Black and white students' test scores: Factors leading to decreasing discrepancies

Diane Anita Fortenberry

University of Northern Iowa

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Abstract
What exists when there are two lines approaching one another, but fail to join in order to form one line? -- a gap. There has been a mysterious proliferation of gaps in recent years. For instance, there's the generation gap. That's where a wide area of misunderstanding exists between the young and the old. Then there is the communication gap. That is not being able to effectively relate to another. But what of the testing gap? More specifically the chasm that exists between test scores of black and white students. Throughout the years it can be said that this gap has been lessened or decreased (Staff, 1984). There have been researchers and theorists, mentioned in the following pages, who have given explanations for the gap decreasing.
BLACK AND WHITE STUDENTS' TEST SCORES: FACTORS LEADING TO DECREASING DISCREPANCIES

A Research Paper
Presented to
The Department of Educational Administration and Counseling
University of Northern Iowa

In Partial Fulfillment of the Requirements for the Degree Master of Arts in Education

by
Diana Anita Fortenberry
August 1985
This Research Paper by: Diana Anita Fortenberry
Entitled: BLACK AND WHITE STUDENTS' TEST SCORES: FACTORS LEADING TO DECREASING DISCREPANCIES

has been approved as meeting the research paper requirements for the Degree of Master of Arts in Education.

Norman McCumsey

6/25/85
Date Approved
Advisor/Director of Research Paper

Norman McCumsey

6/25/85
Date Approved
Second Reader of Research Paper

Norman McCumsey

6/25/85
Date Received
Head, Department of Educational Administration and Counseling
INTRODUCTION

What exists when there are two lines approaching one another, but fail to join in order to form one line? -- a gap. There has been a mysterious proliferation of gaps in recent years. For instance, there's the generation gap. That's where a wide area of misunderstanding exists between the young and the old. There's there is the communication gap. That is not being able to effectively relate to another. But what of the testing gap? More specifically the chasm that exists between test scores of black and white students. Throughout the years it can be said that this gap has been lessened or decreased (Staff, 1984). There have been researchers and theorists, mentioned in the following pages, who have given explanations for the gap decreasing.

Researchers have commented that the shift in policies and attitudes held by our culture and society has had an influence on test scores. This attitudinal impact of society can be seen through desegregation plans (Crain, 1982 & 1978; Anderson, 1983; Sanders, 1984). Secondly, researchers have examined the effects of student preparation in the form of practice (Kulik, 1984) and testwiseness (Powers, 1982; Kalechstein, 1981; McArthur, 1982) on aptitude and achievement scores. Lastly, researchers have written that the instructor's/administrator's behavior (Rosenthal, 1968;
Dworkin, 1979; Rubovitz, 1973; Blaney, 1983; Miller, 1976) or the instructor's race (Terrell, 1983; Graziano, 1982; Savage, 1972; Lahnston, 1972; Phillips, 1966; Jensen, 1974) may have had an impact on the gap of test scores between black and white students.

Just as there are many complex causes to many of education's problems, so it is with the factors that indicate gaps between test scores. Most researchers have attributed the gap to one isolated factor. Nonetheless, there are many factors that have coalesced to decrease the gap. It is important that an individual is presented with a more comprehensive view of the factors involved, than offered in the current literature, in order to begin working on solutions to further eliminate the problem.

To date no research has examined as many as three factors simultaneously that have contributed to the discrepancies of test scores between black and white students.

Statement of the Problem

The purpose of this paper is to examine three factors that may effect decreasing discrepancies between test scores of black and white students. While exhausting this topic, the following questions will be addressed: (1) What role does society/culture play? (2) What role does student preparation
play? and finally, (3) What role does the instructor or administrator play?

Importance of the Study

In educational administration one of the purposes of the administrator is to see that there is a "high quality" education system which meets the needs of its students. In the past, it has been apparent from test scores that the educational system was not meeting the needs of its black and white students equally. In recent years, the gap between black and white students' test scores has been narrowing (Jones, 1984). By examining three of the factors that have led to the decreasing discrepancies, educational administrators can begin/or continue to: (1) request high, yet realistic, expectations of "all" students, (2) sensitize faculty and staff to ethnic students' culture/background, and (3) develop an effective study skills curriculum. When an attempt is made to improve the educational system so that "all" students' needs are met, then the goal of administering a school system that personifies excellence can become a reality.

Definition of Terms

Intentional desegregation. The assignment of students to schools in order to facilitate a diverse racial composition.
Natural desegregation. The assignment to neighborhood schools of students from mixed neighborhoods (Crain, 1978).

Testwiseness. A subject's capacity to utilize the characteristics and formats of the test/or the test-taking situation to receive a high score. Testwiseness is logically independent of the examine's knowledge of the subject matter (Ebel, Millman, Bishop, 1965).

REVIEW OF THE LITERATURE

Introduction

The age of accountability and excellence is at hand. In the May 1984 edition of Phi Delta Kappan, encouraging statistics were reported. According to the College Entrance Examination Board, SAT scores for black students were on the rise. What were/are some of the factors which cause black student's test score to rise and the gap between black and white students' test score to decrease? Many persons outside of education seem to be making the clarion call of accountability and excellence. Regardless of where the new interest in quality education began, the fact remains that actions have and will continue to be taken by many groups to meet the challenge of further decreasing the gap.

One of the most compelling characteristics of an effective school is that of ownership. This ownership includes the input and support of students, parents, community
members, teachers, and administrators. It is the writer's intent to examine how each of the above groups may have in some way contributed to decreasing "the gap" in test scores of black and white students. This literature review will be divided into three main sections: (1) Societal influences, (2) Student preparation, and (3) Teacher/Administrator influences.

**Society Influences**

Like the saying suggests, "one can't see the forests for the trees", perhaps in the past, educators may have been too close to the problem of "the gap" to implement effective changes. Society intervened to solve the problem through desegregation. This desegregation sometimes occurred "naturally" when ethnic groups were accepted in previously all white communities, which led to racially mixed schools. If this phenomenon did not exist, then desegregation was intentional - by assigning black and white students to attend the same schools.

Crain (1978) reviewed 41 studies which related to desegregation and Black Achievement. Crain found four factors that influenced the success of desegregation plans. One factor was region. Two-thirds, or 67%, of the Southern studies as compared to 35% of the Northern studies, showed positive results for black student achievement studies. The
results seemed contradictory in light of the 32 studies reviewed by St. John (1975), or Weinberg (1977) which indicated that positive gains were also obtained from studies in the North. Another factor in determining the success of desegregation plans was the age of the student when desegregation occurred. The studies that Crain reviewed were insistent that the earlier the grade at which desegregation occurs, the more positive the impact on achievement. Curriculum was another factor. Crain explicitly states, "where there is a marked difference in part of the curriculum of the sending and receiving schools, achievement changes (either for better or worse) will occur in that subject area of the desegregated subject" (p. 38). The last factor influencing success would be if the desegregation plan was voluntary or mandatory. The studies showed a significant correlation between mandatory assignment and positive achievement outcomes.

Although Crain accepted that some of the studies seem contradictory in proclaiming that desegregation has caused Black Achievement Scores to rise, he did illustrate that desegregation has led to better curricula or facilities, better trained teachers, and socioeconomic desegregation. Society used another approach of desegregation by desegregating the faculty and staff in the school system. Sanders (1984) examined the effect of student achievement as
it related to four factors of faculty desegregation. The achievement of black students was negatively affected if the teacher was racially or socially isolated or if the teacher was involuntarily transferred due to desegregation plans. All students were negatively affected if the teacher turnover rate was high. Lastly, the more experienced the teacher, the more positive the achievement for all students.

How can society be assured that gains made through desegregation continue? Like government, the educational system needs checks and balances. Crain (1982) actualized this idea when he suggested that desegregation plans include "monitoring provisions which provide information on a school's quality of education" (p. 694). These monitoring provisions can take the form of citizens' committees that collect statistics from the system, visit schools, attend classes and report to the court any perceived problems with the implementation of the order (Crain, 1982). Monitoring can also be done through achievement/statistical data (i.e., test scores and student surveys).

In summary, society has tried to decrease "the gap" through student desegregation. "Desegregation is not a laboratory controlled experiment that is identical in every state" (Crain, 1978, p. 47). In some cases desegregation increased black achievement, in other cases it did not.
"Desegregation policies that do nothing more than set racial quotas are not sufficient to insure a reversal of traditionally unequal school patterns" (Orfield, 1978, as quoted by Sanders, 1984, p. 613). In Sander's study (1984), he illustrated that faculty desegregation had positive and negative affects which relied on several factors. These factors included teacher experience, isolation, transfer conditions, and turnover rate. Sanders found a positive relationship to exist between the above mentioned factors and black student achievement. The monitoring procedures give input to the community, parents, and students. This process serves as a thermometer that can determine the effectiveness of desegregation plans.

**Student Preparation**

The previous section focused on how "outsiders", the society, tried to close the gap. Now the focus is shifted to an "insider", the student. McArthur (1982) examined how increased practice time on specific skills could raise test scores. McArthur concluded that students did perform better on those items targeted by the instructional intervention. The direction of McArthur's conclusions support the saying that "practice makes perfect".

To carry McArthur's conclusions further, one would have to ask what sort of things should the student practice? Kulik
(1984) recommended in his study that students practice on parallel test forms in order to raise their test scores. Kulik not only prescribed "what" to study, but insisted that there was a positive relationship between the amount of time studying and improved test scores. So far the research reviewed has indicated "what" to study and inferred the importance of the "amount of time" to study. Next the researchers suggest "how" to study.

Testwiseness in recent years has also become the student's guide to better test scores. Powers (1982) observed the effects of testwiseness in reading achievement scores of ethnic (Black, Hispanic, Native American, Anglo) populations. Gibbs (1964) as quoted by Powers, stated that individuals possess different amounts of testwiseness. Powers (1982) further stated that students low in testwiseness are penalized and handicapped for lack of such abilities. Powers used 854 (720 in the treatment group and 134 in the control group) third, fifth, and seventh graders from diverse ethnic and socio-economic statuses for his sample. The treatment group had seven 15 minutes class sessions on instruction in the use of testwise skills and techniques. Powers did not note a difference in reading comprehension scores between treatment/control groups. However, according to Powers, ethnic groups did not possess significantly different amounts
of testwiseness and when they are instructed in testwiseness, they make comparable gains. Kalechstein's (1981) results were more conclusive. Kalechstein concluded that testwiseness is a skill that can be taught and that testwiseness is a large source of test score variance.

In summary, student preparation activities used with black students may have been a second critical factor in (describing "the gap"). The preceding research indicated that student preparation consisted of increased practice time on specific skills, McArthur (1982) and the usage of testwise techniques when taking a test (Powers, 1982 and Kalechstein, 1981). Kulik (1984) also inferred that if teachers would give students parallel test forms student's test scores would increase.

Teacher/Administrator Influences

Great expectations - a quality teachers ought to possess. It has been purported that one of the components of effective schools is high teacher expectation of students. What of the teacher whose expectations for a particular group of students aren't positive? According to Rosenthal and Jacobson (1966):

Teacher expectations affect teacher behavior in such a way that it is highly likely that student performance is in turn affected. It would then seem probable that differential teacher expectation for black and white
students is related to differential school achievement (p. 22).

Rubovitz (1973) found a similar relationship to exist in her study of interaction of white teachers with white and black students. Rubovitz specifically noted the reactions/or expectations of the teachers. Rubovitz used 66 white female undergraduate students as teachers to interact with 264 randomly selected seventh and eighth graders attending three junior high schools in a small mid-western city. There were four students (2 blacks and 2 whites) randomly selected from the same-ability-group to participate in a class session with one teacher. In this study all black students when compared to white students were given less attention, less praise and more criticism. If Rosenthal's and Jacobson's theories of the self-fulfilling prophecy in the classroom is to be believed, then the above mentioned teacher behaviors would seem to lead to negative black student outcomes.

The "seemingly innocent banter of the lounge is converted to expectations that have a profound impact on the successes of children" (Dworkin, 1979, p. 712). Dworkin's study shifted focus from the negative expectations of Rubovitz's studies and emphasized the positive expectations. The student became successful in Dworkin's study because the initial emphasis was placed on the student's strengths rather than weaknesses.
After this positive environment had been established, attention then shifted to the student's area of concern. Blaney (1983) further supported Dworkin's study, because all of the variances in Blaney's achievement scores were due to "reacting" of the teacher. These type of behaviors (positive expectations and reacting) tend to be associated with classrooms that are warm and encouraging. This atmosphere or "school climate" is conducive in maintaining effective schools. A warm and encouraging school climate that embodies great expectations is not only dictated by the teacher but by the principal as well (Stodgill, 1974 as cited by Miller, 1976). The principal, as the leader, sets the tone for the school. Miller (1976) recommends that improvement in skills of the principal and organizational climate may in the long run have a significant payoff in student growth.

Another factor affecting "the gap" would be the race of the examiner. There have been conflicting reports about this issue. Studies by Phillips (1966), Jensen (1974), and Graziano (1982), suggested that the race of the examiner had no effect on Black Achievement test scores. Of the fifteen studies reviewed by Graziano no "strong" evidence was given to suggest that the race of the examiner would influence test scores of black students. Jensen (1974) replicated one of the studies covered by Phillips and came to similar conclusions.
Phillips' (1966) results differed somewhat from Jensen and Graziano in that under certain conditions, black students performed well and under other conditions the opposite would be held true. The results of a study by Terrell (1983) inferred that the combined effects of race of examiner and the level of student's mistrust of the examiner are related to black student's performance on I.Q. tests. Savage's study (1972) concurred with Terrell by stating that "students tended to be more negatively influenced by other race testers" (p. 11).

In summary, researchers tend to agree that teacher and administrator's expectations play an important role in student achievement. It has been reported by Rubovitz and Rosenthal that white teacher's expectations of black students were relatively low in contrived experimental situations. Because "the gap" has decreased, perhaps more teachers have focused on black students' strengths. After a sense of "success" was established, areas of concern were addressed by the teacher. According to current literature, it is still unclear whether black achievement can be associated with the race of the tester.

Summary

Public school systems have been concerned with educating the masses. As the masses began to include those persons of
different races, a new problem existed: How to close "the gap" of test scores between black and white students because of previous injustices and inadequacies of the system. The community or society tried to remedy the problem by imposing desegregation (among the students and faculty/staff) to reach the desired end. Although there were mixed outcomes from these actions, black student achievement improved (Staff, 1984). Student preparation through increased study time and usage of testwise skills also acted as remedies to the ills of test discrepancies. Lastly, teacher and administrator rising expectations for black students seemed to be a factor in decreasing "the gap".

In the annals of educational history the effective school system in the 80's might be characterized as being accountable (to the students, parents, and community) and endowed with the "mission" of excellence. While three major groups took ownership in making advances in solving the problems of test discrepancies between black and white students, the gap still exists - therefore the "mission" continues.

Conclusions

If desegregation is to continue, there are certain issues that need to be addressed. If these concerns are not addressed, then there will be a drop in morale and student achievement. This was the case locally in Waterloo (1978)
when 35 black students boycotted their desegregated school (Anderson, 1983). The students felt that the faculty and staff were not sensitive to their culture. This type of concern may be diminished through sensitivity training and other human relation type sessions (Swich, 1972). One key component that Baker (1983) mentioned in her article was the importance of stressing that culturally different children should not be made to feel negative about their differences, but rather that their culture is "understandable, acceptable, and appreciated" (p. 45). These programs should be used as in-service (sessions for practicing teacher) and pre-service (sessions for future teachers) tools to facilitate faculty/staff ethnic group awareness.

Another concern of the students in Waterloo (Anderson, 1978) was the need to have a black support person at school. Sedlacek (1983), in listing variables contributing to the minority student's success, concurred with the Waterloo students. The availability of a strong support person ranked high in Sedlacek's report.

Still another concern of the boycotting students involved teacher expectations. According to the students, the expectations of the teachers were unclear. It is the teacher's obligation to communicate expectations that are clear. Even though it seems to be the trend of effective
schools to set high expectations, these expectations should be realistic. In some cases from the student's perspective, expectations and the teacher's estimation of student's ability tend to be too high (Baksh and Martin, 1984). Perhaps in the future, teachers and administrators will continually monitor and re-evaluate their expectations. Hopefully expectations that are both challenging and rewarding will emerge.

Finally, the black students will have to form partnerships with faculty and staff in order to increase achievement. While the program of instituting test-taking skills and coaching techniques was introduced by Smith (1984) for the Black Scholar's curriculum, these practices can be implemented universally to enhance black student achievement. Throughout the years, groups with an interest in education have had to work together and form partnerships to build effective schools. School systems in the future will have to continually strengthen their bounds of accountability through partnerships. By this bonding of groups (students, teachers, parents, and community) hopefully "the gap" will be eliminated and effective schools will be illustrated through excellence.

Recommendations

The family is considered the nucleus of society. Without strong families, societies would dissipate. Therefore this writer recommends that further research be done examining the
influences of attitude and structure of the family in
decreasing discrepancies of test scores between black and
white students.

Changing attitudes of individuals is a long process.
Because this is true, it is this writer's recommendation that
programs for pre/in-service teachers continue.

S.E.S., or socioeconomic status, tends to relate to the
status that one has acquired at any given time. In America,
an individual is supposedly not status bound, he/she has the
chance to be socially mobile. If these comments are true then
it is this writer's recommendation that studies be done on how
the mobility of S.E.S. of Blacks has affected black student
achievements.
REFERENCES


