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Graduate School Success of Black Students from White Colleges and Black Colleges

ERNEST F. ANDERSON and
FREEMAN A. HRABOWSKI

This study compares the academic performance of black American graduate students who graduated from traditionally black colleges (Group A) with the academic performance of black American graduate students who graduated from historically white colleges (Group B). The study also presents data on the relationship between undergraduate grade point average and graduate school grade point average. No significant difference was found between Group A and Group B on mean graduate grade point average, retention rate, or graduation rate. There was a positive correlation between undergraduate and graduate grade point averages for Group A and Group B within each of four fields of study and for the total group.

Quality higher education for black Americans continues to be a major issue in higher education. The increased college enrollment of blacks, particularly in historically white colleges, has raised the question of whether there is a difference in academic achievement between those black students who have attended predominantly white colleges and those who have attended traditionally black colleges at comparable stages in their careers. More specifically, there is concern about the effect on black students of attending a college with a predominantly

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black student population versus the effect of attending a college that has a student population which is primarily white. Despite the fact that before the early sixties black colleges provided most of the educational opportunities for black college students, major attempts to desegregate higher education have led to a questioning of the value of black colleges [11].

Although diverse views have been expressed on the relative merits of black and white colleges, very little empirical data on the academic performance of the black graduates of these colleges have been collected, analyzed, and reported. Educators have engaged in numerous discussions on the merits of both black and white colleges, all without the benefit of substantial data regarding academic performance. Proponents of black colleges argue that from years of experience these institutions have developed special expertise in the education of the academically disadvantaged [6, 12]. These individuals usually refer to the many accomplishments of the graduates of black colleges.

Other educators often assume that black colleges do not provide educational programs which result in academic achievement equivalent to that attained at white institutions because of the many resources that the latter possess [11, 10]. DeCosta and Bowles [2] state that the problems of black colleges, largely stemming from institutional poverty, affect student achievement and ultimately black enrollment in graduate school. They further contend that "the record of historically white colleges in preparing black students for graduate school is most certainly excellent in terms of placement in the prestige institutions."

Clearly, many predominantly white colleges have resources superior to those available at the majority of black colleges, in terms of the number of Ph.D.s on the faculty, the quantity and quality of the library holdings, and the size of the endowment or state appropriation. Because of these superior resources, one might assume that black students who attend white colleges would be more successful in graduate study than those who attend black colleges.

This study compares the academic performance of black American graduate students who graduated from traditionally black colleges with the academic performance of black American graduate students who graduated from historically white colleges—in an effort to determine the relative effectiveness of both types of schools for a portion of their students who attend graduate school. The primary objectives are to (1) compare the graduate achievement levels of the two groups of students as measured by graduate grade point average, retention rate, and graduation rate, and (2) determine the relationship between under-

graduate academic performance, as measured by college grade point average over the last sixty undergraduate hours, and academic achievement in graduate school as measured by graduate grade point average.

METHOD

This study is a descriptive comparison of graduate academic performance between black students who attended predominantly black undergraduate institutions (Group *A*) and black students who attended historically white undergraduate institutions (Group *B*). Graduate academic performance was measured by grade point average and retention and graduation rates. The two groups were compared on mean graduate grade point average, master's level graduation rate, doctoral level retention rate, and doctoral level graduation rate.

The sample consisted of 350 black American graduate students who entered master's or doctoral degree programs at the University of Illinois at Urbana-Champaign between June 1968 and February 1973. All nondegree students were excluded from the study. As opposed to random selection, this study included all black American graduate students identified who enrolled in at least two units (eight semester hours) of course work on the average during the semester(s) in which they were pursuing a degree. All students who took an average load of less than two units per semester were excluded either because they were not degree candidates or they were not continuously enrolled. Of the 14 students excluded because they took less than two units per semester, 10 were not degree candidates, and the 4 who were in degree programs worked full-time and were not continuously enrolled.

As shown in Table 1, 313 students entered at the master's level and 37 entered directly at the doctoral level; of the 313 students who entered

TABLE 1
DISTRIBUTION OF BLACK GRADUATE STUDENTS BY TYPE OF UNDERGRADUATE COLLEGE ATTENDED AND DEGREE LEVEL AT ENTRANCE

GROUP	ENTERED MASTERS DEGREE ONLY	ENTERED MASTERS AND CONTINUED TO DOCTORATE	TOTAL MASTERS	ENTERED DOCTORAL ONLY	TOTAL DOCTORAL	GRAND TOTAL
<i>A</i> (Students from black colleges)	147	36	(183)	27	(63)	210
<i>B</i> (Students from white colleges)	100	30	(130)	10	(40)	140
	247	66	(313)	37	(103)	350

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at the master's level, 66 (36 from Group *A* and 30 from Group *B*) entered doctoral programs after earning a master's degree or the equivalent, resulting in 103 students in the sample at the doctoral level. Students who entered doctoral programs without earning a formal master's degree were considered master's students until they completed eight units of graduate course work (one unit equals four semester hours). The 37 entering doctoral students had completed a master's degree at another graduate institution before admission to doctoral programs. Two hundred and ten students in this sample had graduated from black colleges and 140 had graduated from white colleges. Fifty-three black colleges and 48 white colleges were represented in this study.

Students within each of the two groups were further categorized into the following four fields of study: Education (Field 1) included all majors in the College of Education which require similar course patterns. Social sciences and public service (Field 2) consisted of all majors with course content primarily from the social science disciplines. Humanities (Field 3) consisted of majors with a preponderance of courses from disciplines in the humanities. Pure and applied science (Field 4) included majors in science and quantitative areas and disciplines. Table 2 shows the number and distribution of black graduate students by undergraduate and graduate major fields of study.

One-way analysis of variance tests were used to determine differences in mean graduate grade point averages and master's level graduation rates between the overall Groups *A* and *B* and between Groups *A* and *B* within each of the four fields of study. Although the use of proportions as the dependent variable in an analysis of variance carries with it the danger of violating the normality and the homogeneity of variance assumptions, the danger was not viewed as great in this study because very few proportions were close to 0.00 or 1.00. Doctoral retention and graduation rates are reported but not analyzed statistically because of the small numbers and the tentative rates of graduation and retention.

TABLE 2
DISTRIBUTION OF BLACK GRADUATE STUDENTS BY GRADUATE
AND UNDERGRADUATE FIELD OF STUDY, AND CORRESPONDING
PERCENTAGES OF TOTAL SAMPLE

	FIELD 1 EDUCATION	FIELD 2 SOCIAL SCIENCES AND PUBLIC SERVICE	FIELD 3 HUMANITIES	FIELD 4 PURE AND APPLIED SCIENCES
Undergraduate	72 (21%)	113 (32%)	63 (18%)	102 (29%)
Graduate	93 (27)	126 (36)	40 (11)	91 (26)

Pearson's Product Moment Correlation Coefficients were used to determine the relationship between graduate and undergraduate grade point averages for the two major groups and for each field of study. Fisher's *Z* transformation was used to determine the statistical significance of the correlation coefficients.

RESULTS AND DISCUSSION

The results of this study confirm Carlisle's [5] conclusion that black students who graduated from black colleges (Group *A*) and those who graduated from white colleges (Group *B*) tend to perform equally well in graduate school.

The differences in mean graduate grade point average and in master's graduation rate between Groups *A* and *B*—both across and within fields of study—were not significant ($p < .05$). The mean graduate grade point averages of Groups *A* and *B* were slightly better than a "B"—4.18 for Group *A* and 4.21 for Group *B* as shown in Table 3.

Consistent with Crossland's [7] findings, the majority of the students in this study were enrolled in master's curricula for both groups: 87 percent of Group *A* and 93 percent of Group *B*, i.e., 89 percent of the overall sample.

Most students in both groups succeeded at the master's level; 87 percent of Group *A* and 91 percent of Group *B* completed master's degrees (see Table 4). At the master's level, graduation rate and retention rate were the same because all master's students in the sample had either graduated or dropped out by the time data collection for this study was completed. Ten students in Group *A* and seven in Group *B* dropped out of graduate programs because their cumulative grade point averages were below the minimum requirements of the Graduate

TABLE 3
MEAN GRADUATE GRADE POINT AVERAGES AND MEAN
UNDERGRADUATE GRADE POINT AVERAGES
BY TYPE OF COLLEGE

GROUP	NUMBER OF STUDENTS	MEAN UNDERGRADUATE GPA	MEAN GRADUATE GPA
<i>A</i> (Students from black colleges)	210	4.15 (s.d. = .47)	4.18 (s.d. = .33)
<i>B</i> (Students from white colleges)	140	4.03 (s.d. = .54)	4.21 (s.d. = .26)
Total	350	4.1 (s.d. = .5)	4.2 (s.d. = .30)

$F = 3.37, F_{.05} (df = 1 \text{ and } 348) = 3.84$

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TABLE 4
GRADUATION RATES IN MASTER'S PROGRAMS AMONG
BLACK GRADUATE STUDENTS BY TYPE OF COLLEGE

GROUP	GRADUATED	NOT GRADUATED	TOTAL
<i>A</i> (Students from black colleges)	159 (87%)	24 (13%)	183
<i>B</i> (Students from white colleges)	118 (91)	12 (9)	130
Total	277 (89)	36 (11)	313

$F = .17, F_{.05} (df = 1 \text{ and } 311) 3.84$

College. Reasons for the other 14 Group *A* students and 5 Group *B* students dropping out could not be determined from the data source. Of the total 313 students in master's degree programs, 277 (89 percent) completed master's degrees. A large portion of these students earned master's degrees in professional programs, e.g., education, library science, social work, and then left the university. The heavy concentration of students in education and social sciences is consistent with Baird's [1] and Boyd's [3] finding.

According to Bowles and DeCosta [2] many black college students fall short of their degree aspirations. The present study does not report the number of students who entered at the master's level and had initially planned to continue in a doctoral program immediately after earning the first graduate degree. Possibly, some students who left after completing a master's program will enter doctoral programs later; others may already have entered doctoral curricula at other universities. Sixty-six students who entered at the master's level (or 21 percent of the master's students) entered doctoral programs at the same university immediately after completing the first graduate degree.

Many students in Groups *A* and *B* were still enrolled and making normal progress toward the degree at the time data collection for this study was completed (February 1975); 49 percent of Group *A* and 70 percent of Group *B* had neither graduated nor dropped out, but were continuing their studies. The retention rates (excluding students still enrolled) were quite high for both groups: 72 percent for Group *A* and 82 percent for Group *B* as shown in Table 5.

Table 6 shows that a total of 34 students have earned doctoral degrees: 24 (38 percent) from Group *A* (black colleges) and 10 (25 percent) from Group *B* (white colleges). The impact of the number of doctoral graduates is especially important when one considers that fewer than 3,000 black Americans have earned a doctorate in the last one hundred years [4].

TABLE 5
RETENTION RATES IN DOCTORAL PROGRAMS AMONG
BLACK GRADUATE STUDENTS BY TYPE OF COLLEGE
(EXCLUDING STUDENTS CONTINUING IN PROGRAMS)

GROUP	RETAINED	NOT RETAINED	TOTAL
<i>A</i> (Students from black colleges)	24 (72%)	9 (28%)	33
<i>B</i> (Students from white colleges)	10 (82)	2 (18)	12
Total	34 (76)	11 (24)	45

Since many doctoral students were still enrolled when data collection for this study was completed, the graduation and retention rates reported here do not provide a final picture of doctoral level performance. However, these rates do provide information on the number of doctoral students in each field of study and their performance to this point.

Clearly, more students from black colleges than students from white colleges have earned doctorates. However, several facts should be considered to avoid misinterpretation of the doctoral retention and graduation rates: (1) the number of students from black colleges in this study is much higher than the number from white colleges, (2) a much larger number of students from black colleges entered graduate school during the first three years covered by this study, (3) 32 of the 37 students who entered the university at the doctoral level were from black colleges (Group *A*), and (4) of the 24 students in Group *A* who received doctoral degrees, 12 had earned master's degrees before entering the university. Consequently, it was inappropriate to compare statistically the graduation rates of doctoral students in Group *A* and *B* at the time this study was completed.

More students received doctorates in education and pure and applied sciences than in humanities and social science. The relatively large number of doctorates earned in education is not surprising because of the large number of education students reported in this study and in

TABLE 6
GRADUATION RATES IN DOCTORAL PROGRAMS AMONG
BLACK GRADUATE STUDENTS BY TYPE OF COLLEGE

GROUP	GRADUATED	NOT GRADUATED	TOTAL
<i>A</i> (Students from black colleges)	24 (38%)	39 (62%)	63
<i>B</i> (Students from white colleges)	10 (25)	30 (75)	40
Total	34 (33)	69 (67)	103

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past research [8]. On the other hand, pure and applied science had the second highest number of doctorates earned, which is certainly different from the findings of other studies. Previous studies [8, 1] reported that blacks are underrepresented in technical fields. However, more than one quarter of the doctoral students in the present study had majors in animal science, biology, biophysics, business administration, chemistry, and economics, and the University of Illinois at Urbana-Champaign is among the largest producers of doctorates in many of the departments included in pure and applied sciences.

Students in humanities who earned doctorates were enrolled in either English or speech, the two majors with the highest concentration of doctoral students in that field. In the social sciences and public service, approximately 50 percent of the students were enrolled in master's programs in library science and social work. At the doctoral level, slightly more than 50 percent of the students were in psychology. Even though none of the doctoral students in social science and public service had graduated, most were still enrolled and making normal progress toward the degree.

The correlation between graduate grade point average and undergraduate grade point average was significantly different from zero within each field of the four fields of study for each of the two major groups. These correlations ranged from $r = .42$ for Group *A* students in education to $r = .66$ for Group *B* students in humanities (see Table 7). Thus, those students who had high undergraduate grade point averages also had high graduate grade point averages, and those who had low undergraduate grade point averages had low graduate grade point averages. Consequently, given the undergraduate grade point average of a student in either group, his graduate grade point average can be

TABLE 7
PEARSON PRODUCT MOMENT CORRELATION VALUES BETWEEN
GRADUATE GRADE POINT AVERAGE AND UNDERGRADUATE
GRADE POINT AVERAGE BY FIELD OF STUDY

FIELD OF STUDY	GROUP <i>A</i>		GROUP <i>B</i>		TOTAL NUMBER OF STUDENTS
	NUMBER OF STUDENTS	CORRELATION	NUMBER OF STUDENTS	CORRELATION	
1 Education	54	.42*	39	.48*	93
2 Social sciences and public service	61	.46*	65	.63*	126
3 Humanities	25	.59*	15	.66*	40
4 Pure and applied sciences	70	.26*	21	.43*	91

*Significance at the .05 alpha level

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predicted with some degree of accuracy, i.e., significantly better than chance. In addition, there was no difference in the correlation of graduate and undergraduate grade point average between students from black colleges and students from white colleges in each field of study.

SUMMARY

Black graduate students who attended predominantly black colleges and those who attended predominantly white colleges as undergraduates were equally successful in master's and doctoral programs at a major, research-oriented university. These two groups were not found to differ significantly on graduate grade point average, master's level graduation rate, or doctoral level retention. This was true in each of four major fields of graduate study.

Undergraduate grade point average is a significant predictor of graduate grade point average for black students from white colleges and from black colleges in each of four major fields of study. This study found no difference between the undergraduate grade point averages earned at black colleges and those earned at white colleges in predicting graduate GPA.

There is no advantage or disadvantage for black students to receive their undergraduate degree from either a black or white college in regard to academic achievement as measured by grades and retention in graduate school. This is not to say, however, that there may not be perceived or real differences in the cultural and personal development between the two groups of students, but these variables were not considered in this study.

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