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ABSTRACT

A study was conducted to examine the relationship between the Scholastic Aptitude Test (SAT) scores of freshmen entering Brenau College in Georgia and the likelihood of graduation from the institution. The basic research question was: Do proportionately more students entering Brenau with combined SAT scores at or above 800 persist to graduation at Brenau as compared to students entering with combined SATs below 800? The subjects were entering freshmen during the fall quarter for each of the years 1980 through 1983. The findings of the study revealed a statistically significant difference in graduation rate with proportionately more students entering with SAT composite scores at or above 800 persisting to graduation. However, the results were considered in relation to the data showing 51% of students admitted as freshmen during the years under study achieved less than 800 on the SAT, and 45% of freshmen who graduated in those classes came from the "below 800" SAT category. Recommendations included the following: (1) develop a study skills course for entering freshmen; (2) conduct faculty workshops encouraging teaching strategies and program planning to support the students enrolled; and (3) adjust in admission and recruiting strategies to emphasize Brenau's academic support system. Contains 20 references. (GLR)

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A STUDY OF THE RELATIONSHIP BETWEEN AN ENTERING FRESHMAN'S  
SCHOLASTIC APTITUDE TEST SCORES AND HER  
PERSISTENCE TO GRADUATION AT BRENAU

Applied Educational Research and Evaluation

EDS 23856

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A practicum presented to Nova University in partial  
fulfillment of the requirements for the  
degree of Doctor of Education.

Nova University

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The purpose of this study was to examine the relationship between the Scholastic Aptitude Test (SAT) scores of freshmen entering Brenau and the likelihood of graduation from the institution. The basic research question was: Do proportionately more students entering Brenau with combined SAT scores at or above eight hundred persist to graduation at Brenau as compared to students entering with combined SAT's below eight hundred? The subjects for the study were all freshmen entering fall quarter for each of the years 1980, through 1983. The "ex post facto" data obtained from the Registrar indicated entering students' SAT scores and any degree obtained. The information was reduced to a table showing numbers of students graduating or not graduating in each of the two SAT categories. A chi square was used to perform the analysis.

The findings of the study revealed a statistically significant difference in graduation rate with proportionately more students entering with SAT composite scores at or above eight hundred persisting to graduation. However, the results were considered in relation to the

data showing fifty-one percent of students admitted as freshman during the years under study achieved less than eight hundred on the SAT, and forty-five percent of freshman who graduated in those classes came from the "below eight hundred" SAT category.

Recommendations suggested by the results of this study included the development of a study skills course for entering freshmen, faculty workshops encouraging teaching strategies and program planning to support the students enrolled, adjustment in admission and recruiting strategies to emphasize Brenau's academic support system, and continued research on the multiple factors impacting student retention at Brenau.

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of these entering students was made to determine those of the initial group who graduated. Finally, an SAT profile was made of the persisters who graduated within five years of entry. The research question that this study sought to answer was: Do students entering Brenau with SAT scores at or above eight hundred differ in graduation rates from students entering with SAT scores below eight hundred?

The subjects for this study were the entering freshmen students in Brenau Women's College for each year from 1980 to 1983 inclusive. The independent variable was the total SAT score of each entering freshman, and had two levels: <800 or  $\geq$ 800. The dependent variable was persistence to graduation among the entering Freshmen being studied.

The results of the study conducted revealed that student persistence to graduation did vary statistically significantly according to SAT score category in each of the four years from 1980 to 1983. Proportionately more students entering with SAT composite scores equal to or greater than eight hundred graduated each year. However it was also revealed in the study that fifty-one percent of students admitted as freshmen from 1980 to 1983 earned less than eight hundred on the SAT, and forty-five percent of those freshmen who ultimately graduated came from the "below eight hundred" SAT category.

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institution by special consent of the Admissions Committee despite combined SAT scores below the minimum eight hundred total required by Brenau's institutional admissions policy. The exact numbers or percentages of these students and any trend in such special admissions had not, however, been documented or published. Neither had their persistence been tracked or compared to that of students accepted to Brenau under "normal" conditions. Moreover, there was a feeling among many faculty, frequently voiced at faculty meetings and retention committee meetings, that the college accepts too many academically underprepared students thus discouraging the persistence of higher achievers (Wright, 1988). A determination of Brenau students' entering academic aptitude profile and whatever consistent trends may exist therein, combined with a clearer understanding of which of those students tend to persist to graduation, would prove helpful in confirming or refuting faculty concerns.

This study was designed to determine the relationship between the combined SAT scores achieved by an entering freshman at Brenau Women's College and the likelihood of persistence to graduation at Brenau. Entering freshmen SAT scores from 1980 to 1983 were analyzed to determine the proportions of freshmen admitted each year with combined SAT's either above or below eight hundred. Subsequently, an analysis of the records of each



of these entering students was made to determine those of the initial group who graduated. Finally, an SAT profile was made of the persisters who graduated within five years of entry. The research question that this study sought to answer was: Do students entering Brenau with SAT scores at or above eight hundred differ in graduation rates from students entering with SAT scores below eight hundred?

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## Chapter 2

### BACKGROUND AND SIGNIFICANCE

A recent report of the Brenau College Strategic Planning Committee stated that "Brenau must develop a strong retention program that knows who our students are . . . and admissions must be geared toward graduation" (Sites, 1988:1). The admission of students more likely to remain at the College for the full four years of the baccalaureate program had been determined by the committee to be a critical goal (Sites, 1988). The high cost of recruiting students who remained only one or two years was identified by both the Retention Committee and the Planning Committee as a serious problem for Brenau, particularly in light of the high attrition rates being experienced at the end of the freshman and sophomore years (Wright, 1988; Sites, 1988). The retention problem is not unique to Brenau (Noel et. al., 1985).

Due in large part to the work of Noel and Levitz (1985), the art of increasing student retention has been significantly advanced in recent years as it is realized that ultimately retention is the result of student success and satisfaction. Schools that strive to match student needs with responsive services and support

are likely to see results in matriculation. Clearly there are numerous factors related to the retention of students which require institutional intervention strategies in various aspects of campus life. According to Noel et.al. (1985), however, the most effective retention strategies are those that directly focus on serving specific groups of students, especially targeting those students at greatest risk for dropping out. One such dropout-prone population includes the academically underprepared student.

Moore and Carpenter (Noel et.al., 1985:96) define academically underprepared students as those perceived to be at a disadvantage in contention with the majority of students entering college with the academic skills needed for college success. Among other characteristics this population may evidence erratic academic performance in high school, unimpressive standardized scores, low socioeconomic background, and/or minority status by race or gender. One can be misled by these and other descriptive characteristics of underprepared students into presuming that the population is confined to lower class and minority students. In fact, academic underpreparedness in the United States is widespread at every level and type of higher education institution and represents diverse populations including the upper-class (Noel et. al. 1985). Attempts have been made with varying degrees of success to address the needs of this diverse population through both

support services and curriculum adjustments as American higher education recognizes that academically deficient students will be a part of the college population for some time to come (Hodgkinson, 1983:13).

Given Brenau's relatively open admissions policy, effective retention strategy at the college must include the identification and support of the major "at risk" group if any. Noel and Levitz (1985) identify three major phases in a comprehensive retention research program, the first of which is analysis of student enrollment behavior. One important step in this first phase is to draw a profile of enrollees and persisters, and one significant factor in such a profile is measured ability at entry such as SAT scores. "Ultimately, retention rates are a relative, campus-specific matter . . . The challenge for retention researchers on campus is to provide starting-point data against which we can document the rate of improvement" (Noel et.al., 1985:363). Such data must include academic preparedness profiles of entering freshmen and indications of who among them persists. The research data can then be used as a part of the school's ongoing evaluation and planning activities to include support services as needed.

Although the use of SAT's has been the subject of much controversy, this sixty year old test does not appear to be on its way out of the college admissions process. The SAT was originally used primarily by private eastern

colleges as an initial screening device for scholarship applicants (Austin and Garber, 1982), but by the 1950s and 1960s it was needed to eliminate applicants for whom there was simply not enough room in American higher education. However, this is not the problem today. Driven by desires for both social justice and institutional survival most U.S. colleges and universities today seem to have policies of open access. As a result, many individuals feel the screening value of the SAT is redundant and discriminatory (Willie, 1985). Nevertheless, despite the test score average decline over the past several years, the predictive validity of these test scores on college performance has been consistent and the tests have also been good predictors of who goes to college, who goes where, and who drops out or graduates (Austin and Garber, 1982). This is important information as the American education system struggles to serve an extremely broad constituency. The extension and expansion of educational opportunity in the United States over the past two decades has resulted in increasing numbers of lower ability students (as measured by SAT scores) with inadequate preparation. Indeed, as Astin (1985: 214) points out, "American higher education today is enrolling an unprecedented number of underprepared students with serious deficiencies in basic learning skills." Green and Levine (1985: 154) add, "Institutions can educate low ability

students, but special steps are needed if the open door is not to become a revolving door."

No single educational model or curriculum plan will promise institutional success; on the contrary as Arthur Levine says, the "best program will closely conform to colleges' mission, student body, faculty, resources and history" (Green and Levine, 1985:xiii). However, there is no doubt that support services to high risk students must be provided, and such risk groups must be clearly identified and recognized. Ernest Boyer points out that there is "a remarkable mismatch between the kinds of students that colleges are enrolling and faculty members' expectations for the students" (Jacobsen, 1985:23). He goes on to say that faculty seem extremely uncomfortable with the issue of who their new students are. In his two year study of the undergraduate experience, Boyer's survey data indicated eighty-four percent of faculty members at four year institutions of higher education felt students should be better prepared. Yet confidential interviews held by Boyer and his staff with admission officers at thirty representative institutions across the United States revealed that the "minimum combined score requirements for the verbal and mathematics sections of the Scholastic Aptitude Test averaged 740 out of a possible sixteen hundred" (Jacobsen, 1985: 23). As Boyer further points out, there seems to be a need for faculty to develop "more

realistic expectations for the role and mission of their institutions" (Jacobsen, 1985: 23). "Considering that the number of underprepared students. . . is rapidly expanding, . . . high priority should be given to studying ways to identify and train faculty members who can work effectively with such students" (Astin, 1985:182).

The ongoing call for tougher standards and accountability in American higher education including the outcomes assessment movement will require clear understanding of who our students are and how we can successfully teach, encourage, and retain them. Despite all the controversy surrounding the value of SAT's, (Crouse, 1986; DeLoughry, 1988; Willie, 1985; Jacobsen, 1986) studies show its relative validity in predicting student success and persistence. The test further serves Brenau on a more institution-specific level as a standardized measuring stick of who attends and graduates from the college.

Despite faculty concerns about student underpreparedness, as evidenced both in the literature (Jacobsen, 1985) and at Brenau specifically (Wright, 1988), Crouse's (1986) study shows that students accepted to college with combined SAT scores of seven hundred have a probability of from .48 to .73 (depending on class rank) of graduating. Clearly these "underprepared" students make up a significant proportion of applications, enrollments and

graduations in American higher education today. It is therefore imperative for institutions such as Brenau to realistically evaluate trends in its student enrollment giving major attention to preparedness as measured in part by SAT scores. This could ultimately allow the institution to maximize its effectiveness in dealing with the identified students enrolled and hopefully to enhance their success and retention. As a contribution to the institutional goals of effectiveness and retention, this study proposed to compare the persistence of students entering Brenau as freshmen from 1980 to 1983, based on SAT scores.

This investigation was appropriate and related to the Seminar on Research and Evaluation as it concerned a researchable problem directly impacting upon Brenau College; and many of the theories and research procedures studied in the seminar were applicable to the investigation.



## Chapter 3

### PROCEDURE

This study sought to determine the relationship between the combined SAT scores achieved by an entering freshman at Brenau Women's College and the likelihood of persistence to graduation at Brenau. Entering freshmen SAT scores from 1980 to 1983 were analyzed to determine the proportions of freshmen admitted each year with combined SAT's either above or below eight hundred. Subsequently, an analysis of the records of each of these entering students was made to determine which ones of the initial group persisted to graduation. Finally an SAT profile was made of the persisters who graduated within five years of entry. The research question that this study sought to answer was: Do students entering Brenau with SAT scores at or above 800 differ from students entering with SAT scores below 800 in terms of persistence to graduation at Brenau?

#### Research Hypothesis

Hypothesis: Freshmen entering Brenau Women's College with combined SAT scores at or above eight hundred will differ in persistence to graduation compared to those

entering with combined SAT scores below eight hundred.

The subjects for this study were the entering freshmen students entering the Women's College of Brenau for each year from 1980 to 1983 inclusive. The independent variable was the total SAT score of each entering freshman, and had two levels:  $<800$  or  $\geq 800$ . The dependent variable was frequency of students graduating from among the entering freshmen being studied.

#### Data Collection

The "ex post facto" data for this study was obtained from the Registrar's Office of Brenau College. A computer printout identified all students entering the Women's College of Brenau as freshmen in the fall of each of the years 1980, 1981, 1982, and 1983. Each student's composite SAT score at entry was listed. The date of each student's last quarter of study at Brenau was indicated along with a degree designation if she graduated.

The number of students in each freshmen class under study varied by year, ranging from 130 up to 170 students per class. Only freshmen with SAT scores were included in the samples; students submitting ACT scores were not counted or compared in the study. Transfer students were likewise excluded from the study.

Based on the computer printout data, a count was made of freshmen students who entered Brenau with composite

SAT scores below eight hundred and who persisted to graduation and received a degree from the college, for each year from 1980 to 1983 inclusive. For each year 1980 to 1983, a count was also made of freshmen entering with SAT's totaling eight hundred and above who persisted to graduation and received a degree. The counts for each year were added to yield a total number of students over the four classes graduating with SAT's below eight hundred and a total number graduating with SAT's at eight hundred or above in the same time period.

#### Data Analysis

The data collected was arranged in a table to indicate the number of freshmen entering from 1980 through 1983 with SAT scores below eight hundred as contrasted with the number entering in that period with SAT scores at or above eight hundred. The number of graduates and the number of non graduates from each cohort were likewise indicated.

The null hypothesis was that there would be no statistical difference between the proportions of freshmen graduating in each SAT category.

$H_0$ : The classification variables are independent.

The alternate hypothesis was that proportionately more freshmen entering Brenau with combined SAT's at or above

eight hundred persist to graduation at Brenau than do freshmen entering with combined SAT's below eight hundred.

<sup>a</sup>  
H : The classification variables are dependent.

The alpha level of significance for this study was .05. A chi square test of independence was used to perform the analysis.

#### Definition of Terms

Freshmen entering Brenau was defined as those women applying to, accepted by, and entering the Women's College of Brenau as first year students, whether residential or commuting, during the fall quarter of 1980, 1981, 1982 and 1983.

SAT refers to the Scholastic Aptitude Test of the College Entrance Examination Board, a test with both verbal and mathematical components designed to predict student performance during the first year of college. The test has a combined score range from four hundred to sixteen hundred.

Combined SAT score refers to the total number of points attained by a student on both the verbal and mathematical components of the Scholastic Aptitude Test. The maximum number of points attainable on each component is eight hundred with a total maximum number of points being sixteen hundred. A minimum of two hundred points is

earned in each component by all test takers.

Persistence to graduation in this study refers to the continued enrollment of a student who enters Brenau as a freshman and completes all the requirements for the baccalaureate degree at the college within five years of entry.

#### Limitations of the Study

This study was limited to the entering freshman classes of the Women's College of Brenau from 1980 through 1983 inclusive, allowing tracking of the subjects through the graduation year 1988. It therefore did not include entering student SAT score trends from 1984 to the present which may potentially have shown significant differences.

The findings of the study are not particularly generalizable to other institutions since it was primarily designed to discover a profile and trend within Brenau College and concerned characteristics particular to that institution. Furthermore, the only Brenau graduates studied were those who started at Brenau as freshmen; transfer students who graduated were not taken into consideration.

Only SAT scores were considered in this study; ACT scores which were submitted by thirteen freshmen students enrolled in 1982, and fourteen in 1984 were not used. Thus the complete freshmen class was not represented

in those two years and study results could thereby be slightly biased.

This study did not control for a variety of intervening variables such as motivation, original intent not to stay four years, mismatch of student and institution, financial problems, and the like which may have led students to leave prior to graduation and which may have had no correlation with academic ability or academic fit at the institution. This study was designed with the understanding that the SAT profile obtained of the graduates observed represented only one of potentially many features that might correlate with persistence to graduation at Brenau.

#### Assumptions of the Study

A basic assumption underlying this study was that the students enrolled in each freshman class observed were traditional aged women entering Brenau directly from high school and were thus representative of the same generation of students. The study also assumed that the ex-post-facto data obtained from the Brenau Registrar were a complete and accurate representation of the freshman classes being studied. It was further assumed that most students had completed their degree within five years from their starting date.

## Chapter 4

### RESULTS

The data obtained from the Brenau Registrar containing composite SAT scores and graduation information of freshmen entering Brenau in the fall of each of the years 1980, 1981, 1982, and 1983 revealed that student persistence to graduation did vary according to SAT level in each of the four years studied. Proportionately more students entering with SAT composite scores equal to or greater than eight hundred graduated as compared to those entering with composite scores below eight hundred for each year. The specific numbers of graduates and the percentages of graduates in each SAT admission category for each year from 1980 to 1983 are summarized in Tables 1 through 4.

As indicated in Table 1, in the 1980 entering freshman class at Brenau one fourth (twenty students) of the students with SAT composite scores below eight hundred persisted to graduation as compared to thirty four percent (thirty students) who entered Brenau as freshmen with SAT's at or above eight hundred.

TABLE 1

Brenau Graduations Among 1980 Entering Freshmen  
According to SAT Score Category

SAT Score	# Entering 1980 Freshmen	# Graduating	% Graduating by SAT Category
SAT < 800	80	20	25%
SAT ≥ 800	88	30	34%

Table 2 illustrates that in 1981, twenty-one percent or fourteen students persisted to graduation from among the freshmen entering with SAT composites below eight hundred. Twenty students representing thirty-one percent of the students entering Brenau that year with SAT's at or above eight hundred persisted and graduated within five years.

TABLE 2

Brenau Graduations Among 1981 Entering Freshmen  
According to SAT Score Category

SAT Score	# Entering 1981 Freshmen	# Graduating	% Graduating by SAT Category
SAT < 800	67	14	21%
SAT ≥ 800	64	20	31%



Of the 1982 freshmen, twenty-five students graduated from Brenau who had entered with SAT composite scores below eight hundred. They represented thirty-three percent of the freshmen who entered with SAT's below eight hundred that year. Twenty-six students who entered in 1982 with SAT's at or above eight hundred graduated from Brenau representing thirty-nine percent of that group. Table 3 summarizes this data.

TABLE 3

Brenau Graduations Among 1982 Entering Freshmen  
According to SAT Score Category

SAT Score	# Entering 1982 Freshmen	# Graduating	% Graduating by SAT Category
SAT < 800	75	25	33%
SAT ≥ 800	66	26	39%

Finally, as shown in Table 4, of the freshmen entering Brenau in 1983, thirty young women (or thirty-eight percent) graduated of the seventy-nine who entered with SAT scores below eight hundred. Of the seventy-seven students entering with SAT composite scores at or above eight hundred, thirty-four students (or forty-four percent) graduated.

TABLE 4

Brenau Graduations Among 1983 Entering Freshmen  
According to SAT Score Category

SAT Score	# Entering 1983 Freshmen	# Graduating	% Graduating by SAT Category
SAT < 800	79	30	38%
SAT ≥ 800	77	34	44%

A composite picture of the students persisting to graduation over the four years under study revealed the following information. Of the 596 students entering as freshmen from 1980 through 1983, 301 or fifty-one percent had SAT's below eight hundred, and 295 or forty-nine percent had SAT's at or above eight hundred. Eighty-nine students representing thirty percent of the 301 who entered Brenau as freshmen from 1980 through 1983 with SAT composite scores below eight hundred persisted to graduation. This may be compared to 110 Brenau graduates (or thirty-seven percent) out of 295 freshmen entering in those years with SAT's at or above eight hundred. Table 5 summarizes these results.

TABLE 5

Number and Percentage of Admissions and Graduations  
Among Freshmen Entering Brenau from 1980 through 1983  
According to SAT Score Category

SAT Score	1980-1983 Combined Freshmen Admits	Percent of Total Admitted 1980-1983	Number of Graduates by SAT Category	Percent of Admits Graduating by SAT Category
< 800	301	51%	89	30%
≥ 800	295	49%	110	37%
Total	596	100%	199	33%

Of all freshmen who persisted to graduation at Brenau from the four admission years under study, forty-five percent had entered with SAT's below eight hundred. Fifty-five percent had entered with SAT's at or above eight hundred. These figures are summarized and compared in Table 6.

In order to employ the Chi Square Test of Independence to determine statistically the significance of the difference in graduation between students admitted in the two SAT categories under study, the expected frequencies of graduation in each category (based on percentages of total admitted) were calculated and yielded the figures outlined in Table 7.

TABLE 6

Percentage of Total Freshmen who Graduated by Entering  
SAT Category for Freshmen Entering from  
1980 Through 1983

1980 - 1983 Freshmen Combined	Graduated	1980 - 1983 % of Total Persister Graduates
Admitted w/ SAT < 800	89	45%
Admitted w/ SAT $\geq$ 800	110	55%

TABLE 7

Expected Student Persistence to Graduation Among Freshmen  
Entering Brenau from 1980 through 1983 in two SAT  
Categories Assuming Independence  
of Classification

SAT Scores	Freshmen Entering 1980 - 1983 Combined	Expected to graduate	Not Expected to Graduate
< 800	301	101	200
$\geq$ 800	295	98	197
Total	596	199	397

A critical  $\chi^2$  value at the .05 alpha level for one degree of freedom was determined to be 3.84. The calculated  $\chi^2$  was 4.35. Therefore the Null Hypothesis that the classification variables were independent was rejected since the calculated value of  $\chi^2$  (4.35) exceeded the critical value of 3.84. There is a significant difference between the number of students entering Brenau with composite SAT scores at or above eight hundred who graduate from Brenau as compared to the number of students who enter with SAT's below eight hundred and who graduate from Brenau.

## Chapter 5

### DISCUSSION, IMPLICATIONS and RECOMMENDATIONS

An analysis of the results of this investigation shows that proportionately more students admitted to Brenau from 1980 to 1983 with combined SAT scores at or above eight hundred graduated from the institution as compared to students admitted with scores below eight hundred. Over the four years, eighty-nine Freshmen students graduated from the lower SAT category while 110 graduated from the eight hundred and above group. A statistically significant difference was found between graduations in the two categories. But perhaps as much or more enlightening was the information yielded by further detailed analysis of the raw data accumulated for the study.

The data compiled showed that fifty-one percent of total admissions during the four years studied came from the lower SAT category of below eight hundred. That is, fifty-one percent of students admitted to Brenau did not meet the minimal institutional requirement of eight hundred combined points on the SAT. (It should be noted that the SAT is only one of a number of factors analyzed by the admission officers in issuing acceptances to the college; however it is currently listed as one aspect of the college's admission policy.) A related and likewise

important statistic that emerged from this investigation was the fact that forty-five percent of all freshmen who graduated from Brenau over the four classes studied entered the college with combined SAT's below eight hundred. In spite of the statistical significance of the fact that forty-nine percent of admissions (those with SAT's at or above eight hundred over the four years) resulted in fifty-five percent of the total persisting freshmen graduating from Brenau, it cannot be ignored that students with composite SAT scores below eight hundred made up an impressively large number of Brenau's admissions and graduations.

Given the figures, expressed faculty concerns about the acceptance of too many underprepared students (Wright, 1988) might well be understood; however faculty may not be aware of just how many such students are admitted nor the relatively large number who successfully graduate. As Boyer points out, there is "a remarkable mismatch between the kinds of students that colleges are enrolling and faculty members' expectations for the students" (Jacobson, 1985). This study may suggest the need for faculty workshops to adjust unrealistic perceptions and celebrate significant successes.

Further implications of the data compiled for this study would suggest the need for retention strategies heavily focused on assisting the academically

underprepared student. Noel et. al. (1985) identify the academically underprepared student as being one of the most dropout prone; clearly then, the admission of fifty-one percent of freshmen in the SAT category below institutional admissions standards would indicate a need for serious attention to this issue. Furthermore, attention to this need among the lower SAT achievers would perhaps address faculty concerns that such students are discouraging persistence among higher achievers. The data suggests relatively equal success by the institution in both categories: attention to special needs of the academically underprepared may help retention in both areas.

Additional considerations not addressed by this study that may merit attention include the breakdown of graduates by majors and by grade point average, as well as a breakdown of SAT scores by math and verbal components. Such further analysis would indicate whether certain majors tend to have significantly greater numbers of underprepared students, whether those admitted in the lower composite SAT categories tend to have lower GPA's by the time they graduate, and whether there is a significant relationship between weak math or verbal skills and persistence to graduation at Brenau. It might be interesting to continue an analysis of admissions to Brenau by the SAT categories used in this study over the years



1984 to 1988 (despite the fact that persistence to graduation could not be finalized) to determine whether the admissions trend observed from 1980 to 1983 is continuing. Four specific recommendations suggested by this study have been made to the college administration. The suggestions fall into four categories which are (1) student development support services, (2) faculty/staff workshops, (3) admissions policy and (4) continued research on student retention factors.

In the area of Student Development perhaps most urgently needed to support the identified population attending Brenau College is a college study skills course offered to entering freshmen and aimed at addressing the most pressing academic needs of lesser prepared students. Such a course could potentially increase retention among the large numbers of lesser prepared students admitted and might well serve such a positive purpose among the wider population of freshmen as well. Such specific topics as increasing reading comprehension, note-taking, study-time management, test anxiety and strategies for test-taking would be essential to the course. The Student Development Office would seem the logical place to centralize this effort, with the input and support of the Academic Dean's Office.

A second recommendation strongly suggested by the results of this study would be the administrative implementation of faculty workshops aimed at better

understanding who our students are and what the applicant pool offers. Allowing faculty a constructively and carefully guided opportunity to discuss the hard facts and statistics such as outlined in the study would hopefully help discourage the voicing of negativisms and encourage the creative thinking which would lead to support services, teaching strategies and program planning designed to assist the students enrolled in reaching their goals at Brenau.

A third recommendation would be an adjustment in admissions policy and procedures and recruiting strategy to take into account and emphasize the positive support services Brenau offers students at both ends of the academic spectrum. For the academically stronger student this would mean continued emphasis on the Leadership Development Program, Brenau Scholars scholarship program for high SAT achievers, and the Honors Program. For the academically weaker students the admissions policy for acceptance of students with combined SAT scores below eight hundred might require the student's participation in and successful completion of a college study skills course. Admissions policy might also require the early (prior to start of fall semester) administration of Brenau's Math and English placement tests with appropriate supportive counseling resulting in an advance knowledge of who among entering freshmen would be in need of a Developmental Math or English class. This would allow faculty and

administration a better opportunity to prepare for and schedule adequate sections of these courses to meet student needs early in their freshman experience. Since critical reading and writing skills make up the bulk of the developmental English class, immediate reinforcement in those areas could prove crucial to needy students. The central issue with regard to admissions policy and recruitment would be to place strong emphasis on the importance Brenau places upon helping each student achieve academic success and make the most of her academic opportunities and college experience.

A last recommendation suggested by the results of this study would be for continued research on the multiple factors potentially impacting student retention at Brenau. A follow-up to this study, and of greatest interest to the academic program at Brenau, would be the collection of quantified data from students who stay as well as those who leave regarding their satisfaction with the academic program of the college and a ranking of how important academics was in their decision to persist or leave Brenau. This type of continued effort to more clearly identify Brenau's persisters combined with refined admissions policies and procedures, faculty workshops and the creation of an in-house study skills course should strongly contribute to institutional effectiveness and retention at Brenau.

## REFERENCES

- Astin, Alexander. Achieving Educational Excellence. San Francisco: Jossey-Bass Publishers, 1985.
- Astin, Alexander. Preventing Students from Dropping Out. San Francisco: Jossey-Bass Publishers, '975.
- Austin, Gilbert R. and Herbert Garber, eds. The Rise and Fall of National Test Scores. New York: Academic Press, 1982.
- Boyer, Ernest L. College: The Undergraduate Experience in America. New York: Harper and Row, 1987.
- Brenau College. The Brenau Undergraduate and Graduate Bulletin 1988-1990. Gainesville, Georgia: 1988.
- Cornelson, John, Ed. "Final Report of the Internal Scanning Subcommittee of the Strategic Planning Committee." Gainesville: Brenau College, 1988. (Mimeographed.)
- Crouse, James. "Should a Million and a Half Students be Required to Take the SAT Next Year?" Phi Delta Kappan. May 1985.
- Crouse, James. "The Time Has Come to Replace the SAT." The Chronicle of Higher Education, 31:40, February 26, 1985.
- DeLoughry, Thomas J. "Counselors Urge Colleges Not to Use Tests as Sole Admissions Criterion." The Chronicle of Higher Education, 36:7, October 12, 1988.
- Green, Janice S., Arthur Levine, and Associates. Opportunity in Adversity. San Francisco: Jossey-Bass Publishers, 1985.
- Hodgkinson, Harold L. "Guess Who's Comming to College." Academe, 69:13-20, March/April 1983.
- Issac, Stephen and William B. Michael. Handbook in Research and Evaluation. San Diego: Edits, 1981.

- Jacobson, Robert L. "Boyer Sees 'Mismatch' Between Students' Quality and Faculty Expectation." The Chronicle of Higher Education, 31:23, October 9, 1985.
- Jacobson, Robert L. "Selective Colleges' Use of SAT is Unshaken by Controversies." The Chronicle of Higher Education, 32:1, July 2, 1986.
- Jaschir, Scott. "State Leaders Grapple with 'Tension' Between College Access and Quality." The Chronicle of Higher Education, 31:9, December 1985.
- Lipsitz, Lawrence, ed. The Test Score Decline. Englewood Cliffs: Education Technology Publications, 1977.
- Noel, Lee, Randi Levitz, Diana Saluri, and Associates. Increasing Student Retention. San Francisco: Jossey Bass Publishers, 1985.
- Sites, John Ed. "Final Report of the External Scanning Subcommittee of the Strategic Planning Committee." Gainesville: Brenau College, 1988. (Mimeographed)
- Willie, Charles V. "The Problem of Standardized Testing In a Free and Pluralistic Society." Phi Delta Kappan. May 1985.
- Wright, Shirley Ed. "Progress Report of the Ad Hoc Retention Committee." Gainesville: Brenau College, 1988. (Mimeographed).

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