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ABSTRACT

A relationship exists between an individuals' perception of his ability to learn and his academic achievement. This paper reports the findings of a study designed to identify the level of self-concept of academic ability of 121 students, comprised of 108 blacks (64 males and 44 females) and 13 whites (7males and 6 females), upon enrollment in and completion of a pre-college compensatory education program in New York State during 1968-1969. Enrollment in compensatory education constitutes one academic role, while completion constitutes another role. The Brookover Self-Concept-of-Academic-Ability Scale was administered to subjects upon entering and again upon completing the program. It was theorized that there would be a positive change in self-concept of academic ability of 1) each subject as a result of moving from one role to another; 2) black and white subjects from test 1 to test 2; and, 3) both male and female subjects from test 1 to test 2. It was concluded that changes in academic roles had a positive effect on the self-concept of academic ability of male and female black subjects; but only for white male subjects. The research indicates that compensatory education programs could positively affect self-concept improvement contributing to academic achievement. (Author/SJM)

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Changes in Academic Roles of Black and  
White Compensatory Education Students and  
It's Effects on Self-Concept-of-Academic-Ability

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EFFECTS OF CHANGES IN ACADEMIC ROLES ON SELF-CONCEPT-OF-ACADEMIC  
ABILITY OF BLACK AND WHITE COMPENSATORY EDUCATION STUDENTS\*

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SYMBOLIC-INTERACTIONIST THEORY

The theoretical orientation for this research, with respect to the development of an individual's self-concept, is based upon the works of Cooley (1909) and Mead (1934). According to Cooley, an individual knows what he is like, in part, by accurately interpreting the reflected attitudes of those about him--this is known as the "looking-glass hypothesis". Mead elaborates further by contending that man is highly dependent upon his fellow man for the satisfaction of most of his needs and desires; for this reason man becomes aware of these attitudes, and usually attempts to satisfy them by his overt behavior.

Dai (1943), Meltzer (1959) and Kinch (1963) have succinctly put forth a formalized theory of self-concept. Briefly, the general theory states that the individual attributes to himself, with the conception of himself emerging from social interaction, which in turn guides, or influences, the behavior of that individual.

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## SELF-CONCEPT AND ACADEMIC ACHIEVEMENT

With this background in mind psychologists, such as Combs and Snygg (1959), have emphasized the importance of an individual's perception in what has been identified as intelligence, or the ability to learn. Brookover and Gottlieb (1964) elaborate by stating:

. . . . if the child perceives that he is unable to learn Mathematics, or some other area of behavior, this self-concept of his ability becomes a functionally limiting factor of his school achievement.

Brookover (1959) has superimposed Mead's interpretation of human interaction, regarding self-concept, to the school learning situation. Later Brookover and Associates (1964) hypothesized that: (1) persons learn to behave in ways that each considers appropriate to himself; (2) appropriateness of behavior is defined by each person through the internalization of the expectations of "significant others"; (3) the functional limits of one's ability to learn are determined by his self-conception; and, (4) the individual learns what he believes "significant others" expect him to learn in the classroom and in other situations.

Brookover and associates (1965) have also investigated the nature of self-concept and its effects, and relationships, to academic achievement. Results reported indicated that there was a direct relationship between self-concept and academic achievement for students in grades 7 through 12. Thus, studies by Brookover, Patterson and Thomas (1962), Morse (1963), Brookover, Thomas and Patterson (1964), Brookover, Erikson and Joiner (1965), Brookover, Lepere, Hamachek, Thomas and Erikson (1965), Morse (1966), Towne (1966), Joiner and Erikson (1967), and Olsen (1969, 1970a, 1970b) would concur with Brookover when he stresses that:

. . . . when applied to the specific learning situation a relevant aspect of self-concept is the person's conception of his own ability to learn the accepted types of academic behavior.

## SELF-CONCEPT-OF-ACADEMIC ABILITY

Brookover and associates (1965) assert that each child has his own "self-concept-of-academic ability". By "self-concept-of-academic ability" Brookover means ". . . the evaluation one makes of oneself with respect to the ability to achieve in academic tasks in general as compared with others." Brookover elaborates by stating that ". . . 'self-concept-of-academic ability' refers to behavior in which one indicates to himself (publicly or privately) his ability to achieve in academic tasks as compared with others engaged in the same task." This definition is based upon Mead's (1934) conceptualization of self ". . . as an awareness of, and articulation as, an internalized social process."

### PURPOSE

This paper reports the findings of a study designed to identify the level of self-concept-of-academic ability of black and white pre-college compensatory education students upon enrollment in, and completion of, a compensatory education program. Enrollment in compensatory education constitutes one academic role, while completion of compensatory education constitutes another academic role.

It should be noted that few pieces of research, excluding those aforementioned, have been reported regarding the relationships between self-concept and academic achievement. And, even fewer studies have dealt with changing one's academic role and the effects upon self-concept and academic achievement. Furthermore, even less research has been undertaken relevant to self-concept and academic achievement and the effect of academic role change for the black segment of the population in general, and the black college population specifically.

## METHOD

### Subjects

Data was collected from the entire 1968-1969 class who enrolled in a New York State pre-college compensatory education program for the first time. The sample includes 121 students, 108 blacks (64 males and 44 females) and 13 whites (7 males and 6 females).

In order to be eligible for this year long pre-college compensatory education program an applicant must meet the following criteria:

1. Be a high school graduate from New York State or hold a New York State Equivalency Diploma.
2. Live in a defined poverty area within the county.
3. Be a U.S. Citizen or have filed a Declaration of Intent.
4. Be entering college for the first time.
5. Be highly motivated to attend college.

### Procedure

The Ss completed the Brookover Self-Concept-of-Academic Ability Scale upon entering the compensatory education program in August, 1968. The same scale was administered to the Ss at the completion of the compensatory education program in May, 1969.

The Brookover Self-Concept-Of-Academic Ability Scale (BSCOAA) was developed by Wilbur Brookover and Associates (1964) and is designed to measure the students self-concept of his academic ability. The BSCOAA is an eight-item Guttman Scale. Responses to each item were made along five point continuum--5 indicating superior ability, 4 above average, 3 average, 2 below average, and 1 poor. A total score of 40 indicates that the student has a superior self-concept-of-academic ability, 32 above average, 24 average, 16 below average, and 8 poor.

The BSCQAA has coefficients of reproducibility of .95 for males and .96 for females . Reliability coefficients calculated by Hoyt's Analysis of Variance were .82, .91, .92, and .86 for males, and .77, .84, .84 and .84 for females on a longitudinal basis. Correlations of .75 for males and .77 for females were reported in one year test-retest (Brookover, 1965).

#### Statistical Treatment of Data

All hypotheses were tested for significance by utilizing the multivariate analysis of variance with planned orthogonal comparisons. A functioning computer program for multivariate analysis of variance with unequal subclass frequencies by lease squares was utilized. Rejection level was set at .05 for all hypotheses.

#### RESULTS

Hypotheses 1. There will be a positive change in self-concept-of-academic ability of the Ss as a result of moving from one role (compensatory education student) to another role (regular college student).

Table 1. contains a comparison of mean self-concept-of-academic ability scores for all Ss, and by race and sex, from Test 1 (the compensatory education student role) to Test 2 (the regular college student role.)

TABLE I

CHANGES IN SELF-CONCEPT-OF-ACADEMIC ABILITY  
 SCORES OF COMPENSATORY EDUCATION STUDENTS  
 BY RACE AND SEX FROM TEST 1 TO TEST 2

	N	Test 1	Test 2	Change (2-1)
All Subjects	121	28.06	28.75	.69*
Black	108	28.19	28.99	.79*
White	13	26.92	26.77	-.15
Male	71	28.13	29.06	.92*
Female	50	27.93	28.32	.36

\*Significant at the .05 level.

Hypothesis 1 was accepted. The change in academic role, from compensatory education student (28.06) to college student (28.75), did result in a positive change in self-concept-of-academic ability. It should be noted that all Ss had academic ability (24.00 being average and 32.00 above average).

Hypothesis 2. There will be a positive change in self-concept-of-academic ability of black and white Ss from Test 1 (compensatory education student) to Test 2 (regular college student).

Table I indicates that Hypothesis 2 is accepted for the black Ss but not for the white Ss. The change in academic role, from compensatory education student (28.19) to college student (28.99), did not result in a positive change in self-concept-of-academic ability for the black Ss. However, the opposite occurred for the white Ss. Namely, the change in academic roles resulted in a negative change in self-concept-of-academic ability (-.15). Once again it should be noted that both black and white Ss

had a self-concept-of-academic ability score indicating average to above average ability. However, black Ss had a higher self-concept-of-academic ability score than white Ss at both Test 1 and Test 2.

Hypothesis 3. There will be a positive change in self-concept-of-academic ability of both male and female Ss from Test 1 (compensatory education student) to Test 2 (regular college student).

Table 1 also indicates that Hypothesis 3 is accepted for male Ss but not for female Ss. The change in academic role, from compensatory education student (28.13) to regular college student (29.06) did result in a positive change in self-concept-of-academic ability for male Ss. A positive change in self-concept-of-academic ability did occur for the female Ss from one role, compensatory education student (27.93), to another role, regular college student (28.32). However, this change was not significant.

Again, it should be noted that both male and female Ss had a self-concept-of-academic ability score indicating average to above average ability. However, male Ss had a higher self-concept-of-academic ability score than female Ss at both Test 1 and Test 2.

Multivariate analysis of variance allows the researchers the luxury of combining a number of variables together. Thus, the author combined the variables of sex (male-female) and race (black-white) for further analysis.

TABLE II

CHANGES IN SELF-CONCEPT-OF-ACADEMIC ABILITY  
SCORES OF COMPENSATORY EDUCATION STUDENTS BY  
RACE AND SEX COMBINED FROM TEST 1 TO TEST 2

	N	Test 1	Test 2	Change(2-1)
White males	7	26.429	27.429	1.000*
Black males	64	28.313	29.234	.919*
White females	6	27.500	26.000	-1.500
Black females	44	28.023	28.636	.613*

\*Significant at the .05 level.

Table II indicates that when the variables of sex and race are combined there is a positive change in self-concept-of-academic ability scores for black and white male Ss and for black female Ss, as a result of changing one's academic role. However, there was a negative change in self-concept-of-academic ability scores for white females as a result of changing one's academic role.

Therefore, Hypothesis 2 holds true for all black Ss but only white male Ss, and not white female Ss. And, Hypothesis 3 holds true for all male Ss, and for black female Ss, but not for white female Ss.

#### CONCLUSIONS

A comparison of scores on the Brookover Self-Concept-of-Academic Ability Scale revealed that:

1. The changes in academic roles did have a positive effect on the self-concept-of-academic ability of all blacks Ss (male and female). However, this was not the case for the white Ss. The changes in academic roles had a positive effect on the self-

Concept-of-academic ability of white male Ss but not white female Ss.

2. All Ss, balck and white, as well as males and females, had a self-concept-of-academic ability score that indicated average to above average ability.

If this research proves true for other samples, and for populations, of students of compensatory education programs, new life will be pumped into compensatory education. For Brookover (1965) stresses that if self-concept-of-academic ability is enhanced then higher academic achievement will result.

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