at the .001 level.

Table 7. Partial correlation analysis for student achievement (SA) and student achievement effort (SAE) (as rated by the student)

Sex	Number	Mean on SA	S.D. on SA	Mean on SAE	S.D. on SAE	Partial r coeff.	t test value
Boys and girls combined	198	6.11	1.30	74.74	7.76	.088	1.222

achievement was found to be significantly related to the student's achievement effort as rated by the teacher (Table 8). This relationship was highly significant as it reached the .001 level. These results do not support the fourth null hypothesis.

The final null hypothesis compared the teacher ratings of student achievement effort with those of the student ratings. This null hypothesis was disproved as there emerged a significant relationship between these two variables to the .001 level (Table 9).

Table 8. Partial correlation analysis for student achievement (SA) and student achievement effort (SAE) (as rated by the teacher)

Sex	Number	Mean on SA	S.D. on SA	Mean on SAE	S.D. on SAE	Partial r coeff.	t test value
Boys and girls combined	198	6.11	1.30	70.95	12.73	.289	4.188*

*Significant at the .001 level.

Table 9. Product-moment correlation analysis for student achievement effort (SAE_1) (as rated by the teacher) and student achievement effort (SAE_2) (as rated by the student)

Sex	Number	Mean on SAE_1	S.D. on SAE_1	Mean on SAE_2	S.D. on SAE_2	P-M r coeff.	t test value
Boys and girls combined	198	70.95	12.73	74.74	7.76	.382	5.787*

*Significant at the .001 level.

DISCUSSION

It was mentioned in the introduction that this study was set up as an attempt to further clarify the relationship among self concept, motivation, and achievement. To sharpen the focus in this clarification, teacher and student evaluations on the variables of motivation and achievement were dealt with specifically. Teacher ratings versus student ratings on motivation and achievement of the student composed the major portion of the experimental hypotheses.

The idea of comparing teacher and student ratings stemmed from an examination of previous studies which showed teachers assessing student motivation and ability to achieve academically more accurately than the students themselves. There is nothing extremely exceptional with the results of these studies if the premise is made that the students have some emotional or behavioral problems causing distortions in their self concept. A student with a low or distorted self concept should theoretically have difficulty in assessing his true motivation and ability to achieve. In this case, the teacher may be able to assess these variables better than the troubled student. If we look at the student with a stable self concept, however, we should see him better able to assess his motivation and ability to succeed academically than some outside source like his teacher. This would be in keeping with the "self" theorists of personality who believe a healthy person has an internal locus of evaluation and that his evaluation is generally correct.

The results found in the present experiment failed to support the idea that the student with a high self concept could properly assess his

achievement. First of all, it was found that student achievement and student self concept were not related when compared by a partial correlation technique. As a matter of fact, the girls had a negative correlation between these two variables. Secondly, using the statistic of chi-square, it was shown that students with low self concepts achieved as well as students with high self concepts and that high self concept students achieved as poorly as low self concept students. In other words, a student can achieve to many academic levels regardless of his self concept. The results obtained in this study equating achievement and self concept were very similar to those of Nemeroff's (1965). He too found a slight negative relationship. It must be recognized, however, that Nemeroff used a different achievement criteria and a different self concept criteria than the study just completed.

Student motivation, as measured under the term "achievement effort," was found to be significantly related to self concept. To see how these two variables were related, chi-square was used. It was determined that students with high self concepts could more adequately assess their motivation than students with low self concepts. Borislow's study (1961) was in harmony with these results. His study of motivation (student effort to achieve) and self concept resulted in a positive and significant relationship between these two variables. It can be pointed out that the high relationship between self concept and motivation, as measured by rating a person's effort or intended effort to achieve, may be due to possible overlapping of the variables being measured. Items used to measure self concept are often very similar to those items on motivational or achievement effort scales. Thus, underlying factors may be the same for both variables and a high correlation would be

expected.

Teacher and student ratings of a student's achievement effort were highly comparable as reported in the results of this study. The conclusion can be drawn that teacher and student may closely agree as to how much effort the student will put forth in achieving a goal. Teacher and student were similar in judging this aspect of student motivation. As interesting as this finding, the picture of teacher and student ratings became complicated when student motivation (achievement effort) was measured against an achievement criteria. When teacher and student ratings of student motivation were compared with achievement, teacher ratings were significant whereas student ratings were not. It might be suspected that this difference stemmed from the teacher being more academically oriented than the student, and as such, the teacher could tend to rate the student's motivation in a way which would correspond more with actual achievement scores. This would lead one to believe that teachers are better able to judge a student's achievement than the student himself. Gordon and Wood's study (1963) was in harmony with this aspect of the present study as they found teachers having closer estimates of a student's achievement than the students. From these results, it is probably safe to assume that teachers can better judge a student's achievement than the students, but not necessarily the student's motivation. With this added insight in realizing the student's achievement ability, the teacher should be able to more effectively help a student work toward a scholastic goal which he can accomplish and from which he can gain satisfaction.

A final area of this experiment was concerned with the sex differences in achievement, self concept, and motivation. The results showed

no significant difference between the sexes when comparing self concept with achievement. Since the experimental subjects were sixth graders, this finding seems to be in general harmony with the idea that the older the students get, the less prominent is girl superiority in academic subjects (Wozencraft, 1963). The results also showed no significant difference between the sexes when comparing self concept with motivation (achievement effort).

This study reported no differences between the sexes in achievement, self concept, and motivation at the sixth grade level, but it must be remembered that the sixth grade is only one level in a person's academic growth. As has been pointed out by other investigators studying the sex differences, one needs to concurrently or longitudinally examine many age levels to get a true picture of differences and similarities and how they develop. This is a weakness of the present study.

SUMMARY AND CONCLUSIONS

The purpose of this study was to investigate the relationship between: teacher and student judgments as compared to student achievement and motivation (achievement effort), self concept as compared to achievement and motivation, and sex differences as compared to self concept and motivation and achievement.

The subjects were obtained from nine 6th grade classes in the Logan City School District during the school year 1967-68. A total of 198 students were used. Student scores were obtained on the Stanford Achievement Test and the California Test of Mental Maturity already available in the school district. Students were given the Lipsitt Self-Concept Scale for Children and a newly constructed Achievement Effort Rating Scale. Teachers were also asked to rate each student on the Achievement Effort Rating Scale.

The data was then used to test five experimental hypotheses which compared: (1) a student's achievement with his self concept, (2) a student's achievement effort (as rated by himself) with his self concept, (3) a student's achievement with his achievement effort (as rated by himself), (4) a student's achievement with his achievement effort (as rated by his teacher), and (5) a student's rating of his achievement effort with his teacher's rating of the student's achievement effort. The statistical analysis of partial correlation was used to test the hypotheses so as to eliminate the influence of intelligence. Product-moment correlation was also used to test one of the hypotheses.

Conclusions

From an analysis of the statistical results of this correlational study, the following conclusions were made:

1. The relationship between a student's achievement and his self concept was not significantly different than zero correlation. Also, there was no significant sex difference when comparing these two variables.

2. The relationship between a student's motivation (achievement effort) and his self concept was significantly greater than zero correlation. There was no significant sex difference when comparing these two variables.

3. The relationship between a student's achievement and his achievement effort (as rated by himself) was not significantly different than zero correlation.

4. The relationship between a student's achievement and his achievement effort (as rated by his teacher) was significantly greater than zero correlation.

5. The relationship between a student's achievement effort (as rated by himself) and the student's achievement effort (as rated by his teacher) was significantly greater than zero correlation.

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APPENDIX

Lipsitt Self-Concept Scale

Name of Student_____

Instructions: Rate yourself on the following statements according to this scale:
1 = not at all
2 = not very often
3 = some of the time
4 = most of the time
5 = all of the time

_____1. I am friendly.	_____1. I would like to be friendly.
_____2. I am happy.	_____2. I would like to be happy.
_____3. I am kind.	_____3. I would like to be kind.
_____4. I am brave.	_____4. I would like to be brave.
_____5. I am honest.	_____5. I would like to be honest.
_____6. I am likeable.	_____6. I would like to be likeable.
_____7. I am trusted.	_____7. I would like to be trusted.
_____8. I am good.	_____8. I would like to be good.
_____9. I am proud.	_____9. I would like to be proud.
_____10. I am lazy.	_____10. I would like to be lazy.
_____11. I am loyal.	_____11. I would like to be loyal.
_____12. I am co-operative.	_____12. I would like to be co-operative.
_____13. I am cheerful.	_____13. I would like to be cheerful.
_____14. I am thoughtful.	_____14. I would like to be thoughtful.
_____15. I am popular.	_____15. I would like to be popular.
_____16. I am courteous.	_____16. I would like to be courteous.
_____17. I am jealous.	_____17. I would like to be jealous.
_____18. I am obedient.	_____18. I would like to be obedient.
_____19. I am polite.	_____19. I would like to be polite.
_____20. I am bashful.	_____20. I would like to be bashful.
_____21. I am clean.	_____21. I would like to be clean.
_____22. I am helpful.	_____22. I would like to be helpful.

Achievement Effort Rating Scale

Name of Student_____

Instructions: Rate yourself on the following 19 statements according to this scale: 1 = never
2 = not very often
3 = sometimes
4 = most of the time
5 = always

_____1. I am neat and careful when I do my school work.

_____2. I start right away on the assignments when they are given.

_____3. Once an assignment is given, I work hard at it without playing around until it is finished or the teacher calls time.

_____4. I turn my work in on time.

_____5. I finish an assignment once I have started it.

_____6. I participate in class discussions conducted by the teacher.

_____7. I participate in class activities and work projects.

_____8. I participate in active games.

_____9. I do the best I can on assignments.

_____10. I pay attention to what is being said and done by the teacher.

_____11. I like to try new and different things even though I am not sure I can do them.

_____12. When the teacher gives our class free study time, I use it to study.

_____13. Whenever I am absent, I make up the work I have missed.

_____14. I like to do extra work for class assignments.

_____15. I am eager to participate in class activities.

_____16. I would rather plan my own work than have someone else plan it for me.

_____17. I try to take on responsibilities by myself.

_____18. When the teacher critizes my work, I try to improve it.

_____19. When given an assignment, I do it on my own.

VITA

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