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STUDENTS AT THE UNIVERSITY OF OKLAHOMA.

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THE ACADEMIC ACHIEVEMENT OF TRANSFER STUDENTS

AT THE UNIVERSITY OF OKLAHOMA

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THE ACADEMIC ACHIEVEMENT OF TRANSFER STUDENTS
AT THE UNIVERSITY OF OKLAHOMA

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CHAPTER I

BACKGROUND, NEED AND PURPOSE

Background and Need for the Study

Among the early advocates of the junior college as a preparatory institution were Tappan, Follwell and James. The theories of these men were greatly influenced by the German pattern of higher education which placed the thirteenth and fourteenth year of education in the category of secondary education.¹ Thus the concept of a junior college was in reality an attempt to reform higher education. Tappan, in his inaugural address at the University of Michigan in 1852, advocated the work of the freshman and sophomore years of college be transferred to the high schools.² Later this same plan of organization was supported by William W. Follwell who became president of the University of Minnesota in 1869.³

However, it was William Rainey Harper who became known as the "father

¹Leland L. Medsker, The Junior College: Progress and Prospect. (McGraw-Hill Book Company, Inc., New York, (1960) pp. 10-11.)

²William R. Harper, The Trend in Higher Education, (Chicago: University of Chicago Press, (1905), p. 69.

³Medsker, op. cit., p. 11.

of the junior college." Harper considered the second and third year of the college as being within the scope of the secondary schools. He re-organized the upper division of the University into the "university college" and the lower division into an "academic college".⁴ Harper did not consider a student mature enough to do work at the University level until he became a college junior. He stated in an address to the National Education Association in 1900:

It is not until the end of the sophomore year that university methods of instruction may be employed to an advantage. It is not until the end of the sophomore year that the average student has reached an age which enables him to do work with satisfaction, except in accordance with academy methods.⁵

Harper suggested that the high schools and academies extend their offerings to include the work of the freshman and sophomore years of college and that the university eliminate its offering of the freshman and sophomore years. In addition to this, he advocated the conversion of many of the weak four-year colleges into junior colleges.

Historically, the primary function of the junior college has been the preparation of students for advanced college work. Yet many junior colleges prepare large numbers of students in terminal educational courses. "In most two-year colleges at least two-thirds of the entering students say they will transfer; yet the study of these who entered in 1952 revealed that only one-third of them did transfer."⁶

⁴Ibid., p. 11.

⁵Harper, op. cit., p. 46.

⁶Medsker, op. cit., p. 97.

The junior colleges of Oklahoma constitute an important segment of the system of higher education. It is important for all concerned to be informed as to how well the junior colleges are functioning in the area of preparing students who will continue their education in a four-year college.

Due to the number of transfer students entering the University of Oklahoma and in light of the regulations concerning admission policy in the State of Oklahoma, it is becoming evident that more information should be obtained concerning the transfer students. Studies have been made at various institutions and data are available which indicates that the transfer students are highly successful. Yet other research studies show that the transfer students achieve at a significantly lower level when compared with non-transfer students. It would seem that these conflicting reports make it imperative that each institution conduct its own research concerning the academic achievement and persistency of the transfer students.

An analysis of the related literature, as reported by Holmes, further emphasizes these conflicting views:

In reviewing and analyzing research material concerning transfer students, the conclusion established by usually valid research is that no pattern or established norm of any type are available on the transfer student---either from the four-year institution or the junior college.

These conflicting reports on the success or lack of success of transfer students among various colleges which indicate that no individual college or university can claim on the basis of previous research just how transfer students will measure up in their own institutions.

⁷Charles H. Holmes, "The Transfer Student in the College of Liberal Arts", Junior College Journal, XXXI (April), p. 456-461.

THE PROBLEM

Statement of the Problem

The problem of this study was to compare the academic success and persistency of junior college transfer students at the University of Oklahoma with transfers from Oklahoma four-year colleges and with native students of the University of Oklahoma.

Statement of Purpose

It was the purpose of this study to ascertain the academic success and persistence of Oklahoma junior college transfer students when compared with non-transfer University of Oklahoma students and with transfer students from Oklahoma four-year colleges. Information was sought which might reveal answers to the following questions:

1. How do junior college transfer students compare academically and in persistence to graduation with native students and with transfer students from four-year colleges?
2. Can junior college transfer students expect to be prepared to pursue work in the college of their choice at the University of Oklahoma?
3. Do transfer students maintain their academic level after enrolling at the University of Oklahoma?
4. Is there a statistically significant difference between the grade-point average of the students and their persistency to graduation?
5. Is there a statistically significant difference between the source of the students and their persistence to graduation?
6. Is there a significant relationship between the college major of

the students and their persistence to graduation?

Definition of Terms

"Junior college" refers to two-year colleges regardless of whether they are private, public, or community institutions.

"Native students" refer to those students who have taken all of their college work at the University of Oklahoma.

"Academic success" is to be defined as degrees of achievement using grade point averages.

"Grade point average" is to be defined as the quotient received by dividing the grade points earned by the semester hours attempted.

"Grade points" refer to an index of academic achievement with an A counting as 4 grade points; B, 3; C, 2; D, 1; and F, 0.

"Source of students" refers to the institution at which the student did his first two years of college work.

Delimitation of the Study

This study is limited to those students who entered the University of Oklahoma with junior classification during the fall semesters of the school years of 1958-59 and 1959-60. They must have completed their first two years of college work at the University of Oklahoma, in an Oklahoma four-year college; or in an Oklahoma junior college. These samples were also restricted to those students who attempted at least two semesters of work after junior classification at the University of Oklahoma.

In addition to the above restrictions, these students must be enrolled in one of the following colleges at the University of Oklahoma: Education, Arts and Science, Engineering, or Business.

PROCEDURE

Source of Data

There were two primary sources from which data essential to this study were secured. These were the Office of Admissions and Records and the Office of Student Affairs of the University of Oklahoma.

Population

The population was taken from the University of Oklahoma, Oklahoma four-year colleges and from Oklahoma junior colleges. A random sample of ninety-six students were chosen from each of the three types of institutions.

Hypotheses of the Study

The following hypotheses were tested in the treatment of the data:

HO₁ There is no statistically significant difference in the over-all grade point average of the students with respect to the type of institution in which the first two years of college work was completed.

HO₂ There is no statistically significant difference in the over-all grade point average of the students with respect to source and college major at the University of Oklahoma.

HO₃ There is no statistically significant difference in the over-all grade point average of the students with respect to persistency to graduation.

HO₄ There is no statistically significant interaction between source of the students and their college major at the University of Oklahoma.

HO₅ There is no statistically significant interaction between source

of the students and their persistence to graduation.

HO₆ There is no statistically significant interaction between the college major of the students and their persistence to graduation.

HO₇ There is no statistically significant interaction between source of the student and college major and persistence to graduation.

HO₈ There is no statistically significant difference in the academic achievement of junior college students before and after transferring to the University of Oklahoma.

HO₉ There is no statistically significant difference in the academic achievement of the four-year college transfers before and after transferring to the University of Oklahoma.

HO₁₀ There is no statistically significant difference in the academic achievement of the native University of Oklahoma during the first two years of college work and the remaining two years.

Treatment of the Data

Analysis of Variance and Chi-square tests were used in order to determine if any significant statistical differences existed in hypotheses which were to be tested. Bartlett's tests of homogeneity of Variance was computed in order to determine if homogeneity of variance existed between the groups of data.

The assumption of the normality of the distribution of grade point averages was tested by use of the Chi-square technique with Chi-square .05 serving as the criterion.

Review of Related Literature

A review was made of the related literature in the area of transfer

students. The review included dissertations, theses, research reports, periodicals, pamphlets, and other printed materials available through the resources of the University of Oklahoma library, Oklahoma State University library and the inter-library loan. A thorough search was made of general guides and other sources which include The Education Index, Review of Educational Research, Encyclopedia of Educational Research, Readers' Guide to Periodical Literature, Dissertation Abstracts and Doctoral Dissertations Accepted by American Universities.

Organization of the Study

The introductory chapter sets forth the background and need for the study, the questions for which answers were sought and the delimitation of the problem. This chapter also contains the method of research and the treatment of the data.

Chapter II presents a review of the literature concerning the academic success and persistence of transfer students in four-year colleges and universities. Chapter III is devoted to a presentation of the data. Chapter IV contains an analysis of the data concerning the academic achievement and persistence of junior college students in relation to the achievement and persistence of transfer students of four-year colleges and non-transfer students of the University of Oklahoma. The summary and conclusions of the findings of this investigation are presented in Chapter V.

CHAPTER II

SURVEY OF RELATED LITERATURE

A review of the related literature concerning the academic achievement and persistency of the junior college transfer students reveals a great variety of approaches in making such studies and it also reveals conflicts in the conclusions reached. In surveying the literature, emphasis was placed upon those studies which made a comparison of the junior college transfer students with transfer students from four-year colleges and with non-transfer students. It was noted that a majority of the reports referred to the non-transfer students as "native" students and that many of the early studies were conducted by California institutions. The later reports have become more comprehensive in coverage and in analysis.

Eells¹ made a study in 1929 of the junior college transfer students at Stanford University. A comparison was made of junior college students with transfers from four year colleges, and with a group of randomly selected non-transfer students. The junior college transfers showed a superiority on the Thorndike test to both the native Stanford students and to the transfers from four-year colleges. The junior college group showed a consistently higher grade-point average than did the native students, although the native Stanford students had a higher rate of persistency.

¹W.C. Eells, "Records of Junior College Transfers in the University", School Review, XXXVII, (March, 1929), pp. 187-197.

In 1929 Showman² made an analysis of fifty-three junior college transfer students who entered the University of California at Los Angeles in 1926. These junior college students were compared with a group of native students consisting of 150 women and 100 men who were beginning their fifth semester of work at the University in September of 1926. The junior college group entered the first semester at the University of California with a grade-point average of 1.79 but only achieved a grade-point average of 1.32 during the remainder of the period in school. The native students entered their fifth semester with a grade point average of 1.31 and raised this to 1.54 by the time of graduation. A larger per cent of the junior college students persisted to graduation with sixty-one per cent graduating as compared to fifty-two per cent of the native students.

Allen³ reported in 1930, the results of a study in which he compared the academic records of 330 junior college transfer students who entered Baylor University between the years of 1910 and 1929. These students represented twenty-six junior colleges and were compared with a like number of randomly selected native students. He reached the conclusion that the difference in grade-point averages was very slight and that the junior college graduate was just as successful at Baylor as the non-transfer students.

²Harry M. Showman, "Junior College Transfers at the University of California at Los Angeles", California Quarterly of Secondary Education, IV (June, 1929), pp. 319-322.

³W. S. Allen, "University Success of Junior College Graduates", The Junior College Journal, I (December, 1930), pp. 147-148.

Congdon⁴, in 1932, made a study of the academic success achieved by transfer students entering into the University of Michigan's College of Engineering. This evaluation consisted of analyzing the records of 3,052 students. He used the following criteria for ascertaining the success of the students: (1) grade averages by semesters; (2) economy of time in finishing the college work; (3) academic disciplinary records; (4) persistence in residence; and (5) percentage of honor students among the graduates. He concluded that the junior college transfer students have a higher academic achievement than other students and maintain their scholastic superiority throughout their junior-senior years of engineering college work.

Bell⁵, in 1932, made a follow-up study of junior college students by use of a questionnaire. He surveyed 557 students who attended Citrus-Grove Junior College in Azusa, California, from 1915 to 1930. He received the following replies concerning the quality of the educational preparation of the junior college; excellent 24 per cent, very good 48 per cent, good 18 per cent, fair 9 per cent, poor 1 per cent.

Hale⁶ reported in 1932 of a large-scale study made of the success of junior college transfer students. His study included 725 junior col-

⁴W. H. Congdon, "Do Junior College Transfers Succeed:", The Junior College Journal, II (January, 1932), pp. 209-215.

⁵George Bell, "Follow-up of Junior College Students", The Junior College Journal, II (April, 1932) pp. 378-380.

⁶W. W. Hale, "Success of Junior College Graduates", The Junior College Journal, II (May, 1932), pp. 469-470.

lege graduates who were enrolled in seventy-one senior colleges. He reported that 37.7 per cent of the junior college transfer students maintained an academic record which was equal to or exceeded the averages for the native student. Of the total group of graduating students, 9.6 per cent received honors as compared to 12.1 per cent of the junior college students receiving honors.

Reeves and Russell⁷, reporting in 1933, made an investigation into the performance of transfer students upon the basis of the type of college from which they transferred. The study was made of transfer students from liberal arts colleges, transfers from junior colleges, and transfers from teacher-training institutions. They found that the academic achievement of the junior college transfer students was the highest, followed by the teacher training group and the liberal arts college group, and in that order.

In 1934 at the University of Illinois, Grossman⁸ made a comparison of students of junior standing who had transferred from junior colleges, of those who had transferred from four-year colleges and of those students who had taken all of their work at the University of Illinois. The conclusion reached in this investigation was that the junior college transfer students were able to pursue college courses at the University of Illinois with a degree of proficiency equal to, or greater than, students who had

⁷Floyd W. Reeves and John D. Russell, "Admission and Retention of University Students", The University of Chicago Survey, Vol. V (Chicago: The University of Chicago Press, 1933), pp. 7.

⁸D. A. Grossman, "Junior College Transfer Students at Illinois", Junior College Journal, IV (March, 1934) pp. 297-303.

their first two years of work in a four-year college.

Gerberich and Kerr⁹ made a comparison of 215 junior college transfer students and 436 native students who graduated from the University of Arkansas from 1928 to 1932. The native students achieved higher scholastic records and were also higher in persistence to graduation. It was found that 64.7 per cent of the native students graduated while 56.3 per cent of the transfer students graduated.

Fichtenbaum¹⁰, in 1941, compared the scholastic performance in the University of Texas of those students who entered the University as graduates of junior colleges and those students who were juniors and who had done all of their work at the University of Texas. The transfer students showed less tendency to drop-out than the native students. The non-transfer students made a higher grade-point average during the junior year but this difference was less significant during the senior year. The junior college students carried as heavy or heavier load than did the native students and after a year at the University the average passing load was materially greater for the junior college graduates. However, the native students had a better quality performance record as indicated by a greater proportion of honor grades.

Jordan¹¹ reported on a comparative study of junior college transfer

⁹J. R. Gerberich and F. D. Kerr, "Success of Transfers at the University of Arkansas", Junior College Journal, VI (June, 1936), pp. 180-185.

¹⁰Max Fichtenbaum, "Junior College Graduates VS. Senior College Juniors", American Association of Collegiate Registrars, XVI (January, 1941), pp. 144-154.

¹¹A. M. Jordan, "Study of Transfer Students", High School Journal, XXIV (February, 1941), pp. 81-86.

students in five North Carolina colleges in 1941. He compared 318 junior college students with a random sample of 224 native students in the five colleges. He reported that the native students made higher scores in two colleges and that the differences were only slight in the other three colleges. There was considerable variability among the grade-point averages of the students from the different junior colleges.

Bells¹² reported in 1941 of an analysis of the records of the junior college transfer students of sixty-seven junior colleges with a total of 2,080 graduates. Information was obtained by writing to the registrars of these institutions. Reports were also received from 319 senior colleges to which these students transferred. Bells reached the following conclusion: (1) more than half of these students graduated from the senior college or were still in residence; (2) only five per cent withdrew because of poor scholarship; (3) about two-fifths withdrew primarily for reasons other than poor scholarship; (4) average grades of the students in the senior institutions were somewhat higher than grades of the same students in junior colleges; (5) many received graduation honors and other evidence of scholastic distinction.

Taggart¹³, in 1941, reported on data collected from transfer students who had completed at least four semesters at San Mateo Junior College, California or Stanford University. He found that seventy-one per cent

¹²Walter C. Bells, "Success of Transferring Graduates of Junior College Terminal Curricula", Journal of the American Association Collegiate Registrars, XVII (July, 1943) pp. 372-398.

¹³J. F. Taggart, "Study of Junior College Transfers", California Journal of Secondary Education, XIX (October, 1941) pp. 368-375.

of these students who graduated from the University would not have been eligible academically to enter the University at the time they entered San Mateo and seventy-five per cent of the transfers graduating from Stanford would not have been eligible to enter Stanford as freshmen.

Rodes¹⁴, in 1949, made a study of transfer students from junior college students who entered engineering training at the University of California. He found there was no significant difference in the performance between the group of transfer students and the non-transfer group. It was believed that close co-operation of the University of California and of the junior colleges was responsible for this.

In 1951, DeRidder¹⁵ reported on the achievement of the graduating class of 1948 at the University of Michigan. This study included the College of Literature, Science and Arts. Of the 212 students who had been on academic probation, 130 were native students and 82 were junior college transfers. Among the 859 who remained, there were 431 natives and 428 transfer students. The ratio of native-to-transfer students on probation was significant at the one per cent level.

In 1954, Martorana and Williams¹⁶ compared a group of transfer students with non-transfer students at State College of Washington. They concluded that there is no significant difference in the academic success of transfer students and that achieved by students who begin as freshmen

¹⁴H. P. Rodes, "Successful Transfer in Engineering", Junior College Journal, XX (November, 1949), pp. 121-127.

¹⁵Lawrence M. DeRidder, "Comparative Scholastic Achievement of Native and Transver Students", Junior College Journal, XXII (Oct., 1951) pp.83-85.

¹⁶S. V. Martorana and L. L. Williams, "Academic Success of Junior College Transfers at the State College of Washington", Junior College Journal, XXIV (March, 1954), - 402-415.

at the College. There were more drop-outs among the transfer students, but the percentage of drop-outs due to low grades was greater among the native students than among the transfer students.

The Kansas State Teachers College at Pittsburg, Kansas,¹⁷ made a study of the junior students who enrolled in the fall of 1953. One hundred eleven native students were compared with sixty-eight students entering from junior colleges. Four semesters after junior college transfer students had graduated as compared with forty-one per cent of the native students. The junior college transfer students were also higher in academic achievement. The junior college transfers had a median grade-point average of 2.00 compared with a grade-point average of 1.89 for the native students. The grade-point averages were based on a three point scale.

Bird¹⁸ presented data concerning the junior college transfer students who were eligible to enter the University of California and also of those students who were ineligible to enter the University as freshmen. This report of 1955-1956 compared the "eligible" with the "ineligible" transfer students. The "eligible" transfer students carried about the same academic load as the native students while the "ineligible" students carried a lighter load. The grade point averages for the three groups of students at the end of four semesters were: native students, 1.73; "eligible" junior college

¹⁷Unpublished report made by Kansas State Teachers College of Pittsburg, Kansas, Spring, 1955.

¹⁸G. V. Bird, "University of California Annual Report on University Junior College Relations, 1955-1956", Berkeley: Office of Relations with Schools, University of California. August, 1, 1956.

students, 1.80; "ineligible" junior college students, 1.59. In persistency for the four semesters, the three groups had the following record: 77.9 per cent, 77.9 per cent, and 62.5 per cent, respectively.

A study was made by Masiko,¹⁹ in 1957, of the Chicago City Junior Colleges with special reference to Wright Junior College. Answers were being sought to such questions as: (1) do junior colleges prepare students adequately for transfer to senior colleges; (2) are junior colleges preparing students for immediate entrance to business and industry; and (3) is the curriculum of the junior college geared to the needs of modern society? It was found that the transfer students improved their scholastic records at four colleges and that they did less well at four other colleges. The transfer students did better at colleges specializing in teacher education.

Nall²⁰, in a doctoral study in 1958, compared the academic performance and persistency of junior college transfers with transfer students from four-year colleges and also with native students. He found that the junior college group were less successful than native students in both scholarship and persistency. In comparison with transfers from four-year colleges the junior college transfers were less successful in the College of Arts and Science, and the School of Business, but they did excel in the College of Engineering. Both transfer groups experienced a scholastic drop during their first semester at the University of Colorado.

¹⁹Peter Masiko, Jr., "Follow-Up Studies in Co-educational Junior Colleges", Junior College Journal, XXVII (April, 1957) p. 521-526.

²⁰Alfred W. Nall, "The Academic Success of Junior College Transfers to the Junior College Level at the University of Colorado", (unpublished Ph.D. dissertation, University of Colorado, 1958.)

FaFauci and Richter²¹ reported in 1958 on the practices of Boston University in admitting transfer students. Students who are not qualified on the basis of admission criteria to enter Boston University as freshmen are given an opportunity to prove themselves at the Boston University Junior College. The major function of this junior college is to identify and select students who indicate a level of academic readiness which suggests probable success in the four-year program of their choice. It is the practice of Boston University to admit only those students who have been recommended by a committee of faculty members. Each student is evaluated according to his grades, standardized tests data, and comments made by each instructor concerning the student's attitudes, personality traits, and interests. The transfer students who enter Boston University from the University Junior College approximate or improve upon the academic success of students who are admitted directly to the university.

Medsker²² reported in 1960 on the records of transfer students from sixty-one junior colleges. This study covered the years 1953 to 1955 and included senior institutions from several states. He reported the following findings: (1) At Fresno State College the junior college transfer students performed academically only slightly below that of the native students. The transfer group persisted considerably less well than the native students; (2) the transfers at San Jose State College compared favorable with the native students. The grade-point averages of both were

²¹Horation M. LaFauci and Peyton E. Richter, "Academic Success Beyond the Junior College: The Identification and Selection of the Four-Year Student", Junior College Journal, XXIX (November, 1958), pp. 123-127.

²²LeLand L. Medsker, The Junior College: Progress and Prospect, McGraw-Hill Book Company, Inc., New York, 1960, pp. 121-130.

of both were practically the same by the end of the senior year. However, only 52 per cent of the transfers graduated at the end of the normal period as compared with native students; (3) the junior college transfer students at the University of Georgia had a performance which was almost identical to that of the native students in respect to academic achievement, persistence, and degrees received; (4) at the University of Illinois the native students were superior to the transfer students by 0.14 grade points by the end of the senior year. The degree of persistency was also higher for the native group; (5) the transfers at Fort Hays Kansas State College were superior to the native students in academic achievement but the native group was slightly above the transfers in the percentage receiving degrees; (6) the native students at the University of Kansas performed higher than the transfers in both grade-point averages and in persistency. The largest difference in grade-point averages was during the first semester of the junior year and; (7) at the University of Mississippi the junior college transfers, the transfers from four institutions and the natives performed equally well during the first semester of junior classification. During the second semester the native students and the junior college transfers achieve somewhat higher than the transfers from the four-year institution. In the last two semesters the junior college transfers did less well than the other two groups.

Hennessey²³, in a Doctorial dissertation in 1960, made a comparision

²³ Francis Joseph Hennessey, "A Comparison of Selected Academic and Personal Characteristics of Regularly enrolled and community Junior College Transfer Students at Michigan State University", (unpublished Doctorial Dissertation, Michigan State University, East Lansing, Michigan, 1960).

of native students in their junior year and community junior college transfer students who enrolled at Michigan State University as juniors in the fall term of 1958. For this study, he selected 137 male and 36 female junior college transfer students and compared them with a like number of native Michigan State University native students. He concluded that: (1) the female transfer students suffered extreme loss in grade-point averages during the first semester at Michigan State University; (2) the two groups did not differ significantly in over-all achievement; (3) a significantly greater number of the transfer students failed to maintain a two-point grade average in the College of Business and Public Service; and (4) the drop-out rate was not significantly higher for the transfer students than for the non-transfer students. However, a significantly larger number of the drop-outs resulted from factors other than academic failure than did the native students.

In 1960, Ammerman²⁴ made a study of 154 graduates of Henry Ford Community College who transferred to the University of Michigan during the years 1948 through 1957. He stated that 77 per cent of the transfer students suffered a substantial drop in grade-point averages during the first semester at the University. This was followed by a gradual rise in grade-point averages for each succeeding semester. Seventy-three per cent of these students graduated from the university. Sixty-nine per cent of the withdrawals were due to poor scholarship.

Klitzke²⁵, in 1961, made a comparison of transfer students of Colorado

²⁴ Albert M. Ammerman, "A Study of the Academic Success of Henry Ford Community College Graduates Transferring to the University of Michigan" (unpublished Doctorial dissertation, Wayne State University, Detroit, Michigan, 1960).

²⁵ Louis L. Klitzke, "Academic Records of Transfers in Teacher Training", Junior College Journal, XXXL (January, 1961), pp.255-257.

colleges with native students of Colorado State College of Greeley. An equal number of transfer and native students were compared concerning scholastic achievement and persistence. The conclusion was reached that the transfer students majoring in education were not as academically successful as the native students. A significantly higher number of native students were persistent to graduation.

In 1961, Holmes²⁶ studied the junior college and four-year college transfer students over a ten-year period which covered the years from 1946 to 1955. High school preparation was found to be an important factor. Students in the junior college groups with 16.0 units of high school preparation showed a decrease in grade point average. Twenty-five per cent of the transfer students with 21.0 or more units of high school preparation showed an increase in grade-point average upon transfer to the University of Syracuse. Sixty-two per cent of the transfer students graduated, and 14 per cent were dropped as compared to 4.3 per cent of the total student body.

Osner²⁷ compared the academic achievement of native and junior college transfers who graduated in 1959 from four California State Colleges. For this study 316 transfers were compared with 1,094 native students. He found that native and transfer students differed significantly with regard to college majors. A high proportion of the transfer students chose areas

²⁶ Charles H. Holmes, "The Transfer Student in the College of Liberal Arts", Junior College Journal, XXXI (April, 1962), pp.456-461.

²⁷ Henry J. Osner, "A Comparison of the Academic Success of Native Students and Junior College transfers who graduated from Four California State Colleges in 1959". (unpublished Doctorial dissertation, The College of the Pacific, Stockton, California, 1961).

related to teaching and a much smaller number enrolled in science and mathematics. The grade-point averages of the natives were consistently higher than the transfers but the difference was not found to be significant.

Summary

The literature devoted to the academic achievement and persistency of the junior college students is so varied in the results reported that it is impossible to make general conclusions with any degree of reliability. Many of the studies use small samples or the reports include a number of years which may tend to reduce the value of the studies.

Most of the investigations used grade-point averages in making comparisons and did not applied the criterion of persistency as a measure of success. There were indications that the grade-point average of the junior college transfer student was progressively higher each semester he attends a four-year institution; however, the effect of the "drop-outs" might have been a factor which would tend to raise the grade-point average of those students who persist to graduation.

A majority of the studies reported that the junior college transfer students, as a group, were successful in the four-year institutions. But the inconsistency of these investigations seemed to point out the need for further studies in this area. It seems likely that each institution which receives a large number of transfer students should make its own investigation.

CHAPTER III

PRESENTATION OF THE DATA

Comparison of the Over-All Grade-Point Averages

For this study the population was taken from the University of Oklahoma, Oklahoma four-year colleges and from Oklahoma junior colleges. These students must have completed a minimum of four semesters in their respective colleges and must have been enrolled in at least twelve hours per semester. They must have enrolled at the University of Oklahoma as juniors in either the College of Education, College of Business, College of Arts and Sciences or in the College of Engineering.

The enrollment records for the fall semester of 1958 and the fall semester of 1959 were used to secure a list of all juniors. The names of all the students who did not meet the requirements of the delimitation and those students who did not have complete records were deleted. The remaining list contained 1240 names of which 939 were native Oklahoma University students, 145 were transfer students from Oklahoma four-year colleges and 156 were transfers from Oklahoma junior colleges.

The final sample was comprised of ninety-six junior college transfer students, ninety-six four-year college transfer students and ninety-six native University of Oklahoma students. The grade-point averages were computed using the four-point scale. The grade averages were rounded off

to two decimal places or to the nearest hundredth of a grade point.

The samples from both of the transfer groups may be considered as being fairly representative of that group as the total number of the transfers from four-year colleges is 145 and the total number of the junior college transfers is 156. However, the sample taken from the native University of Oklahoma students is a small percentage of the total group. This amounts to slightly over ten per cent of the total number.

The grade-point-averages for the students who persisted to graduation and those who did not are shown in Table I. It is interesting to note that the high scores for each group are almost equal but there is a considerable difference in the means of these groups. An examination of Table 18 reveals that only a very few students who graduated were achieving at the grade-point level of 2.00 which is the minimum for graduation. Several of the students who did not graduate were achieving at the level above 2.50. The difference between the grade-point average of these two groups was significant at the .01 level.

TABLE I

COMPARISON OF STUDENTS WHO GRADUATED WITH THOSE STUDENTS
WHO DID NOT GRADUATE

GROUP	GRADE-POINT AVERAGES			STANDARD DEVIATION
	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	
Grads	3.89	2.75	2.02	.44
Non-Grads	3.80	2.29	1.53	.45

Table 2 gives a comparison of the students by source of college. This comparison does not take into account the factor of persistency. The highest means was made by the junior college transfer students and the lowest was made by the native Oklahoma University students. However, the differences in the means of this group was not significant at the .05 level.

TABLE 2

COMPARISON OF THE STUDENTS BY SOURCE OF COLLEGE

GROUP	GRADE-POINT COMPARISON			STANDARD DEVIATION
	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	
Natives	3.67	2.42	1.53	.45
4-Yr. Trans.	3.65	2.53	1.65	.40
Jr. C. Trans.	3.89	2.61	1.58	.48

Comparisons are made of the students by source of college again in Table 3. However, considerations are given to whether or not the students persisted to graduation. Since there was a significant difference between the graduates and non-graduates, it could be expected that there would be a greater difference in these groups than was found in the groups listed in Table 2. The greatest difference occurs within the junior college transfer groups, and the least amount of difference is within the native groups. This table reveals that the students who graduate achieve at more nearly the same level than the students who did not graduate. The difference between these groups was significant at the .05 level.

TABLE 3
COMPARISON OF THE STUDENTS BY SOURCE OF COLLEGE
AND PERSISTENCY

GROUP	GRADUATES				NON-GRADUATES			
	<u>GRADE-POINT HIGH</u>	<u>MEANS</u>	<u>LOW</u>	S.D.	<u>GRADE-POINT HIGH</u>	<u>MEANS</u>	<u>LOW</u>	S.D.
Natives	3.67	2.69	2.06	.46	3.07	2.14	1.53	.56
4-Yr. Trans.	3.65	2.42	2.02	.39	3.74	2.35	1.65	.45
Jr C. Trans.	3.89	2.84	2.02	.47	3.80	2.38	1.57	.50

The comparative achievement of the students in the College of Education is given by source of institution in Table 4. The highest mean of these groups was made by the junior college transfer students, although the scores by all three groups of students who graduated were rather uniform. It may be of value to note that the students of both transfer groups who did not graduate achieved a mean score well above the minimum required for graduation while the mean of the native students approached the minimum for graduation. The difference between these groups was significant at the .05 level of confidence. TABLE 4

COMPARISON OF STUDENTS BY SOURCE OF COLLEGE IN
THE COLLEGE OF EDUCATION

GROUP	COLLEGE OF EDUC. GRADUATES				COLLEGE OF EDUC. NON-GRADS.			
	GRADE-POINTS				GRADE-POINTS			
	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	<u>S.D.</u>	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	<u>S.D.</u>
Natives	3.66	2.76	2.18	.46	2.43	2.01	1.70	.33
4-Yr. Trans.	3.65	2.75	2.02	.51	3.55	2.40	1.65	.55
Jr. C. Trans.	3.54	2.86	2.20	.42	3.80	2.46	1.78	.67

A comparison of the achievement of the students in the College of Business is given in Table 5. The means of the students who graduated are about the same for both transfer groups. The means of these two groups are much higher than the means for the native students. However, the greatest difference between the means of the graduates and the non-graduates of any of the groups occurs among those students who transferred from four-year colleges. The means of these groups of students in the College of Business compares very favorably with the means of the students in the College of Education as shown in Table 4. The difference between these groups was significant at the .05 level of confidence.

TABLE 5
COMPARISON OF STUDENTS BY SOURCE OF COLLEGE
IN THE COLLEGE OF BUSINESS

GROUP	GRADUATES				NON-GRADUATES			
	GRADE POINTS				GRADE POINTS			
	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	<u>S.D.</u>	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	<u>S.D.</u>
Natives	3.57	2.58	2.09	.45	2.97	2.05	1.81	.33
4-Yr. Trans.	3.61	2.73	2.20	.45	2.82	2.12	1.74	.30
Jr. C. Trans.	3.87	2.78	2.02	.56	3.12	2.37	1.63	.47

The achievement of the students in the College of Arts and Sciences are compared in Table 6. The highest scores made by the students who graduated were made by the junior college transfer students and the highest scores made by those who did not graduate were made by the four-year college transfer group. It is interesting to note that all the means of those groups

which did not graduate were well above the minimum required to graduate. In the four-year college transfer group the lowest score made was still above the 2.00 grade-point average required for graduation. These groups showed a significant difference at the .05 level.

TABLE 6
COMPARISON OF THE STUDENTS IN THE COLLEGE OF
ARTS AND SCIENCES

GROUP	GRADUATES				NON-GRADUATES			
	GRADE POINTS				GRADE POINTS			
	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	<u>S.D.</u>	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	<u>S.D.</u>
Natives	3.67	2.76	2.06	.57	3.07	2.37	1.85	.44
4-Yr. Trans.	3.51	2.66	2.16	.52	3.74	2.53	2.02	.53
Jr. C. Trans.	3.89	2.94	2.15	.57	3.59	2.44	1.90	.44

The means of the students in the College of Arts and Sciences was considerably lower than that of the students in the College of Business; however, the graduating students of both groups achieved at a comparable rate.

TABLE 7
COMPARISON OF THE STUDENTS IN THE COLLEGE
OF ENGINEERING

GROUP	GRADUATES				NON-GRADUATES			
	GRADE-POINTS				GRADE-POINTS			
	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	<u>S.D.</u>	<u>HIGH</u>	<u>MEANS</u>	<u>LOW</u>	<u>S.D.</u>
Natives	3.57	2.66	2.07	.33	3.16	2.05	1.56	.49
4-Yr. C. Trans.	3.39	2.71	2.26	.33	2.98	2.25	1.78	.41
Jr. C. Trans.	3.47	2.78	2.31	.37	2.93	2.15	1.58	.43

Table 7 shows a comparison of the students in the College of Engineering. The highest score for the means, high and low were made by the Junior College Transfer students. The low score was made by the non-graduate native Oklahoma University students. In comparing the students in the College of Engineering with the students in the College of Arts and Sciences the greatest difference occurred between the groups of non-graduates. The means of the non-graduates in the College of Engineering was considerable lower than that for the comparable students in the College of Arts and Sciences. The difference between these groups was significant at the .05 level of confidence.

Comparison of Achievement During First Two Years With
That of the Remaining Two Years of College Work

More detailed information was obtained by making a comparison of the achievement of the students during the first two years of college with that of the next two years of work. In a number of cases the higher grade-point average made during the freshman and sophomore years somewhat compensated

for the lower grades received during the next two years. This was especially true of the transfer students as can be seen by an examination on Table 25 and Table 26.

In order to determine the significance of the difference of these grade-point averages, tests were computed for each of the three groups of students by source of institution. A comparison was first made of the achievement of the native Oklahoma University students as shown in Table 8. These students had a mean average of 2.34 for the first two years of work and a mean average of 2.50 for the second two years. A Chi-square test was computed in determining the significant differences in these means and the results showed no significance at the .05 level of confidence.

The next comparison was made of the transfer students of the Oklahoma four-year colleges. The mean grade-point average of these students before transferring to the University of Oklahoma was 2.69. The mean grade-point average achieved after transferring to the University of Oklahoma was 2.34. The Chi-square test showed a significant difference at the .05 level of confidence.

Then comparisons were made of the transfer students from Oklahoma junior colleges. Again the comparison was between the grades made the first two years of college and the grades made during the remainder of college. The mean grade-point average for the first two years of college was 2.87, while the mean grade-point average for the remainder of college was 2.32. The Chi-square test showed significance at the .05 level of confidence.

The highest mean grade-point average during the first two years was

made by the junior college transfers but this group made the lowest grade-point average during the remainder of college. Although the native students made the lowest mean grade-point average during the first two years of college, their average for the remainder of college was the highest of the three groups. The grade-point average for the native students was raised during last half of college by .16 grade point. The averages of both transfer groups dropped during their enrollment at Oklahoma University. The transfers from the four-year colleges dropped by .35 and the transfers from junior colleges dropped by .55 grade points.

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TABLE 8

MEAN GRADE POINT AVERAGES BY SOURCE OF INSTITUTION
DURING SEMESTERS ONE TO FOUR AND SEMESTERS FIVE TO TEN

GROUP	Semesters 1-4		Semesters 5-10	
	Mean G.P.A.	S.D.	Mean G.P.A.	S.D.
Natives	2.35	.48	2.50	.36
4-Yr. Trans.	2.69	.53	2.34	.53
Jr. Col. Trans.	2.87	.56	2.32	.44

The mean grade-point averages of the students are considered by source of institution in Table 8. Although the native students entered their junior year with a lower grade-point average than either of the transfer groups, their achievement was the highest of all by the time of termination or graduation. The junior college transfer students entered with the highest grade-point average and achieved thereafter at a lower rate than either the native or four-year college transfer students. Both of the transfer groups achieved at a lower rate at the University of Oklahoma than they did at their home colleges.

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TABLE 9

MEAN GRADE POINT AVERAGES BY SOURCE OF INSTITUTION AND COLLEGE
MAJOR DURING SEMESTERS ONE TO FOUR AND SEMESTERS FIVE TO TEN

GROUP	Semesters 1-4						Semesters 5-10					
	Natives		4-Yr.		Jr. C. Tr.		Natives		4-Yr.		Jr. C. Tr.	
	GP	SD	GP	SD	GP	SD	GP	SD	GP	SD	GP	SD
Educ.	2.38	.45	2.76	.60	2.83	.55	2.37	.49	2.55	.51	2.47	.80
Bus.	2.18	.48	2.42	.42	2.79	.54	2.48	.27	1.94	.43	2.42	.51
A.S.	2.48	.51	2.75	.48	2.92	.68	2.78	.40	2.68	.66	2.31	.56
Eng.	2.31	.50	2.64	.64	2.85	.47	2.39	.28	2.17	.53	2.08	.48

Table 9 gives a comparison of the students by source of institution and also by their college major. No consideration is given to persistency. The junior college group entered the junior year at the University of Oklahoma with a higher grade-point average than either of the other two groups, and the native students entered with the lowest grade-point average. However, this trend was generally reversed during the junior and senior year as the natives were superior to the transfer students in all college majors except in the College of Education.

After transferring to the University of Oklahoma the junior college students achieved at a rate which was higher than that of the 4-year college transfer students only in the College of Business. In this case, the junior college transfers exceeded the four-college transfers by .48 grade points. In the College of Education, the junior college transfer students exceeded the native students by .10 grade points.

Only in the College of Education did the native students fail to

achieve at a higher rate during their last enrollment periods. This drop amounted to .01 grade points. The native students raised their grade-point average in the College of Business from 2.18 to 2.48 while the four-year college transfer students suffered a loss in the College of Business from 2.42 to 1.94. The greatest loss in grade points for the junior college students was in the College of Engineering. They entered the junior year at the University of Oklahoma with a grade-point average of 2.85 but from this point they only achieved a grade-point average of 2.08. This represented the greatest loss of grade points by any of the groups in any of the college majors.

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TABLE 10

MEAN GRADE POINT AVERAGES FOR NATIVE OKLAHOMA UNIVERSITY
STUDENTS DURING SEMESTERS ONE TO FOUR AND SEMESTERS FIVE TO TEN

GROUP	GRADUATES				NON-GRADUATES			
	Sem. 1-4 G.P.A.	S.D.	Sem. 5-10 G.P.A.	S.D.	Sem. 1-4 G.P.A.	S.D.	Sem. 5-10 G.P.A.	S.D.
Educ.	2.68	.58	2.87	.47	2.13	.31	1.87	.51
Bus.	2.31	.57	2.84	.32	2.05	.39	2.12	.76
A. & S.	2.62	.52	2.87	.54	2.36	.51	2.69	.56
Eng.	2.56	.51	2.74	.36	2.05	.49	2.05	.79

Table 10 gives a comparison of the graduate and non-graduate University of Oklahoma students. It also compares them by their college major. All of these groups of students raised their mean grade-point averages during the last four semesters of work except the non-graduates of the College of Engineering. The largest change in grade point averages was within the College of Business. The graduates raised their mean grade-point average by .53. The largest drop in grade-point averages was within the College of Education where the non-graduates had a loss of .26 grade points. It was unexpected to find a considerable raise in the grade-point averages of the non-graduates of the College of Arts and Sciences. This higher rate of achievement was second only to the group of graduates in the College of Business.

TABLE 11

MEAN GRADE-POINT AVERAGES FOR THE FOUR-YEAR COLLEGE GROUP
DURING SEMESTERS ONE TO FOUR AND SEMESTERS FIVE TO TEN

GROUP	GRADUATES				NON-GRADUATES			
	Sem. 1-4		Sem. 5-10		Sem. 1-4		Sem. 5-10	
	G.P.A.	S.D.	G.P.A.	S.D.	G.P.A.	S.D.	G.P.A.	S.D.
Educ.	2.86	.71	2.79	.39	2.78	.49	2.31	.62
Bus.	2.77	.47	2.73	.33	2.41	.35	1.98	.54
A. & S.	2.89	.41	2.90	.59	2.61	.56	2.46	.73
Eng.	2.78	.70	2.54	.35	2.43	.55	1.80	.71

The transfer students from the four-year colleges achieved at a higher rate at the University of Oklahoma in only one department. This was made by the graduates of the College of Arts and Sciences who entered the University with a mean grade-point average of 2.89 and later achieved at a rate of 2.90. The non-graduates of both the College of Business and the College of Engineering achieved a mean grade-point average of less than 2.00 which is the minimum required for graduation.

In the College of Engineering there was a wide variation between the achievement of the graduates and the non-graduates. This drop in grade-point averages was similar to that of the junior college transfer students. The native students also suffered a loss in this comparison but this loss was not so severe as that of the transfer students.

TABLE 12

MEAN GRADE POINT AVERAGES FOR JUNIOR COLLEGE GROUP DURING
SEMESTERS ONE TO FOUR AND SEMESTERS FIVE TO TEN

GROUP	GRADUATES				NON-GRADUATES			
	Sem. 1-4		Sem. 5-10		Sem. 1-4		Sem. 5-10	
	G.P.A.	S.D.	G.P.A.	S.D.	G.P.A.	S.D.	G.P.A.	S.D.
Educ.	3.01	.57	2.84	.51	2.66	.53	1.87	1.09
Bus.	2.91	.63	2.83	.41	2.68	.44	2.12	.53
A. & S.	3.19	.69	2.51	.36	2.65	.67	2.69	.74
Eng.	3.22	.41	2.32	.40	2.68	.54	1.84	.57

The mean grade-point averages of the junior college transfer students according to college major and persistency is given in Table 12. The junior college transfers who persisted to graduation in the College of Engineering entered the University of Oklahoma with a grade point average of 3.22 which was the highest of any groups from any of the three institutions and they suffered a loss of .90 grade points which was the greatest loss of any group. This is contrary to many of the findings of the literature concerning junior college transfers in the College of Engineering.

The junior college transfer students who persisted to graduation achieved at their highest rate in the College of Education and the lowest achievement of the junior college transfer group was among the non-graduates of the College of Education. The graduates of all three institutions achieved at almost identical rates in the College of Education. The mean grade-point averages were 2.87 for the native students, 2.84 for the junior college transfers and 2.79 for the four-year college transfers.

The number and per cent of the total group of students who received degrees by the end of a ten semester period is shown in Table 14. The highest percentage of native University of Oklahoma students receiving degrees occurred in the College of Arts and Sciences. Both of the transfer groups received the highest percentage of degrees in the College of Education.

CHAPTER IV

TREATMENT OF THE DATA

Two primary statistical techniques were employed in analyzing the data. These included an analysis of variance and the Chi-square tests for significance of difference. It was necessary to assume that homogeneity of variance existed among the groups which were to be tested. This assumption was tested by Bartlett's Test of Homogeneity of Variance. The obtained value of this test failed to reach significance at the .05 level of confidence. Therefore, the assumption of homogeneity of variances was accepted.¹ The normality of distribution of grade-point averages was determined by use of chi-square tests of significance of difference. None of the groups deviated significantly from normality with χ^2 .05 serving as the criterion.

Table 13 presents a summary of the analysis of variances of the groups which were tested.² The students were grouped according to persistency, source of institution and college major. The F scores obtained for these three groups were significant at the .01 level, with the greatest

¹Allen L. Edwards, Experimental Design in Psychological Research. New York: Rinehart and Company, 1950, p. 169.

²Donald S. Villars, Statistical Design and Analysis of Experiments for Development Research. Dubuque, Iowa: Wm. C. Brown Company, 1951 p. 80-82.

TABLE 13

ANALYSIS OF VARIANCE OF MEAN GRADE POINT AVERAGES ACCORDING
TO PERSISTENCY, SOURCE OF INSTITUTION AND COLLEGE MAJOR

Source of Variation	df	Sum of Squares	Varaince	F
Persistency	1	15.09	15.09	79.42 **
Source of Institution	2	1.81	.91	4.78 **
College Major	3	2.45	.82	4.31 **
Persistency and Source of Institution	2	.41	.21	1.10
Persistency and College Major	3	1.02	.34	1.78
Source of Institution College Major	6	.36	.06	3.16
Source, Persistency College Major	6	.84	.14	
Within Treatment	264	50.85	.19	
AB-AC-BC-ABC-W	281	53.48	.19	
Total 287	287	72.83	.25	

** Significant at the .01 level of confidence

AB= Persistency and source
AC = Persistency and college major
BC = Source and college major
ABC = Persistency, source, and college major
W = Within Treatment

difference being among the students grouped according to persistency. The interaction of these groups was not found to be significant at the .01 level.

Since the analysis of variance yielded a significant value at the .01 level of confidence for persistency, source, and college major tests were computed to determine where the difference within these groups were located.

The analysis of variance for the interaction of the various groups failed to show a significant difference at the .05 level.

Hypothesis 1 was: There is no statistically significant difference in the over-all grade-point averages of the students with respect to the type of institution in which the first two years of college work was completed. A Chi-square technique was used to test this hypothesis. The grade point averages of the native University of Oklahoma students were compared with that of the transfers students from Oklahoma four-year colleges. The obtained value of .744 was not significant at the .05 level. A comparison of the native Oklahoma University of Oklahoma students with the junior college transfer students yielded a value of 1.317 which was not significant at the .05 level. The comparison of the four-year college transfers with the junior college transfers yielded a value of 1.6000 which was also below the required value for significance at the .05 level of confidence. Therefore, the hypothesis was accepted and we may conclude that no significant difference exists in the over-all grade-point averages of the students regardless of where the first two years of college work was completed.

Hypothesis 2 was: There is no statistically significant difference

in the over-all grade-point average of the students with respect to source and college major. A Chi-square value of 2.931 was obtained in a comparison of the Business majors and the Arts and Science majors. A value of 2.510 was received for the Arts and Science majors and the Engineering majors. Neither of these differences was significant at the .05 level of confidence which would make it necessary to accept this hypothesis. Therefore, we may conclude that no statistically significant difference exists in the over-all grade-point averages with respect to source and college major.

Hypothesis 3 was: There is no statistically significant difference in the over-all grade-point average of the students with respect to persistency to graduation. The Chi-square obtained value of 6.710 was significant at the .05 level which was an indication that the hypothesis was to be rejected. Therefore, we may conclude that a statistically significant difference exists in grade-point averages with respect to persistency.

Hypothesis 4 was: There is no statistically significant interaction between the source of the students and their college major. This hypothesis was accepted as the analysis of variance failed to show any significant interaction at the .05 level. Therefore, we may conclude that no statistically significant interaction exists between the source of the students and their college major.

Hypothesis 5 was: There is no statistically significant interaction between the source of the students and their persistence to graduation. This hypothesis was accepted as the analysis of variance failed to show any significant difference at the .05 level. Therefore, we may conclude that no statistically significant interaction exists between the source

of the students and their persistency to graduation.

Hypothesis 6 was: There is no statistically significant interaction between the college major of the students and their persistence to graduation. This hypothesis was accepted as the analysis of variance failed to show any significant interaction at the .05 level. Therefore, we may conclude that no statistically significant interaction exists between the college major of the students and their persistence to graduation.

Hypothesis 7 was: There is no statistically significant interaction among the source of the student and college major and persistence to graduation. This hypothesis was accepted as the analysis of variance failed to show any significant difference at the .05 level. Therefore, we may conclude that there is no statistically significant interaction among the source of the students and college major and persistence to graduation.

Hypothesis 8 was: There is no statistically significant difference in the academic achievement of the native University of Oklahoma students during the first two years of college work and the remaining two years. A Chi-square test was used to test the significant difference between the grades received during the first two years and the grades received during the next two years. The obtained value of .588 was not significant at the .05 level of confidence. Therefore, the hypothesis was accepted and we may conclude that there is no statistically significant difference between the achievement of the native University of Oklahoma students for the first two years of college work and the last two years.

Hypothesis 9 was: There is no statistically significant difference in the academic achievement of the four-year college transfer students before and after transferring to the University of Oklahoma. A Chi-square

test was used to test the significance difference between the grades received at the four-year colleges and those received at the University of Oklahoma. The obtained value of 3.877 was significant at the .05 level of confidence. Therefore, the hypothesis was rejected and we may conclude that there is a statistically significant difference between the academic achievement of the four-year transfer students before and after transferring to the University of Oklahoma.

Hypothesis 10 was: There is no statistically significant difference in the academic achievement of the junior college transfer students before and after transferring to the University of Oklahoma. A Chi-square test was used to test the significant difference between the grades received at the junior college and the grades received after transferring to the University of Oklahoma. The obtained value of 4.850 was significant at the .05 level of confidence. Therefore, the hypothesis was rejected, and we may conclude that there is a statistically significant difference in the academic achievement of the junior college transfer students before and after transferring to the University of Oklahoma.

SUMMARY

On the basis of the treatment and analysis of the data the null hypotheses concerning the interactions of the groups were accepted. Two other hypotheses were accepted. One dealt with a comparison of the grade-point-averages of the native University of Oklahoma students during their first two years of college work and the remaining two years. The other hypothesis was concerned with the over-all grade-point averages and the source of the students.

The most significant differences were found when comparisons were made between graduates and non-graduates, and between the academic achievement before and after transferring to the University of Oklahoma. Both transfer groups achieved at a significantly lower level during their enrollment at the University of Oklahoma while the native University of Oklahoma students achieved at a higher rate, although this higher rate of achievement was not statistically significant.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to compare the academic success and persistency to graduation of junior college transfer students at the University of Oklahoma with transfers from Oklahoma four-year colleges and with native students of the University of Oklahoma. This study was concerned only with those students who entered the University of Oklahoma with junior standing and who entered one of the selected major fields which were to be studied. These students must have been native University of Oklahoma students, transfers from Oklahoma junior colleges or transfers from Oklahoma four-year colleges. They must have entered the College of Education, the College of Business, the College of Arts and Sciences or the College of Engineering.

The total population which was relevant to this study included 1,240 students. From this population three groups of students were selected according to source of origin. Each group contained ninety-six subjects which were further divided into sub-groups of twelve. These sub-groups were chosen according to college major and persistence to graduation.

Analysis of Variance and Chi-square tests were used in order to determine if any significant statistical differences existed in the hypothesis

which were to be tested. Bartlett's Test of Homogeneity of Variance was computed since one of the basic assumptions underlying the use of the analysis of variance is that homogeneity of variance between the groups of data must exist.

Findings

An analysis of the data revealed the following findings:

1. That the transfer students generally achieved at a significantly lower rate after transferring to the University of Oklahoma.
2. That a significant difference existed in the achievement of the students according to persistency to graduation.
3. That little difference existed between the transfer students of the junior colleges and the transfer students of the four-year colleges.
4. That a large number of the transfer students who did not persist to graduation achieved at a higher rate than the minimum required for graduation.
5. That there was no significant difference found among the students according to persistency, college major and source of college.
6. That the native University of Oklahoma students achieved at an increased rate after reaching junior standing.
7. That the transfer students did less well in the College of Engineering than in other major fields.
8. That the native University of Oklahoma students achieved at a lower rate in the College of Business than in other major fields.
9. That there is no significant difference in the four-year grade-point averages of the native University of Oklahoma students, the junior

college transfer students and the four-year college transfer students.

Conclusions

The following conclusions were drawn on the basis of the findings of this study:

1. Many of the transfer students who do not persist to graduation withdrew from the University for reasons other than academic.
2. That the native University of Oklahoma students achieved at a higher rate during their junior and senior years while each of the transfer groups achieved at a lower rate.
3. That the transfer students achieved at a higher level before transferring to the University which compensated for their lower achievement when comparisons were made of the over-all grade-point-averages.
4. The greatest differences among any of the groups tested were found when comparisons were made of achievements according to persistency.
5. That the transfer students may expect a drop in grade point average after transferring to the University of Oklahoma and in this study the greatest drop in grade-point-average was among students enrolled in the College of Engineering.
6. That the transfer students from the junior colleges compared very favorably with the transfer students from the four-year colleges.
7. That the junior college transfer student was prepared to achieve at a satisfactory level in the major colleges of the University of Oklahoma.

Recommendations

The following recommendations are made on the basis of the findings of this study and an analysis of the related research:

1. That each institution conduct its own research concerning the achievement of transfer students.

2. That an investigation be made of the factors relating to the withdrawal of transfer students who had high academic achievements at the University.

3. That a study be made of the factors relating to the drop in the grade-point-averages of students after transferring to the University of Oklahoma from other Oklahoma colleges.

4. That research be conducted to determine the relative achievement of the transfer students from each individual junior college.

5. That a study be made of the achievement of the junior college students who transfer from institutions outside of the state of Oklahoma.

6. That the University of Oklahoma take steps to retain more of the talented transfer students.

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APPENDIX A

TABLE 14

PERCENTAGE AND NUMBER OF NATIVE STUDENTS, FOUR-YEAR COLLEGE
TRANSFERS AND JUNIOR COLLEGE TRANSFER STUDENTS WHO RECEIVED
DEGREES BY THE END OF A PERIOD OF TEN SEMESTERS

Source	EDUC.		BUS.		ARTS & SCI.		ENG.	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
O.U. (N-939)	G ₁	152--74	134-65		156-80		240-72	
	G ₂	52--26	72--35		39-20		94-28	
4-Yr.Col. (N-145)	G ₁	18--60	12--50		18-52		30-53	
	G ₂	12--40	12--50		17-48		26-47	
Jr.Col. (N-156)	G ₁	20--65	15--50		21-48		33-62	
	G ₂	12--35	15-50		19-52		21-38	

G₁ = Graduates

G₂ = Non-graduates

N = Original number in groups

TABLE 15

TEST FOR NORMALITY OF DISTRIBUTION
OF NATIVE OKLAHOMA UNIVERSITY STUDENTS

G	Values	f	$\frac{(O-E)^2}{F}$
Over 2.5	Over 3.66	0	.5961
2.0--2.5	3.41-3.66	4	1.5190
1.5--2.0	3.15-3.41	5	.1821
1.0--1.5	2.89-3.15	13	.1474
0.5--1.0	2.63-2.89	5	.6524
0.0--0.5	2.38-2.63	16	.1294
0.0--0.5	2.38-2.12	14	.2383
0.5--1.0	2.12-1.86	25	.7375
1.0--1.5	1.86-1.60	12	.3608
1.5--2.0	1.60-1.34	2	.5271
2.0--2.5	1.34-1.09	0	1.5878
Under 2.5	Under 1.09	0	.5961
Total			7.6014

Significance at .05 level of confidence 21.9

TABLE 16

TEST FOR NORMALITY OF DISTRIBUTION
OF FOUR-YEAR TRANSFER STUDENTS

G	Values	f	$\frac{(O-E)^2}{F}$
Over 2.5	Over 3.65	1	.4251
2.0--2.5	3.40-3.65	8	3.2802
1.5--2.0	3.16-3.40	3	.3974
1.0--1.5	2.91-3.16	7	.3255
0.5--1.0	2.66-2.91	12	.2914
0.0--0.5	2.42-2.66	13	.3991
0.0--0.5	2.42-2.17	29	.3404
0.5--1.0	2.17-1.93	23	.3580
1.0--1.5	1.93-1.68	15	.4451
1.5--2.0	1.68-1.43	2	.5982
2.0--2.5	1.43-1.19	0	1.8690
Under 2.5	Under 1.19	0	.7016
Total			9.4315

Significance at .05 level of confidence = 21.9

TABLE 17

TEST FOR NORMALITY OF DISTRIBUTION
OF JUNIOR COLLEGE TRANSFER STUDENTS

G	Values	f	$\frac{(O-E)^2}{F}$
Over 2.5	Over 3.89	0	.5961
2.0--2.5	3.61-3.89	3	.8893
1.5--2.0	3.33-3.61	7	.6550
1.0--1.5	3.5-3.33	7	.2061
0.5--1.0	2.77-3.05	12	.1659
0.0--0.5	2.49-2.77	13	.2927
0.0--0.5	2.49-2.22	15	.1839
0.5--1.0	2.22-1.94	22	.5290
1.0--1.5	1.94-1.66	15	.7010
1.5--2.0	1.66-1.38	2	.5271
2.0--2.5	1.38-1.10	0	1.5878
Under 2.5	Under 1.10	0	.5961
Total			6.9305

Significance at .05 level of confidence = 21.9

APPENDIX B

TABLE 18

GRADE POINT AVERAGES FOR SEMESTERS 1-10 FOR NATIVE
STUDENTS WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	244	218	274	232
2	366	217	206	207
3	262	290	328	229
4	338	324	299	268
5	218	357	334	243
6	223	251	211	244
7	294	227	304	357
8	259	269	297	235
9	264	209	228	303
10	260	267	258	291
11	304	255	209	321
12	281	217	367	265

TABLE 19

GRADE POINT AVERAGES FOR SEMESTERS 1-10 FOR FOUR-YEAR COLLEGE
TRANSFER STUDENTS WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	205	361	216	279
2	202	237	351	250
3	206	254	257	226
4	283	306	244	292
5	254	270	223	290
6	232	271	240	288
7	341	215	300	339
8	365	328	341	267
9	321	242	342	237
10	273	309	220	298
11	284	266	226	234
12	355	220	232	250

TABLE 20

GRADE POINT AVERAGES FOR SEMESTERS 1-10 FOR JUNIOR COLLEGE
TRANSFER STUDENTS WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	339	293	215	347
2	354	246	312	242
3	220	263	311	231
4	240	304	224	275
5	256	202	389	259
6	240	387	262	237
7	305	348	220	239
8	246	288	305	324
9	315	283	247	302
10	299	219	316	316
11	331	300	362	310
12	290	207	362	252

TABLE 21

GRADE POINT AVERAGES FOR SEMESTERS 1-10 FOR NATIVE STUDENTS
WHO DID NOT PERSIST TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	218	196	234	188
2	209	188	193	201
3	170	192	298	199
4	231	183	217	316
5	243	211	283	243
6	153	297	212	161
7	171	181	189	162
8	193	229	307	190
9	187	194	299	205
10	220	184	237	269
11	215	192	272	173
12	212	220	185	156

TABLE 22

GRADE POINT AVERAGES FOR SEMESTERS 1-10 FOR FOUR-YEAR COLLEGE
TRANSFER STUDENTS WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	205	361	216	279
2	202	237	351	250
3	206	254	257	226
4	283	306	244	292
5	254	270	223	290
6	232	271	240	288
7	341	215	300	339
8	365	328	341	267
9	321	242	342	237
10	273	309	220	298
11	284	266	226	234
12	355	220	232	250

TABLE 23

GRADE POINT AVERAGES FOR SEMESTERS 1 TO 10 FOR JUNIOR COLLEGE
TRANSFER STUDENTS WHO DID NOT PERSIST TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	373	171	248	191
2	225	226	263	284
3	317	163	190	213
4	189	243	238	190
5	196	273	340	223
6	178	202	258	158
7	230	278	274	192
8	223	218	359	220
9	380	206	215	293
10	201	312	202	267
11	248	263	225	171
12	198	290	230	179

TABLE 24

GRADE POINT AVERAGES FOR SEMESTERS 1-4 FOR NATIVE STUDENTS
WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	251	187	265	226
2	365	170	186	179
3	270	282	299	220
4	360	322	338	260
5	219	344	318	212
6	202	221	184	217
7	235	198	290	359
8	256	219	268	253
9	255	174	241	304
10	228	238	224	281
11	305	231	173	315
12	223	180	352	242

TABLE 25

GRADE POINT AVERAGES FOR SEMESTERS 1-4 FOR FOUR-YEAR COLLEGE
TRANSFER STUDENTS WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	232	383	235	301
2	306	240	334	294
3	201	232	268	260
4	231	288	247	306
5	233	315	215	325
6	272	276	360	300
7	377	223	318	343
8	376	379	322	323
9	318	237	335	243
10	220	275	275	363
11	291	269	301	207
12	340	216	256	267

TABLE 26

GRADE POINT AVERAGES FOR SEMESTERS 1-4 FOR JUNIOR COLLEGE
TRANSFER STUDENTS WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	300	237	223	393
2	366	249	349	336
3	202	282	330	265
4	288	334	211	310
5	233	205	397	348
6	232	397	317	290
7	335	356	230	225
8	288	341	343	384
9	278	315	270	365
10	361	239	388	321
11	365	316	392	291
12	360	217	381	336

TABLE 27

GRADE POINT AVERAGES FOR SEMESTERS 1-4 FOR NATIVE STUDENTS
WHO DID NOT PERSIST TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	218	175	231	201
2	237	212	185	176
3	165	188	287	186
4	270	158	269	323
5	191	265	245	212
6	212	283	166	200
7	175	166	161	172
8	220	232	322	173
9	182	183	287	171
10	201	233	225	
11	243	173	270	152
12	243	201	180	197

TABLE 28

GRADE POINT AVERAGES FOR SEMESTERS 1-4 FOR FOUR YEAR COLLEGE
TRANSFER STUDENTS WHO DID NOT PERSIST TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	251	177	179	198
2	232	293	234	226
3	221	223	381	250
4	294	216	220	217
5	188	244	381	213
6	263	307	222	166
7	332	243	264	161
8	340	223	221	283
9	334	286	350	299
10	256	205	202	363
11	244	220	256	207
12	383	250	221	220

TABLE 29

GRADE POINT AVERAGES FOR SEMESTERS 1-4 FOR JUNIOR COLLEGE
TRANSFER STUDENTS WHO DID NOT PERSIST TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	392	195	284	275
2	217	258	280	344
3	315	242	213	252
4	213	312	228	237
5	236	288	355	256
6	270	252	317	194
7	252	356	325	233
8	230	251	364	278
9	378	247	200	330
10	210	270	187	350
11	260	291	229	198
12	216	263	194	269

TABLE 30

GRADE POINT AVERAGES FOR SEMESTERS 5-10 FOR NATIVE
STUDENTS WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	223	240	283	239
2	367	268	222	224
3	249	298	358	243
4	328	321	264	275
5	219	367	347	270
6	240	301	239	273
7	329	253	326	356
8	261	306	324	210
9	274	245	214	302
10	331	293	247	301
11	303	276	231	325
12	319	240	386	265

TABLE 31

GRADE POINT AVERAGES FOR SEMESTERS 5-10 FOR FOUR-YEAR COLLEGE
TRANSFER STUDENTS WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	259	328	203	263
2	216	232	362	224
3	222	266	248	203
4	291	342	241	274
5	276	247	228	251
6	200	268	221	266
7	265	208	281	335
8	359	328	341	241
9	325	235	360	250
10	290	347	226	237
11	277	264	250	265
12	370	210	320	239

TABLE 32

GRADE POINT AVERAGES FOR SEMESTERS 5-10 FOR JUNIOR COLLEGE
TRANSFER STUDENTS WHO PERSISTED TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	384	268	209	303
2	345	243	275	231
3	241	244	295	216
4	218	276	236	263
5	278	216	379	229
6	257	376	208	208
7	253	339	213	254
8	302	240	253	261
9	348	265	220	250
10	267	238	240	329
11	290	337	203	273
12	230	354	284	203

TABLE 33

GRADE POINT AVERAGES FOR SEMESTERS 5-10 FOR NATIVE STUDENTS
WHO DID NOT PERSIST TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	219	227	236	136
2	150	139	204	247
3	176	198	323	210
4	184	167	165	305
5	286	135	384	187
6	97	338	237	104
7	162	198	300	161
8	136	220	296	217
9	200	203	328	250
10	300	300	285	272
11	171	200	275	157
12	161	218	200	209

TABLE 34

GRADE POINT AVERAGES FOR SEMESTERS 5-10 FOR FOUR YEAR COLLEGE
TRANSFER STUDENTS WHO DID NOT PERSIST TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	222	132	334	150
2	232	151	195	188
3	81	119	357	94
4	288	233	156	275
5	183	226	318	136
6	227	256	228	268
7	319	247	235	112
8	236	208	191	115
9	191	162	238	266
10	275	169	175	211
11	283	180	210	250
12	240	232	203	100

TABLE 35

GRADE POINT AVERAGES FOR SEMESTERS 5-10 FOR JUNIOR COLLEGE
TRANSFER STUDENTS WHO DID NOT PERSIST TO GRADUATION

Student Number	College Major			
	Education	Business	Arts-Sci.	Engineering
1	328	171	180	68
2	241	226	218	221
3	320	103	84	127
4	150	243	252	148
5	112	273	329	144
6	93	202	204	162
7	200	278	346	121
8	205	185	218	117
9	371	90	214	181
10	180	185	216	232
11	215	240	107	218
12	110	165	163	225