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A Study of the Second Year Female Academic Probates at Tuskegee Institute

by

Tommie M. Samkange

Throughout America, educational institutions are plagued with the drop-out problem. Studies have shown that even though the effects of this problem are more readily visible among the low socio-economic groups, a significant number of its victims are from the higher echelons of society. Further studies have indicated that it takes its toll among those with high scores on the intelligence tests as well as those with average and below average scores. Not only do its victims vary in abilities to succeed, but they also may be found at any point along a personality continuum. Such complexities combined with the increasing rate and intensity of the first drop-out figures have led many groups and individuals to delve into the problems in an effort to discover likenesses or differences in drop-out victims and to discover underlying causes for the apparent lack of holding power of educational institutions.

Statement of the Problem

The purpose of the present study was to discover the underlying factors which contributed to the failure of Tuskegee's 1964-65 second year probates. The researcher sought answers to such questions as (1) Were these students prepared for college work upon entrance? (2) How did they allocate their time between the social and academic realms of college life? (3) How much professional guidance did these students receive in choosing their majors and educational institution? (4) How did the academic areas compare in potential drop-out rate?

Need for the Study

In past years, Tuskegee Institute has suffered a loss of some 200 or more students per year who, because their level of academic performance was so low, were not allowed to continue their study at the Institute. Concurrently, some 500 or more students per year have been placed on academic probation due to a similar level of performance. Each of the afore-mentioned drop-outs represents over a thousand dollars and at least a year of time used to little or no advantage. Each case further represents a loss suffered by Tuskegee and society.

If adequate answers could be derived as the causes of such failures, preventive and remedial measures could be taken by Tusgee and other institutions suffering from the same problem.

Definition of Terms

Second year academic probate refers to those students who entered Tuskegee Institute in September, 1964 and whose averages at the end of the academic year were below the two-point requirement for freshmen at the end of the first year. It further includes Opportunity Work Plan students with less than two-point averages, who entered school prior to September, 1964 but who have maintained less than a two-point average and hence are still classified by the Institute as freshmen.

Potential drop-out designates those students who are treading on thin academic grounds. They are so designated because students who are on academic probation are believed by the author to be those persons who most often eventually become drop-out statistics.

Hypotheses

The author began this study on the assumption that many students find themselves on college probation and drop lists because (1) they come to college ill prepared to do college work; (2) they have had little or no professional guidance in choosing their majors and/or the educational institutions they attend; (3) they devote too much time and energy to the social realm of college life and not enough to the academic phase; (4) their work obligations leave too little time in which to fulfill their academic requirements adequately.

Review of Related Literature

Numerous studies have been conducted in the area of school drop-outs. For all practical purposes, they can be divided into three main groups: (1) that group which deals with the student mortality rate at various institutions (2) that group which deals with the comparison of drop-outs or potential drop-outs with normal achievers and with those who remain in school (3) that group which deals with those factors which influence students to become student mortality figures.

Each study, in its own way, gives educators something further to work with in their efforts to increase the holding power of educational institutions. A brief review of a few of these studies would be invaluable to one seeking to gain insight into the drop-out problem. Such a review would be of further significance in placing the present study in its proper perspective.

Identification of Drop-Outs

In 1958 Marion E. Gardner (4) conducted a study in which he sought to determine whether one could predict the academic success of students in college by using personality trait ratings obtained

from high school. Utilizing a Normal Curve Rating Scale, Gardner rated 190 high school seniors on the traits of reliability, industry, cooperation, initiative, efficiency, and accuracy. Coefficients of correlation were calculated between the average ratings on each trait and the quality point averages earned during the first year in college. These calculations revealed a significant correlation between the ratings on all traits and quality point averages. Calculated coefficients ranged from a high of .664 to a low of .335. Correlations involving the trait of accuracy were high enough for Gardner to suggest the use of this trait alone by colleges to supply significant information concerning applicants for admission.

An effort was made by Edward Jones (8) to study the academic probate from the standpoint of environmental and emotional personal factors and methods of study in order to find out how the factors contribute heavily to his academic status. A group of 35 male probates and a matched sample were subjected to the same check list of methods of study and information concerning the environmental situations. The results were not conclusive, but certain trends were evident. The abler students used a variety of methods of study. Their greatest superiority was in the area of preparing for examinations and in studying the texts. The better students were worriers and integrators. A sense of urgency characterized their efforts. Eighty per cent of the probates were affected by a lack of good study habits or a lack of motivations.

Student personal data records and other records were used in the study; ability and achievement test scores were analyzed; and generalizations were drawn for all students who entered school the fall semester of 1955 and were not enrolled for the fall semester of 1956. Thirty-six per cent of the drop-outs were earning passing grades when they withdrew and 64 per cent were not. Three of every five drop-outs scored in the lowest quartile on the English achievement test. Seventy-four per cent of the drop-outs scored below the national median on the English achievement test. One of every three drop-outs scored above average on the ability and achievement test and from five to eight per cent were academically capable of doing college work.

Nicholson (10) conducted a study in 1957 to analyze student mortality at State Teachers College, Indiana, Pennsylvania, with certain factors being regarded as selective admission and retention of students as a basis of improving services. Data for 2239 entering freshmen were collected on selected factors, developed into tables and interpreted. Eighty and seventy per cent of these students were in the upper half of their high school graduating class. Of this percentage 64.1 per cent graduated, whereas the graduation rate of those who were in the lower half of their classes was 39.5 per cent. The higher the student ranked on the ACE test or the better his first semester grades, the greater were his chances of survival. Students from large high schools survived better than those from small ones. Women were found to be better survivors than men.

Comparisons with Regard to Drop-outs

Drener (3) did a study in 1960 to discover any significant differences and similarities between over-achieving and under-achieving students. One hundred thirty-eight students (74 over-achievers and 64 under-achievers) were studied for differences in two major areas. The first area involved scholastic aptitude, cumulative grade point averages, reading abilities, mechanics of expression, high school marks, and age. The second area involved the average number of hours spent per week studying, in extracurricular activities, and in work for pay. The over-achieving students had better study habits, but there were no significant differences between over-achievers and under-achievers for all the areas of the vocational preference scale. For all other characteristics, there were very few significant differences.

Bernice Horall (6) conducted a study aimed at acquiring a better understanding of the performance and personality of brilliant college students, especially in terms of the ways in which they differ from college students of average or low college ability. College freshman scores on the ACE fell 1.5 or more sigmas above the mean when compared with matched cases from the middle of the distribution. A general information blank as well as the Group Rorschach Test and Group Thematics Apperception Tests were administered to the subjects. The experimental group was found to be significantly better in the following areas: fewer total "needs", fewer "needs" for achievement and recognition, better over-all adjustment, better effect of environment on organism, and better reaction to environment. They also had fewer conflicts about personal characteristics and about school performance. They over-emphasized small unusual details on the Group Rorschach. They also displayed a higher level of maturity and less deep underlying anxiety.

Influences on Drop-outs

A study to investigate experimentally some of the many factors known to be culturally determined and which influence the performance of persons in academics and on intelligence tests was undertaken by Ernest Haggard (5) in 1954. A total of 208 persons were subdivided into 24 sub-groups for the purpose of testing and retesting under various controlled conditions. Practice helped the high status group but not the low status group. Motivation during practice sessions had a negative influence on both groups. Both groups made significant gains on the test which was revised to remove middle class bias. Given test-retest conditions, the performance of low status persons improved substantially, whereas that of the higher status group remained relatively constant.

Oscar Christensen (1) did research in 1963 to explore the influence of a pilot summer advisory and counseling program for entering freshmen at the University of Oregon. When the experimental group was compared with the control group, it was found

that such a program was effective in the following areas: (1) increasing study program stability, (2) creating an immediate positive opinion about the value of organized orientation activities and about the counseling center. (3) creating an immediate positive reaction toward the University. It had no effect on elevating fall grades, some aspects of social adjustment, or improving persistence in college.

A study was conducted by Mahone (9) to test the theory which states that persons who are fearful of failure tend to be unrealistic in their vocational choices with respect to both ability and interest. He used the Mandlcer-Sarason Test Anxiety Scale, Thematic Apperception stories, and a vocational information questionnaire. On each criterion of realistic vs unrealistic vocational aspiration, significantly more subjects who were low in achievement-related anxiety were classified as unrealistic than subjects who were high in achievement motivation and low in achievement related-anxiety. Sixty-eight were inaccurate and 66 were accurate in estimating their own abilities.

In his study, Slater (11) aimed to increase the understanding of factors influencing and affecting student mortality. He grouped the freshmen males according to the fathers' occupations. A year later the University records were examined to compare the rate of persistence according to the fathers' occupations and the college in which each was enrolled. It was found that the value systems and experiences which characterize family units predispose the children favorable or unfavorably toward the academic aspects of their collegiate life. Persistence rates ranged from .44 to .58 when students were enrolled in colleges where their fathers were employed. For students in "strange" academic settings, persistence rates were .39 and below.

Another study of "Factors in College Persistence" was conducted by Ikenberry (7) whose aims were (1) to examine differences in cognitive and affective characteristics between students who withdraw from college and students who remain through the first year and (2) to study differences between collegiate withdrawals and enrollees when these groups were classified in terms of first year college achievement and sex. At the end of an academic year an inter-correlation matrix was formed and factor analyzed for a random sample of withdrawals and enrollees. Data were obtained from school records, aptitude and ability tests, as well as interest tests. Of the three discriminate functions found, above average groups were high on the intelligence function, while below average groups were low on this function.

Female groups were all above male groups on the cultural-sex function, and withdrawal groups were above enrolled groups on the social-background function.

Cook and Martinson (2) completed a study to discover whether varying amounts of such subjects as high school mathematics, physical science, and foreign language studied in high school were related to differences in grades earned in six major areas of liberal arts. Freshmen students for whom complete high school records were available

were divided into dichotomies on the basis of high school grades. The *t* test was used to test the significance of the difference in mean grade point averages in college and a difference was considered significant if it reached the five per cent level or beyond. Findings showed that good work in high school English gives an advantage to the student in college over the average high school English student. There was little relationship in other areas.

METHOD OF PROCEDURE

In September of 1963, 995 freshmen were enrolled in the several schools at Tuskegee Institute. By June of 1964, 233 of these students were dropped from the Institute because of their low level of academic performance; 314 were placed on academic probation because of a similar level of performance; and 448 were in good academic standing.

Questionnaires were sent to the eighty-five female students on academic probation who enrolled at the Institute for the fall semester. (Those students who failed to maintain two-point averages were either dropped or designated as probates, depending upon the degree of failure and the circumstances surrounding the failure.) In spite of several attempts to retrieve questionnaires, the maximum number to be returned was fifty-nine.

The responses made to each question by each probate were carefully analyzed, recorded, and used with other findings to draw generalizations. High school grade point averages for the fifty-nine probates were obtained and compared with their cumulative college grade point averages. Further generalizations were drawn from the utilization of entrance examination scores made by subjects on the School and College Ability Test. Graphs and tables were used to facilitate interpretation of data.

FINDINGS

The use of Institute records such as high school grade point averages, entrance examination scores, and college grade point averages and the analysis of responses on questionnaires sent to the fifty-nine academic probates participating in this study did much to support and refute certain hypotheses set forth at the beginning of the research.

Academic Capability of Students

The first hypothesis stated that many students find themselves on college probation and drop lists because they come to college ill-prepared to do college work. Figure 1. shows the distribution of high school grade point averages for the fifty-nine students used in this study. These averages range from 1.41 to 3.93 on a four-point scale wherein "A" is four points, "B" is three points, "C" is two

points, and "D" is one point. In this distribution, the mean grade point average is 2.80 and the modal average is 3.51. Twenty-three students, or thirty eight per cent, had high school averages of "B" or above; sixty-seven per cent had "C" averages; and ten per cent had averages of "D".

According to information in Tuskegee's 1964-65 *General Information Bulletin*, students from accredited high schools with grade point averages of "C" or above may be admitted to the Institute unconditionally. It appears that this is the grade point average at which Tuskegee administrators feel that students are prepared to do college work. If this is true, the high school grade point index, which states that ninety per cent of the female academic probates studied were "prepared" to do college work, refutes the first hypothesis.

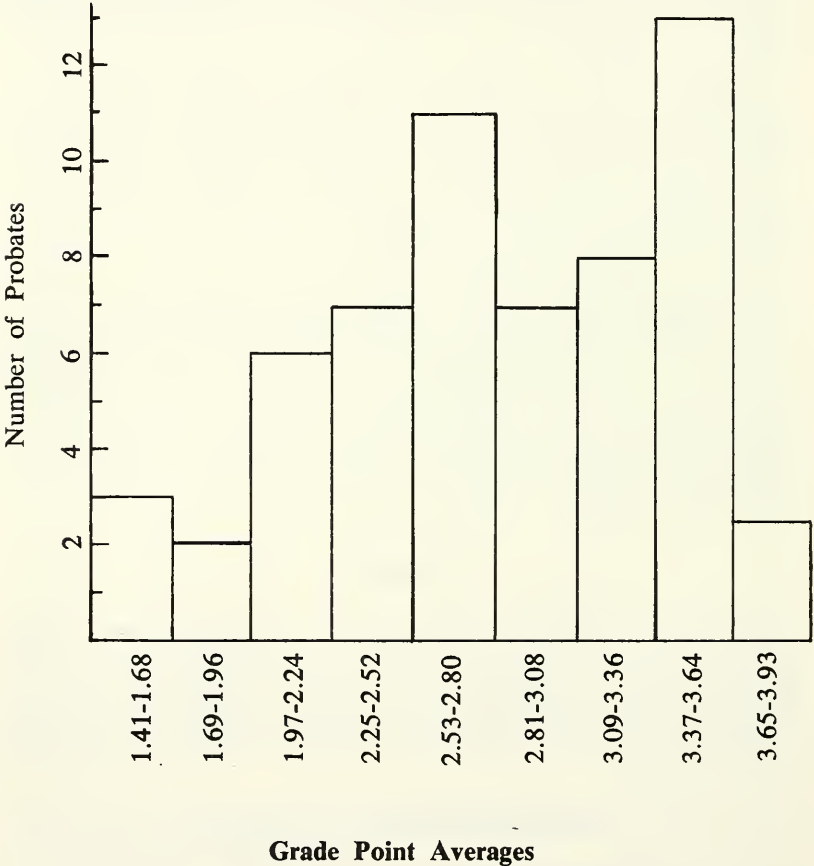


Figure 1. High School Grade Point Averages for Fifty-nine Academic Probates.

Figure 2. shows the distribution of total stanine scores for the Verbal and Quantitative aspects of the School and College Ability Test (SCAT) administered to each probate upon entrance. The figure shows a stanine class range from a low of three to a high of eight. Seventy-six per cent of the probates fell within the average stanine classes of four, five, and six; ten per cent fell in the below-average classes of three; and fourteen per cent fell into the above-average classes of seven and eight. The mean stanine score is 4.96 and the modal class is five.

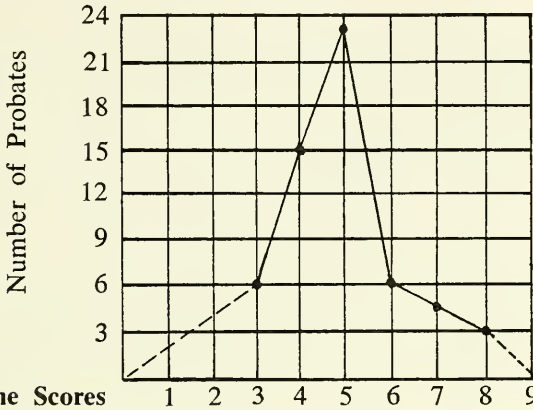


Figure 2. Stanine Scores for Fifty-nine Academic Probates.

Evidences pointed out by the two instruments discussed thus far harmoniously refute the first hypothesis. Indications are that sixty-six and five tenths per cent of the probates were capable of doing at least average college work.

Figure 3. indicates the rank of academic probates in their high school graduating classes. It shows that seventy-one and two tenths per cent of the probates were ranked in the upper fourth of their class; that fifteen and three tenths per cent were ranked in the upper middle fourth; that eight and five tenths per cent were ranked in the lower middle fourth of their class; and that five per cent were ranked in the lower fourth of their class. These indications go hand-in-hand with those presented in Figures 1 and 2. The class sizes ranged from 12-452.

Upper 25%	71.2% of the academic probates
Upper middle 25%	15.3% of the academic probates
Lower middle 25%	8.5% of the academic probates
Lower 25%	5% of the academic probates

Figure 3. Rank of Probates in High School Graduating Class.

Actual College Performance

A distribution of the college grade point averages of the fifty-nine probates as of June, 1964 is presented in Figure 4. The required grade point average for freshmen at the end of the first year is two points. The distribution shows a modal grade point average of 1.40 and a mean average of 1.62.

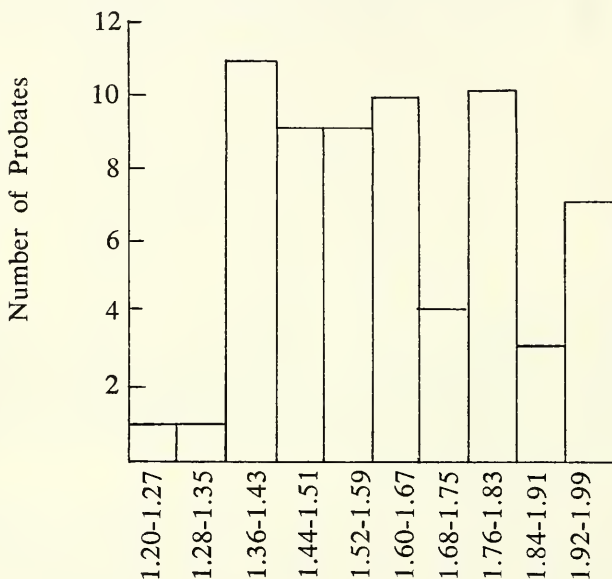


Figure 4. Distribution of College Grade Point Averages of Fifty-nine Academic Probates.

If the evidences pointed out in the three previous figures are correct, if sixty-six per cent of these students are capable of doing average college work, and if Figure 4 indicates that they are performing below their indicated abilities, what are the possible influences on their academic performance?

Professional Guidance

The second hypothesis in this study is that students find themselves on college probation and drop lists because they have had little or no professional guidance in choosing their majors and educational institutions. Table 1. describes the methods used by the probates in choosing their majors and educational institution.

Table 1. Reasons for Probates' Choice of Major and Educational Institution.

	Personal Interest	Counselor	High Grades in Major Area	Friends & Relatives
Major	39	3	2	15
Ed. Institution	11	12	0	36

Five per cent had professional help in choosing their majors; twenty-five per cent were actually assisted in making this choice by persons virtually unqualified to give such advice; and sixty-seven per cent chose majors purely on the basis of personal interest. Tuskegee was chosen by seven per cent with the aid of a counselor; by thirteen per cent with the help of instructors; and by sixty-one per cent with the help of relatives and friends.

Responses on the questionnaires (See appendix) further revealed that twenty-four per cent of the probates have changed their major while attending Tuskegee; that forty-two per cent of them experienced difficulty in the same area in high school as they did in college; and that thirty per cent of them were majoring in the area of their difficulty. This would further seem to indicate a lack of counseling or professional guidance.

In view of these students' feelings concerning their abilities, Figure 5 displays the reactions of probates to their 1963-1964 academic performance. These reactions appear to have some relevance to the guidance or lack of guidance received by probates prior to their enrollment at Tuskegee. Approximately forty-six per cent of them were greatly shocked at their performance as it related to their views of their abilities; approximately forty-one per cent were moderately shocked; and approximately fourteen per cent were slightly shocked. These responses indicate either a lack of understanding of themselves and their abilities, or a lack of understanding and preparation (in some area) for college. Thus, the second hypothesis is supported by the evidence revealed in Table 1. and Figure 5.

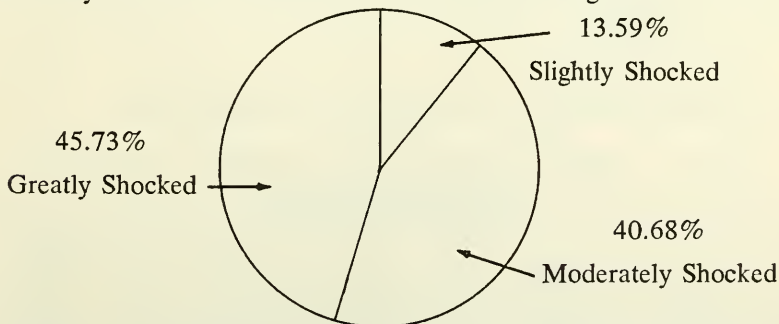


Figure 5. Reaction of Fifty-nine Probates to Their Level of Academic Performance.

Influences on Academic Performance

The third and fourth hypotheses formulated by the researcher were that many students find themselves on college probation and drop lists because they devote too much time and energy to the social realm of college life and too little to the academic phase; and their work obligations leave too little time in which to adequately fulfill their academic requirements.

Figure 6. displays the areas indicated by the probates to have been influences on their academic performance. Contrary to the stated hypotheses, work was listed as an influence by only five per cent of the students and extra-curricular activities by only eight and five tenths per cent.

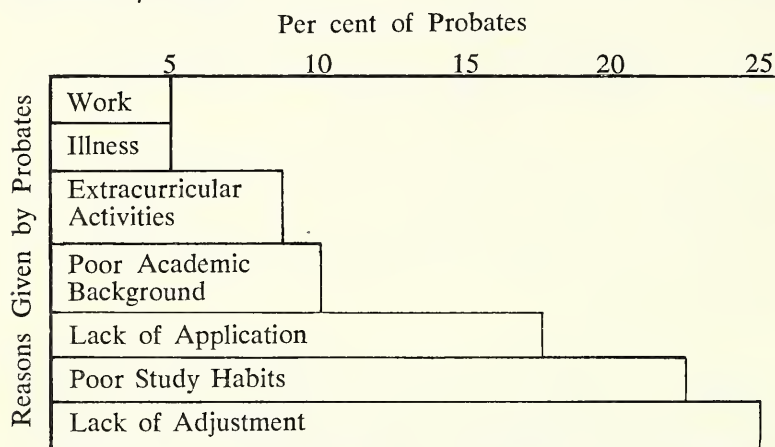


Figure 6. Reasons Given by Probates for Poor Academic Performance.

The major influences were lack of adjustment, which was reported by twenty-eight and eight tenths per cent; lack of application, which was reported by eighteen and six tenths per cent; poor study habits, reported by twenty-three and seven tenths per cent; and poor academic backgrounds, which was reported by ten and four tenths per cent of the subjects.

Table 2. shows how many extracurricular activities were engaged in by subjects last year as compared to the current year.

Table 2. Number of Extracurricular Activities Participated in by Fifty-nine Probates.

	None	One	Two	Three or More
Last Year	49%	23.7%	22%	5%
This Year	45.7%	31%	18.6%	5%

Approximately forty-nine per cent belonged to virtually no organizations last year and approximately forty-six per cent belong to none this year; approximately twenty-four per cent belonged to one organization last year and about thirty-one per cent belong to one this year; about twenty-two per cent belonged to two organizations last year as compared to nineteen per cent this year; five per cent affiliated with three or more organizations last year and the same percentage affiliates with three or more organizations this year. Since approximately seventy-three per cent of the probates belonged to no more than one organization last year, it can hardly be concluded that extra-curricular activities had a negative influence on the academic performance of the probates; thus, the third and fourth hypotheses were refuted by the study.

Other Findings

Figure 7. reveals the responses of probates concerning their performances this year as it relates to last year. Approximately eighty-eight per cent of the subjects feel that their performance has improved over that of last year; ten per cent feel that they are performing at about the same level; and about two per cent reported that their performance level seems to be lower than it was last year.

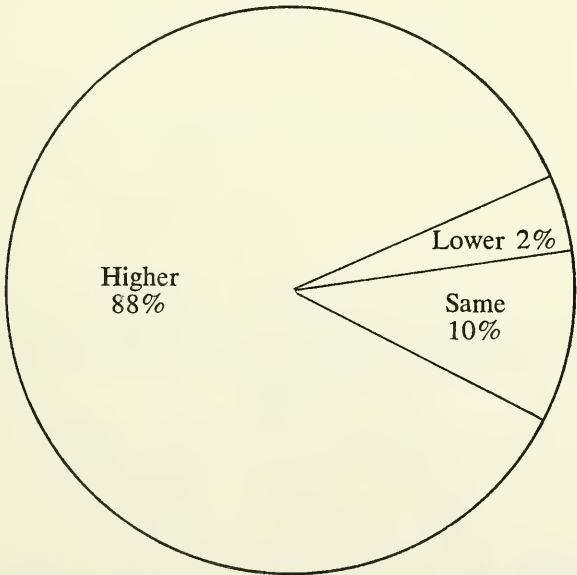


Figure 7. Probates' Performance as It Relates to that of Last Year.

Table 3. indicates that approximately thirty-seven per cent of the probates' fathers are engaged in unskilled work, while twelve per cent are engaged in professional work; that approximately sixty-eight per cent of the mothers are engaged in unskilled work, and about fourteen per cent are in professional work.

Table 3. Occupations of Probates' Parents.

	Father	Mother
Professional	7	8
Skilled	6	0
Semi-skilled	7	5
Unskilled	22	40
No response	7	2
Deceased	10	4
Total	59	59

Figure 8. reveals that probates come from family sizes ranging from one to eleven children. The model family size is four and the average number of children is five.

Figure 9. reviews the sources of financial assistance used by the probates. Nearly sixty-nine per cent depend upon parents alone for financial assistance; approximately twenty-two per cent depend on earnings from work; and approximately seven per cent depend on other relatives.

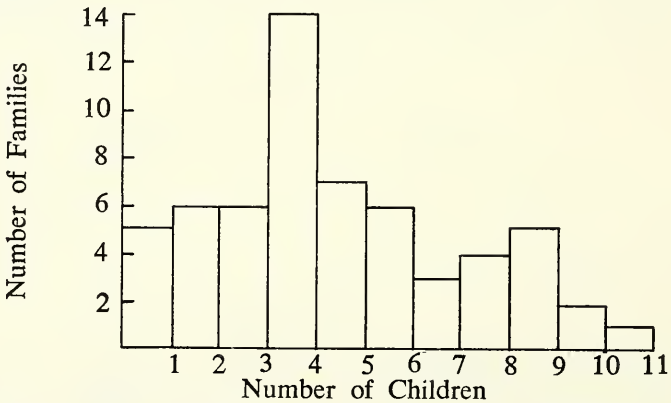


Figure 8. Number of Children in the Families of Fifty-nine Probates.

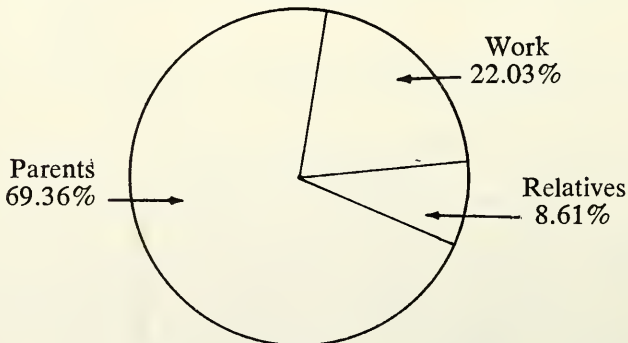


Figure 9. Sources of Financial Assistance for Fifty-nine Probates.

A distribution of probates according to majors may be viewed in Figure 10. The pattern ranges from a high of thirty-one per cent in Education and twenty-five per cent in Arts and Sciences to a low of approximately seven per cent in both Mechanical Industries and Physical Education. These percentages have more significance when viewed in knowledge of the fact that Mechanical Industries and Physical Education combined have a population which is fifteen

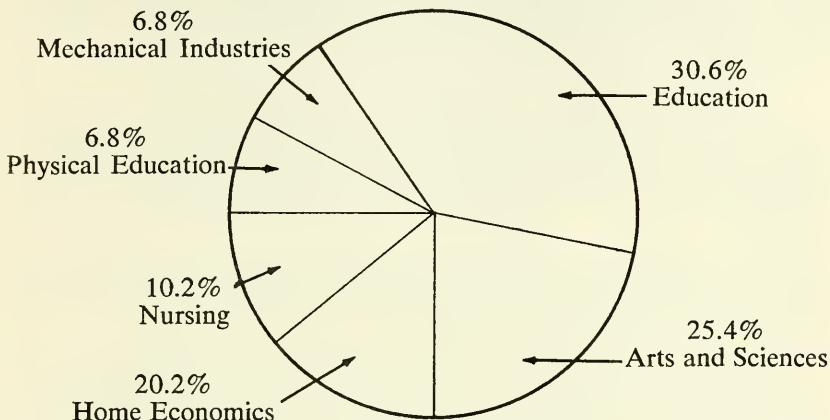


Figure 10. Comparison of Potential Drop-out Rate of the Several Schools Enrolled in by Probates.

per cent of the whole; whereas Arts and Sciences and Education combined have a population which is approximately forty-nine per cent of the whole, which was 2386 as of June, 1964.

Summary

The purpose of this study was to discover the underlying factors contributing to the failure of Tuskegee's 1964-65 academic probates. The author began the study with the following hypotheses: (1) Many students find themselves on college probation and drop lists because they come ill-prepared, (2) because they have had little or no professional guidance in choosing their majors and educational institutions, (3) because they devote too much time and energy to the social realm of college life and too little to the academic phase, and (4) because their work obligations leave them too little time in which to adequately fulfill their academic requirements.

The study involved the use of fifty-nine second year students who are currently on academic probation. High school grade point averages, college entrance examination scores, and college grade point averages were utilized along with questionnaires to provide pertinent data.

According to Tuskegee's "definition of preparedness," the first hypothesis was negated: ninety per cent of the subjects were "pre-

pared" to do college work because they had the required grade point for unconditional entrance to Tuskegee; ninety per cent fell within the average or above average stanine classes for the School and College Ability Test; and eighty-six per cent were in the upper half of their graduating classes.

The second hypothesis was supported by the study because only five and seven per cents respectively had professional help in choosing their majors and educational institutions, and because of the number of students who are having their greatest difficulty in the area of their major.

The third and fourth hypotheses were refuted by the study because it was found that work was listed as an influence on poor performance by only five per cent of the students, and extra-curricular activities was listed by only eight and five tenths per cent of the subjects.

Lack of adjustment and poor study habits along with poor academic backgrounds were given precedence by subjects as being areas of influence on their performance.

Other interesting findings indicate that (1) eighty-eight per cent of the subjects feel that they are doing better work this year than they did last year; (2) thirty-seven per cent of the probates' fathers are engaged in unskilled work as are sixty-eight per cent of the mothers; that twelve per cent of the fathers are engaged in professional work as are fourteen per cent of the mothers; (3) the family sizes of probates ranged from one to eleven children and that the modal and average family sizes respectively are four and five; (4) sixty-nine per cent of the probates receive their financial assistance from parents, twenty-two per cent from work, and seven per cent from relatives; and (5) the Department of Education has the highest potential drop-out rate while Physical Education has the lowest (using the majors of the probates as indices).

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Appendix
Questionnaire

Name _____

Age _____ Date of Birth _____ Sex: M _____ F _____ Major _____

1. What is your father's occupation? _____
2. What is your mother's occupation? _____
3. How many sisters do you have? _____
4. How many brothers do you have? _____
5. What is your main source of financial assistance for your college expenses? (____Parents), (____Scholarship), (____Federal Loan), (____Campus Work), (Specify Other _____)
6. Do you utilize any of the other sources to supplement your main source? Yes _____ No _____
7. If the answer to question # 6 is yes, name the sources _____

8. If you entered Tuskegee on a scholarship, from what organization or institution did it come _____; how much was the scholarship grant per semester _____?
9. Approximately how many students were in your graduating class? _____
10. Approximately what was your rank in your graduating class? _____

11. In what subject matter area did you have your greatest difficulty at Tuskegee Institute? _____
12. Did you experience difficulty in this general area in high school? Yes _____ No _____
13. Have you changed your major since you have been here? Yes _____ No _____
14. If the answer to question #13 is yes, what was your major before you changed it? _____
15. Who and or what was instrumental in your choice of a major? _____

16. Who or what influenced you to come to Tuskegee?.....

17. Do you like it here? Yes..... No.....
18. Would you like to change schools? ____Yes ____No
19. If your answer to question #18 is yes, what school would you like to attend?..... Why?.....

20. Was Tuskegee your first (___), second (___), or third (___) choice as an educational institution?
21. With what organizations did you affiliate last year?.....

22. With what organizations do you affiliate now?.....

23. Which of the following best describes your participation in areas of college life other than academic? (___ not involved enough), (___ involved enough), or (___ involved too much)
24. How do you feel Tuskegee could have or should have better helped you to improve your academic performance last year?

25. Judging from your perception of your abilities, which of the following best describes your feelings concerning your level of performance during the past year? (____ slightly shocked), (____moderately shocked), (____greatly shocked)
26. Which of the following best describes your level of academic performance this year as it compares to last year? (___ about the same), (____lower (____higher)
27. What factors do you attribute to this change or lack of change?

28. What do you think were the causes of your low level of academic performance last year?