A COMPARISON OF THE SCHOLASTIC ACHIEVEMENTS OF TRANSFER AND NATIVE STUDENTS IN THE COLLEGE OF AGRICULTURE AT OKLAHOMA STATE UNIVERSITY

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CHAPTER I

INTRODUCTION

The Education Policies Commission (2) stated in the second half of the twentieth century, "The goal of universal education beyond high school is no more utopian than the goal of full citizenship for all Americans, for the first is becoming prerequisite for the second." It is this emphasis that has been placed on higher education by society which has brought about the upsurge in the number of college students in the United States. The present enrollment in colleges and universities is at an all-time high and is of concern to many educators.

Educators have concluded that there are several reasons for the increase in the number of births following World War II, which has resulted in greatly increased numbers of youth who are now of college age. Also, there is a feeling among many people that a high school education is not sufficient; but that an education beyond high school is a necessity in the complex and changing employment picture in the United States.

In the fall of 1962, data indicated that forty percent, or 4.5 million, of the high school graduates were enrolled in college (7). It is estimated that in 1970, fifty percent of the high school graduates, one in every four beginning his program of higher education will enroll in a junior college (9).

The demand for enrollment in the four-year colleges and universities will be so great that many potential students will be restricted from

enrolling in order that the four-year institution may accommodate expanding numbers of upper division, graduate and professional students. For this reason, junior colleges will probably be called upon to educate an increasing percentage of lower division students.

This need for a lower division institution to relieve pressure on the four-year colleges and universities was first realized in 1892 by the father of the junior college concept, Dr. W. R. Harper of the University of Chicago. However, it was not until 1902 that the first separately-organized junior college began operation. This distinction goes to Joliet Junior College, Joliet, Illinois, which is still in operation (4). From this meager beginning in 1902, the number of junior colleges swelled to 800 public and private junior colleges in 1965. Table I depicts the growth rate in the number of junior colleges in the United States during this period.

TABLE I

GROWTH IN NUMBER OF JUNIOR COLLEGES, 1905-1965

YEAR	TOTAL	PUBLIC	PRIVATE
1905	32	1	31
1910	55	3	52
1915	89	15	74
1920	165	40	125
1925	292	88	204
1930	430	162	268
1935	518	213	305
1940	575	258	317
1945	584	261	323
1950	600	280	320
1955	624	309	315
1960	690	380	310
1965	800	489	311

Source: Junior College Journal, 1905-1965.

These 800 junior colleges had an enrollment of well over one million students in 1965, and an enrollment of six to eight million students has been predicted by 1970.

The junior college has benefited the four-year institutions by taking their share of lower division students. However, as the percentage of students transferring to the four-year institution increases, various problems arise. This study was concerned with several of these problems.

Statement of the Problem

The number one objective stated by the majority of junior colleges is to provide a curriculum that runs parallel to the lower division curriculum in the four-year institutions. This parallel curriculum is often called a transfer program as the four-year colleges and universities begin to restrict the number of lower division students that they will accept.

The success of this program is measured by the success of the junior college student after transfer to a four-year college or university. Due to the increasing number of transfer students in the College of Agriculture at Oklahoma State University, much concern has been shown for this problem and it is important for educators in the College of Agriculture to know how well these junior college transfers are performing. Not only will this information be helpful in guiding students in selecting a college to attend, but it will also be an evaluation of how well these junior colleges are preparing their students for upper division work. Also, it will help the four-year college to set up courses designed to correct deficiencies in some subject areas.

Two studies have been conducted concerning the transfer student at Oklahoma State University; both outside the College of Agriculture. Both dealt with the College of Arts and Science students, with the first being conducted by Cowley in 1938, and the second by Hoemann in 1967. Therefore, the problem to be studied appears to be one that would be valuable to the College of Agriculture at Oklahoma State University. The problem involved a comparison of the transfer students in the College of Agriculture and the native agriculture majors enrolled in their junior year on the same date.

Transfer and native students were compared on grade point averages, persistency to graduate, ability to graduate in four years, and the number of graduates to continue their education. Also, they were compared to determine if major area of study or the college transferred from made a difference in their performance.

Definition of Terms

Active student is one considered by the University as currently enrolled.

Inactive student is one considered by the University as having been dropped, suspended, or withdrawn from this University.

Upper division refers to the last two years in the University; the junior and senior levels.

Lower division refers to the first two years in the University; the freshman and sophomore levels.

Withdrawn refers to a student who terminates his residence within a semester.

Dropped refers to a student who completes a semester but does not

return.

Suspended refers to a student who has his attendance terminated by University officials.

OSU is the abbreviation for Oklahoma State University.

GPA is the abbreviation for grade point average.

Grade point averages are an index of academic achievement. At OSU, each letter grade receives the following number of quality points for computing grade point averages: A - 4; B - 3; C - 2; D - 1; F - 0.

Persistency is indicated by the number of a group completing each semester and the number who graduate.

Transfer student is one who enters OSU after attending another institution. It may be either a junior college or a four-year college. They will have either obtained 50 semester hours of credit or attended two years. Those not meeting the requirements will be treated as a separate group.

Non-transfer or native student is one whose first higher education enrollment is at OSU and one who completes all his courses at this institution.

Hypotheses Tested

The following hypotheses, stated in the null form, are those which were tested:

1. There will be no significant difference in the two-year cumulative grade point averages between the transfer and native students.

2. There will be no significant difference in the grade point averages received at OSU by the transfer and native students.

3. There will be no significant difference in the final cumulative

grade point averages between the transfer and native students.

4. There will be no significant difference in the number who persist to graduate between transfer and native students.

5. There will be no significant difference in the number who graduate in four years between transfer and native students.

6. There will be no significant difference in grade point averages of transfers when compared by colleges transferred from.

7. There will be no significant difference in grade point averages when compared by major area of study.

8. There will be no significant difference in the number of extra semesters taken between transfer and native students.

CHAPTER II

REVIEW OF LITERATURE

Since the beginning of the junior college in 1902, there have been numerous studies concerning the performance of the junior college student who transfers to the four-year college or university. With the increasing emphasis on the junior college in the last thirty years the number of studies performed is increasing.

In the studies reviewed, a wide variety of methods and findings were reported. Because of this, the writer felt it necessary to review these studies in succession.

Among the earliest, most-often cited studies was that by Koos (17). He compared 75 juniors at the University of Minnesota with 95 junior college graduates in 13 universities and six colleges. He found that by assuming the different colleges were comparable, the median grade of the junior college students was 80.6 and for the Minnesota students it was 79.8. This showed a small superiority for the junior college student.

Eells (6) had the distinction of writing the first Master's thesis on the performance of the junior college student. He completed his study in 1927 at Stanford University using 317 transfers. He found that although the transfers fall below the native students in their first semester after transfer, they later achieved higher grade point averages in every semester thereafter.

In 1928, Proctor (22), also of Stanford University, conducted a

study comparing the lower-division grade point averages of natives and transfers to their grade point averages in the junior year. He also made a comparison by sex. In the lower-division work of 478 native males and 60 transfer males he found that the transfers had a .36 grade point average advantage over the native student. With the females, the transfer had a .49 grade point average advantage over the native female. In comparing their first year after transfer, the natives proved superior by .03 of a grade point in the males and .04 of a grade point in the females.

Jones and Robinson (14), in 1928, completed a study at the University of California on 538 native and 538 transfer students and found that there were no significant differences between the work of the whole groups of junior colleges and university students, rather, the greatest differences existed between the junior colleges themselves.

In 1929, Showman (25) made a study at the University of Southern California which indicated an inferiority of the transfer students, but his study has been severely criticized for the small number of transfer students used.

Hale (11), in 1931, made a study using transfer students in 116 colleges to compare their persistency to graduate. He found that 48 percent went on to graduate; 58 percent of the males and 43 percent of the females. However, only 39 percent of the transfer students from private junior colleges graduated. Hale also studied the percentage of drop-outs for each semester after transfer and found that 2.1 percent remained less than one semester; 2.0 percent dropped out after one semester; 3.6 percent attended less than one year; 11.9 percent remained one year, but did not return for the second year; and 5.1 percent re-

turned after one year, but did not graduate.

In 1934, Grossman (10) compared the performance and persistency to graduate of junior college transfers, university transfers, and liberal arts college transfers at the University of Illinois. Results showed that the male junior college transfer obtained a grade point average of .10 of a grade point higher than the transfers from a four-year college. When he compared the females, he found that there was no significant difference between the two groups. Grossman found that 83.4 percent of the junior college transfers graduated, but only 75.1 percent of the four-year college transfers graduated. When this was broken down, 86.6 percent of the public junior college transfers graduated, but only 76.6 percent of the private junior college transfers graduated. In comparing the university transfers and liberal arts college transfers it was found that the liberal arts colleges graduated 80.9 percent, while the university graduated 67.8 percent.

Cowley (3), in 1938, at Oklahoma A & M, compared 52 transfers to 188 native students. Evidence indicated that the native students performed higher in grade point averages than did the transfer in the upper-division courses. The transfer students surpassed the native students by .16 of a grade point before transfer, but fell .08 of a grade point below the native students after transfer to the four-year program.

In 1950, Rodes (23) conducted a study concerning junior college transfer students in the College of Engineering at the University of California and indicated that the relative performance of the junior college graduates was just as good, both on entrance examinations and upper-division work, as that of non-transfer students. It is noted by

this writer that the entrance examination already cited was given to all students before acceptance into the junior year and a predication correlation between past and future grades was accurately predicated 76.6 percent of the time.

DeRidder (5), studied 1948 graduates at the University of Michigan concerning the percentage of transfer and native students who had been placed on scholastic probation. Results showed that 20 percent of the total graduating class had been on some type of scholastic probation. This was a total of 212 students, with 130 native and 82 transfers included. Stated in another manner, one out of four native, and four out of six transfers had been placed on scholastic probation.

Martorona and Williams (19) conducted a study concerning the transfers to the State College of Washington during the period from 1947 to 1949. A comparative group of 251 transfers and 251 native students were matched on sex, age, size of high school, and major area of study. It was noted that although the native students had higher high school grade point averages than did the transfers, the transfers made a high gain in their grade point averages in the upper-division work. Also, the transfer students' grade point averages decreased in the fifth semester below the natives, but it increased to equal that of the native students by the eighth semester.

Nall (21), at the University of Colorado, discovered that the native student achieved a .49 grade point average advantage over the transfer student in the fifth and sixth semesters, .16 of a grade point in the seventh semester and .10 of a grade point in the eighth semester.

Medsker (20) made a study of sixteen four-year colleges with 2500 transfer students being included. Comparisons were made on the same

campus and it was concluded that native students attained higher grade point averages in twelve of the sixteen colleges. He also found that it took the transfer student longer to graduate than it did the native student. Medsker reported that of 1503 junior college students used in Oklahoma, 90 percent were in a transfer program. It was noted that attrition of transfer students is higher than for native students but poor grades were but one of the reasons for leaving, with economical problems being the reason cited most often.

Klitzke (15) studied the academic of transfer students in teacher education at Colorado State College, Greeley, Colorado. He found that 78.35 percent of the transfer students graduated, while 90.04 percent of the native students graduated. The transfer students' cumulative grade point average in senior college decreased while the native grade point average increased during the last two years. The transfer drop-out's grade point average was 3.22 and the native students drop-out's grade point average was 2.75, indicating that grades were not the major reason for dropping out. Klitzke concluded that transfer students were not as academically successful as were native students.

Holmes (13) conducted a ten-year study of the junior college transfer students in the College of Liberal Arts at Syracuse University which covered the period from 1946 to 1955. Results showed that the junior college students dropped somewhat below the natives in all the comparative factors of grade point average, number dropped and on probation, and the granting of graduation honors, but each group graduated approximately equal percentages of students during the period studied.

Knoell and Medsker (16) completed a national survey in 1965 concerning the performance of junior college transfer students. They found

that at the end of four years, only 45 percent of the transfers included in their study graduated, but 50 percent of the non-graduated were still enrolled. At the end of five years, 62 percent had graduated and 13 percent were still enrolled. Therefore, 80 percent of the transfers had graduated within five years of starting. The grade point average for the transfer student was 2.27 during the fifth semester, 2.42 for the sixth, 2.54 for the seventh, and 2.68 for the eighth semester. This was lower than the grade point average for the native student. Also, transfers were less likely to raise their grade point averages after transfer to a major state university as contrasted to those transferring to a smaller college.

Hoemann (12) completed a study of the academic achievement and persistence to graduate for transfer and native students in the College of Arts and Sciences at Oklahoma State University. He concluded that the transfers' first two years cumulative grade point average was higher than the native students, the transfers' grade point average dropped the first semester after transfer, and the male transfer student had a higher grade point average than did the natives at the end of the two years - the fifth and eighth semester. Also, the attrition of the transfer student after semesters seven and eight was greater than for the native. Hoemann found that equal percentages of each group graduated in four years after starting and he found no difference in the performance of students from different junior colleges in Oklahoma.

CHAPTER III

METHODOLOGY

This chapter is divided into three parts: the types of information collected, key to codes used in assembly of data, and research design.

Types of Information Collected

The names of all agriculture students who were classified as juniors in the fall of 1967 were obtained from the Dean of Agriculture's office at Oklahoma State University. The remaining information was obtained from either the Dean of Agriculture's office or from the Bursar's office at Oklahoma State University.

The type of information required for analysis in this study included:

Transfer students:

1. Name
2. Year first enrolled in college
3. Junior college transferred from
4. Major area of study
5. First two-year cumulative grade point average
6. Grade point average for each semester at OSU
7. Final cumulative grade point average
8. Number of years to graduate
9. Date of graduation

10. Extra semester grade point averages

Native students:

1. Name
2. Year first enrolled in college
3. Major area of study
4. First two-year cumulative grade point average
5. Grade point average for each semester at OSU
6. Final cumulative grade point average
7. Number of years to graduate
8. Date of graduation
9. Extra semester grade point averages

Key to Codes

The coding system utilized in compilation of the data included:

1. Number of student (e.g., 1-2-3-4, etc.)
2. Year first enrolled in college (e.g., 1965-66, etc.)
3. Transfer (1) or Native (o)
4. College transferred from:

   Code: 1 - Altus Junior College

   2 - Bacone Junior College

   3 - Cameron State Agricultural College

   4 - Connors State College

   5 - Eastern Oklahoma A & M College

   6 - Murray State Agricultural College

   7 - Northeastern Oklahoma A & M College

   8 - Northern Oklahoma College

   9 - Northwestern State College

10 - Oklahoma Military Academy

11 - Panhandle State College

12 - St. Gregory's State College

13 - Others (International and out-of-state)

5. Major area of study:

Code: 1 - Agricultural Economics

2 - Agricultural Education

3 - Agricultural Engineering

4 - Agricultural Journalism

5 - Agronomy

6 - Animal Science

7 - Biochemistry

8 - Botany and Plant Pathology

9 - Dairy Science

10 - Entomology

11 - Forestry

12 - General Agriculture

13 - Horticulture

14 - Poultry Science

15 - Pre-Veterinary Medicine

6. Two-year cumulative grade point average

7. Fifth semester grade point average

8. Sixth semester grade point average

9. Seventh semester grade point average

10. Eighth semester grade point average

11. Summer grade point average

12. Final cumulative grade point average

13. Graduated in four years Yes (1) or No (2)

14. Date of graduation

15. Extra semester grade point averages

After completing the data required, the students were classified as either transfer or native and then were grouped according to college transferred from and major area of study.

Techniques

The analysis of variance was used to test hypotheses 1, 2, 3, 6, and 7. The Chi Square technique was used to test hypotheses 4 and 5. Percentages on number 8.

The author chose the analysis of variance because it allows the author to match the groups by a statistical procedure and not by actual re-arrangement. Simply stated, the analysis of variance is a statistical technique which tests the significance of the difference between two or more groups after initial differences between the groups are statistically eliminated.

The Chi Square technique is an appropriate statistical instrument that would measure the sign difference between numbers of cases falling into a given category from each group.

CHAPTER IV

ANALYSIS OF THE DATA AND THE RESULTS OF THE STUDY

In this chapter a description of the data collected in the study and the results of the statistical treatment of the hypotheses tested will be reviewed.

The description of the sample population will be summarized in tables and briefly stated. Also, the results of the statistical treatments will be summarized in tables and reviewed.

Description of Sample Population

The sample population consisted of those students classified as first semester juniors in the fall of 1967 by the College of Agriculture. This was a total of four hundred and four students.

The population was then divided into native and transfer students. The native group consisted of 240 students and the transfer group consisted of 164 students at the beginning of the study period. In each of the succeeding five comparisons there were 237, 225, 210, 203 and 180 native students respectively, which shows that 60 students (25 percent) either withdrew, dropped or were suspended during the study period. When the transfer population was studied there were 163, 158, 135, 128 and 117 students in the succeeding five comparisons respectively, for a total of 47 (28.65 percent) of the students who withdrew, dropped or were suspended. Table II depicts the preceding information.

TABLE II

DESCRIPTION OF STUDY POPULATION BY NUMBER COMPARED PER SEMESTER

COMPARATIVE FACTOR	BEGIN STUDY	5th Sem.	6th Sem.	7th Sem.	8th Sem.	FINAL
Native	240	237	225	210	203	180
Transfer	164	163	158	135	128	117

The transfer population was then divided into those junior colleges attended and these data are shown in Table III. It is noted that junior colleges 1, 2, 10 and 12 had no observations and 11 had only one observation, so an error occured when calculating the standard deviation for this group, but the standard deviation was set to 0.00 and the evaluation continued.

Table IV is a further description of the transfer population showing the number and percentage of withdrawn, dropped and suspended students grouped together. The range in the percentages of students who thus did not complete the study was 20.5 and 54.2 percent with the average percentage being 28.6 percent.

TABLE III

JUNIOR COLLEGES ATTENDED BY TRANSFERS

CODE	NAME OF JUNIOR COLLEGE	Number (N=164)	PERCENT
1	Altus Junior College	0	0.00
2	Bacone Junior College	0	0.00

TABLE III (Continued)

CODE	NAME OF JUNIOR COLLEGE	Number (N=164)	PERCENT
3	Cameron State College	39	22.56
4	Connors State College	9	5.48
5	Eastern Oklahoma A & M College	9	5.48
6	Murray State College	19	11.58
7	Northeastern Oklahoma College	27	16.46
8	Northern Oklahoma College	10	6.09
9	Northwestern Oklahoma College	15	9.15
10	Oklahoma Military Academy	0	0.00
11	Panhandle State College	1	.90
12	St. Gregory's College	0	0.00
13	Others (International and out-of-state)	35	21.34

The next category of information sought required dividing each group according to the major of studies. Tha natives tended to locate themselves mainly in the areas of agricultural economics, animal science and forestry, respectively, while the transfer located primarily in the areas of agricultural education, animal science and forestry. Table V explains the coding used in analyzing the major areas of study and Table VI is a description of the sample population divided by major area of study divided and by native and transfer groups.

TABLE IV

DESCRIPTION OF TRANSFER STUDENT POPULATION
BY JUNIOR COLLEGES OF ORIGIN

JUNIOR COLLEGE	NUMBER BY SEMESTERS STUDIED					
	BEGIN STUDY	5th Sem.	6th Sem.	7th Sem.	8th Sem.	FINAL
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	39	39	36	33	33	31
4	9	9	9	9	8	7
5	9	9	9	7	7	7
6	19	19	19	17	16	16
7	27	27	27	24	21	18
8	10	10	10	7	6	6
9	15	15	15	15	15	15
10	0	0	0	0	0	0
11	1	1	1	1	1	1
12	0	0	0	0	0	0
13	35	34	32	22	21	16
Number Withdrawn Dropped, Suspended		1	5	23	7	11

TABLE V

MAJOR AREA OF STUDY BY CODE

CODE	MAJOR AREA OF STUDY	Number (N=404)	PERCENT
1	Agricultural Economics	57	14.10

TABLE V (Continued)

CODE	MAJOR AREA OF STUDY	Number (N=404)	PERCENT
2	Agricultural Education	67	16.58
3	Agricultural Engineering	9	2.22
4	Agricultural Journalism	0	0.00
5	Agronomy	41	10.14
6	Animal Science	102	25.25
7	Biochemistry	4	0.98
8	Botany and Plant Pathology	2	0.49
9	Dairy Science	11	2.72
10	Entomology	3	0.74
11	Forestry	44	10.89
12	General Agriculture	18	4.45
13	Horticulture	12	2.97
14	Poultry Science	3	0.74
15	Preveterinary Medicine	31	7.67

TABLE VI

DESCRIPTION OF SAMPLE POPULATION
BY MAJOR AREA OF STUDY

TYPE OF STUDENT	NUMBER OF STUDENTS BY MAJOR AREA OF STUDY														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Native	44	21	6	0	20	59	3	1	6	3	25	12	11	3	19
Transfer	13	46	3	0	21	43	1	1	5	0	19	6	1	0	12
TOTALS	57	67	9	0	41	102	4	2	11	3	44	18	12	3	31

Analysis of the Data

The hypotheses tested were stated in the null form and are on pages five and six of Chapter I. The five percent level of probability was used in reporting the findings of this study. If the hypothesis was rejected at the five percent level it was implied that the mean difference was so great that it would occur in less than five percent of other samples.

Analysis of Grade Point Average

Comparative data on groups of transfer and native students were used in analyzing the performance of the two groups as reflected by their grade point average.

Table VII presents the comparative data relative to the performance of the transfer group against the native students. The analysis of variance technique was applied to the difference in the grade point means of each comparative period. The means, standard deviations, sum of squares, degrees of frequency, means squared and the F-ratios are listed in Table VII.

TABLE VII

ANALYSIS OF VARIANCE OF GRADE POINT AVERAGES
OF TRANSFER AND NATIVE STUDENTS

COMPARATIVE FACTOR	2-Year Cum.	5th Sem.	6th Sem.	7th Sem.	8th Sem.	FINAL
No. of Students						
Native	240	237	225	210	203	180
Transfer	164	163	158	135	128	117

TABLE VII (Continued)

COMPARATIVE FACTOR	2-Year Cum.	5th Sem.	6th Sem.	7th Sem.	8th Sem.	FINAL
Mean GPA						
Native	2.332	2.498	2.593	2.730	2.823	2.659
Transfer	2.505	2.253	2.263	2.588	2.819	2.684
Standard Deviation						
Native	0.646	0.757	0.746	0.690	0.713	0.495
Transfer	0.540	0.880	0.841	0.751	0.664	0.533
Sum of Squares						
Between	2.893	5.305	10.016	1.571	0.001	0.044
Within	147.86	260.52	233.25	166.52	146.23	76.73
Degrees of Frequency						
Between	1	1	1	1	1	1
Within	402	398	377	327	303	295
Mean Square						
Between	2.893	5.801	10.02	1.571	0.001	0.044
Within	0.366	0.655	0.619	0.510	0.483	0.260
F-Ratio	7.906*	8.862*	16.189*	3.085	0.002	0.169

*Significant at the .05 level of probability

The two-year cumulative grade point average showed a difference of 0.017 of a grade point favoring the transfer student. This difference in the two-year cumulative grade point average is consistent to earlier reports; e.g., Knoell and Medsker (16).

The F-ratio of 7.906 on the cumulative grade point average comparison is well above the 3.86 required for significance at the .05 level of

probability. Therefore, hypothesis number one, which reads: There will be no significant difference in the two-year cumulative grade point averages between the transfer and native students, must be rejected.

It is noted in Table VII that the native students continued to consistently improve their grade point average from 2.332 to a final grade point average of 2.659. However, the transfer students dropped in their grade point average the first semester at OSU, but continued to improve their subsequent grade points until they had a final grade point average of 2.684.

The difference in mean grade point averages at the end of the first semester of the junior year was 0.245 and 0.330 at the end of the junior year. These yielded 8.862 and 16.189 F-ratios, respectively, which were considered significantly different at the .05 level of probability. The difference in means of the grade points at the end of the first semester of the senior year was 0.142 and the last semester was 0.04 which yielded F-ratios of 3.085 and 0.002, respectively. These were not considered significant at the .05 level of probability, and therefore, the author must accept the second hypothesis about the last year of work which reads: There will be no significant difference in the grade point averages received at OSU by the transfer and native students.

The difference between the final cumulative grade point averages was 0.025 in favor of the transfer student. This was an increase of 0.327 of a grade point for the natives over the two-year cumulative average and the transfers improved their grade point average 0.181 of a grade point. This had an F-ratio of 0.169 which was well below the 3.86 required for significance at the .05 level of probability. Therefore, hypothesis number three must be accepted; there was no significant dif-

ference in the final cumulative grade point averages between the transfer and the native students.

Analysis of Persistency

Persistency to graduate is a measure of primary concern to many educators because it is more important to them than the number of students initially enrolled. Also, the author felt it necessary to evaluate the sample population to determine if there was any significant difference between the populations compared as to the number who graduate in four years. The Chi Square was used to evaluate the data. Table VIII gives a Chi Square analysis of the persistency to graduate of transfer and native students. Also, analysis of the students' ability to graduate in four years is calculated. The table shows that approximately four percent more native students persisted to graduate and also graduated in four years than did transfer students.

TABLE VIII

CHI SQUARE ANALYSIS OF THE PERSISTENCY OF TRANSFER AND NATIVE STUDENTS TO GRADUATE

COMPARATIVE FACTOR	TYPE OF STUDENTS Transfer		Native		TOTAL	CHI SQUARE
Number Beginning	164	40.59*	240	59.41*	404	
Number Graduated	117	39.36*	180	60.64*	297	0.176
Percent Graduated	71.34%		75.00%			
Number Graduated in Four Years	44	37.29*	74	62.71*	118	0.535
Percent Graduated	26.83%		30.83%			

* Percent of total

Further information shows that the Chi Square value of 0.176 is below the 3.841 required for significance at the .05 level. Therefore, hypothesis number four, which stated: There will be no significant difference in the number who persist to graduate between transfer and native students, must be accepted.

The Chi Square value of 0.535 found in Table VIII is below the 3.841 required for significance at the .05 level of probability. Therefor, hypothesis number five, which reads: There will be no significant difference in the number who graduate in four years between transfer and native students, must be accepted.

Table IX shows the number of students who were included at the beginning of the study period, number who graduated and the number who graduated in four years by junior colleges attended.

TABLE IX

PERSISTENCY TO GRADUATE OF TRANSFERS BY JUNIOR COLLEGES AND ABILITY TO GRADUATE IN FOUR YEARS

COMPARATIVE FACTOR	NUMBER BY JUNIOR COLLEGE ATTENDED													
	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
Number Beginning	0	0	39	9	9	19	27	10	15	0	1	0	35	164
Number Graduated	0	0	31	7	7	16	18	6	15	0	1	0	16	117
Number Graduated in Four Years	0	0	17	3	4	6	4	1	2	0	1	0	6	44

Of the total of 164 transfer students, 117 graduated. However, as reported in Table IX, only 44 graduated within a four-year period of time.

Analysis of Transfers By Junior Colleges Attended

Comparative data on each junior college was statistically tested by the analysis of variance technique to determine whether there was a significant difference in grade point averages between transfers as to the junior college attended.

Table X presents the comparative data relative to the performance of the transfer group as to each junior college attended. The number of students used in calculating the analysis of variance technique may be found in Table IV on page 20. The degrees of freedom, sum of squares, mean squares and the F-ratio are found in Table XI.

TABLE X

THE MEANS OF GRADE POINT AVERAGES BY JUNIOR COLLEGES

JUNIOR COLLEGE ATTENDED	MEAN GPA BY SEMESTERS					
	2-Year Cum.	5th Sem.	6th Sem.	7th Sem.	8th Sem.	FINAL
3	2.56	2.27	2.41	2.86	3.00	2.73
4	2.77	2.67	2.47	2.74	3.12	2.87
5	2.65	2.26	2.11	2.47	2.67	2.56
6	2.42	2.30	2.35	2.68	2.84	2.61
7	2.66	1.91	1.96	2.25	2.43	2.63
8	2.33	1.95	1.87	2.63	2.80	2.52
9	2.39	2.08	2.31	2.32	2.77	2.40

TABLE X (Continued)

JUNIOR COLLEGE ATTENDED	MEAN GPA BY SEMESTERS 2-Year Cum.	5th Sem.	6th Sem.	7th Sem.	8th Sem.	FINAL
11	2.23	2.39	2.63	2.63	3.21	2.43
13	2.40	2.53	2.37	2.64	2.85	3.06

The value of the F-ratios contained in Table XI were below those required for significance with the appropriate degrees of freedom. Therefore, hypothesis number six, which reads: There will be no significant difference in grade point averages of transfers when compared by colleges transferred from, must be accepted.

TABLE XI

ANALYSIS OF VARIANCE OF GRADE POINT AVERAGES OF TRANSFER STUDENTS

SOURCE OF VARIATION	DEGREE OF FREEDOM	SUM OF SQUARE	MEAN SQUARE	F-RATIO
2-Year				
Between	8	2.724	0.341	1.233
Within	155	42.752	0.276	
5th Sem.				
Between	8	8.836	1.106	1.459
Within	154	116.579	0.757	
6th Sem.				
Between	8	6.118	0.765	1.087
Within	148	104.163	0.704	

TABLE XI (Continued)

SOURCE OF VARIATION	DEGREE OF FREEDOM	SUM OF SQUARE	MEAN SQUARE	F-RATIO
7th Sem.				
Between	8	6.652	0.832	1.525
Within	118	64.321	0.545	
8th Sem.				
Between	8	4.723	0.590	1.372
Within	107	46.044	0.430	
Final				
Between	8	4.336	0.542	2.047
Within	108	28.599	0.265	

Analysis of Sample Population by Major Area of Study

The analysis of variance technique was used on the comparative data on each major area of study to determine whether there was a significant difference in grade point averages between the major area of studies undertaken.

Table XII represents the means of the grade points by major area of study. Table XIII gives the degrees of freedom, sum of squares, mean of squares and the F-ratios relevant to this area of analysis.

TABLE XII

THE MEANS OF GRADE POINT AVERAGES BY MAJOR AREA OF STUDY

SEMESTER STUDIED	MEAN GPA BY MAJORS AREAS OF STUDY														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2-Year Cum.	2.39	2.53	2.26	0.00	2.55	2.30	2.99	3.16	2.56	2.79	2.28	2.06	2.73	2.16	2.40
5th Sem. Average	2.57	2.58	2.32	0.00	2.33	2.25	3.09	3.59	2.94	2.98	2.15	2.04	2.65	2.10	2.36
6th Sem. Average	2.72	2.66	2.51	0.00	2.50	2.19	2.89	0.00	3.19	2.46	2.15	1.97	3.02	2.53	2.48
7th Sem. Average	2.85	2.90	2.53	0.00	2.59	2.61	3.01	0.00	2.86	2.00	2.41	2.23	3.15	2.51	2.54
8th Sem. Average	2.95	3.08	2.62	0.00	2.95	2.72	2.86	0.00	3.00	2.92	2.71	2.20	3.22	2.67	2.33
Final Cum.	2.71	2.89	2.64	0.00	2.69	2.63	3.30	0.00	2.75	3.21	2.53	2.48	2.88	2.36	2.50

Note - Final Cumulative average may rise due to fewer students used in calculations due to withdrawals, drops and suspensions.

TABLE XIII

ANALYSIS OF VARIANCE OF GRADE POINT AVERAGES
BY MAJOR AREA OF STUDY

SOURCE OF VARIATION	DEGREES OF FREEDOM	SUM OF SQUARES	MEAN SQUARES	F-RATIO
2-Year				
Between	13	10.72	0.825	2.341*
Within	390	137.43	0.352	
5th Sem.				
Between	13	21.83	1.680	2.652*
Within	386	244.49	0.633	
6th Sem.				
Between	12	31.28	2.617	4.501*
Within	366	211.99	0.579	
7th Sem.				
Between	12	14.74	1.228	2.530*
Within	316	261.55	0.485	
8th Sem.				
Between	12	16.52	1.376	3.098*
Within	292	129.72	0.444	
Final				
Between	12	17.93	1.543	1.460
Within	284	310.50	0.982	

*Significant at the .05 level of probability

The F-ratios of the two-year cumulative average, 5th semester, 6th semester, 7th semester and 8th semester of 2.341, 2.652, 4.501, 2.530, and 3.098, respectively, are above the 1.78 required for significance at the .05 level of probability. Therefore, hypothesis number seven must

be rejected on this comparison.

The F-ratio of the final cumulative average of 1.46 was below the 1.78 required for significance at the .05 level of probability and, therefore, hypothesis number seven must be accepted. This hypothesis reads: There will be no significant difference in grade point averages when compared by major area of study.

When the number of extra semesters per student was studied it was found that the 240 beginning native students completed 140 extra semesters of work and the 164 beginning transfer students completed 112 extra semester. When the term extra semester is used, it includes summer semesters and the semesters undertaken after the eighth semester. This was found to be 0.58 of a semester per native student and 0.68 of a semester completed per transfer student. The author felt this was not a big enough difference for rejection of hypotheses number eight, which reads: There will be no significant difference in the number of extra semesters taken between transfer and native students.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions of the Study

The purpose of this study was to make a comparison of the scholastic achievements of transfer and native students in the College of Agriculture at Oklahoma State University. The author felt the findings of the study justified the following conclusions:

1. The transfer students' two-year cumulative grade point average was significantly higher than the natives' two-year cumulative average.

2. The transfer student experienced a drop in grade point average during the junior year, which concurs with findings of earlier studies. The average transfer student, starting with the seventh semester began to raise his grade point average until there was no significant difference at the end of the eighth semester.

3. Native students continually increased their grade point average throughout the last two years of college work.

4. The final cumulative grade point average advantage went to the transfer student. The term final cumulative average here includes all work undertaken by the student. However, there was no significant difference in the final cumulative average.

5. Native students showed the greater persistency to graduate as well as the ability to graduate in four years.

6. Transfer students came primarily from Cameron State College,

Northeastern Oklahoma College, Murray State College and Northwestern State College; accounting for sixty percent of the students.

7. Transfer students coming from Connors State College, Eastern Oklahoma A & M College, Northeastern Oklahoma College and Cameron State College compiled the highest two-year cumulative average, respectively, while students coming from out-of-state, Connors State College, Cameron State College and Northeastern Oklahoma College compiled the highest final cumulative grade point average.

8. When transfers were compared as to college transferred from, there was no significant difference.

9. Major area of studies showed a significant difference at the two-year cumulative average, and at each of the succeeding four semesters. The final cumulative average showed no significant difference.

10. Students who majored in biochemistry, entomology, horticulture and agronomy had a higher two-year cumulative average, respectively. It is noted that the first two majors had only four and three students, respectively.

The highest final cumulative average was found in the areas of biochemistry, entomology, agricultural education and horticulture.

11. It was found that neither group-native or transfer-tended to take a substantially greater number of extra semesters than the other.

Recommendations

The author, after having studied the achievements of transfer and native students felt justified in making the following recommendations:

1. Studies should be made to determine a predictor of success for both the transfer and the native student.

2. Studies should be made concerning both groups in each major area of study in the College of Agriculture at Oklahoma State University.

3. The author felt that a study should be conducted evaluating the success of transfer students in specific courses which have received prerequisite courses at the junior college level against native students.

4. The author felt that the College of Agriculture might give more counseling for transfer students to better enable them to complete the final two years of college work.

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APPENDIX

DATA COLLECTED IN THE STUDY

1	0	0	10	3.46	3.27	2.50	3.00	3.00	3.08	2			
2	0	0	14	1.91	1.31	2.25	1.69	2.00	1.92	2		1.40	3.52
3	1	13	6	2.39	4.00	3.20	3.48	3.31	3.63	2		3.63	4.00
4	1	136		2.33	2.83	2.19	2.40	3.18	2.68	2			
5	0	0	11	1.52	2.36	2.44	2.56	2.94	2.27	2	3.37	3.00	
6	1	5	11	2.83	1.67	1.29	1.94	2.19	1.94	2		3.43	
7	0	0	15	2.80	3.36	2.56	2.10	1.60	2.53	2		1.60	
8	1	131		1.82	3.67	3.79	3.65	3.64	3.43	2	3.06		
9	1	32		2.30	2.19	2.26	3.05	3.40	2.58	1			
10	0	0	6	2.60	2.94	2.89	3.12	2.75	2.81	1			
11	0	0	5	2.17	2.24	2.00	1.82	2.39	2.17	2	2.66		
12	0	0	6	2.73	3.06	2.62	3.40	2.40	2.79	2		3.14	
13	1	3	11	2.43	2.18	1.12	S						
14	0	0	6	3.44	3.75	3.00	2.80	3.35	3.34	1			
15	0	0	11	3.17	3.47	2.00	2.25	3.05	2.67	1			
16	1	3	2	2.43	2.50	2.50	3.37	2.64	2.70	2	3.10		
17	1	135		1.99	1.52	1.92	S						
18	0	0	3	2.28	2.21	2.07	2.10	D					
19	0	0	6	1.95	2.80	2.20	2.76	3.71	2.42	2	2.50		
20	1	9	2	2.38	2.25	2.63	2.44	2.65	2.56	2		2.83	
21	1	3	6	2.34	2.73	2.93	3.29		2.86	1			
22	0	0	11	2.09	1.00		2.01	2.33	D				
23	0	0	5	2.67	3.00	3.00	2.67	2.88	2.79	1			
24	0	0	11	3.11	3.17	3.53	2.50	3.00	3.11	1	3.75		
25	0	0	6	2.21	1.94	2.00	2.67	2.50	2.21	2	1.00		
26	0	0	6	2.09	2.23	1.76	2.56	2.00	2.09	1			
27	1	6	2	3.20	3.20	3.00	3.24	3.71	3.27	1			
28	1	138		3.30	3.18	WD							
29	0	0	11	1.66	0.93	S							
30	0	0	2	2.22	2.89	3.00			2.53	1			
31	1	3	2	2.20	2.00	1.67	2.50	2.37	2.24	2	3.20		
32	0	0	1	1.49	0.93	0.67	S						
33	1	9	5	2.27	1.27	1.81	1.64	3.77	1.98	2	3.00		
34	0	0	1	2.35	3.08	2.60	3.25	4.00	2.76	1			
35	0	0	11	2.00	1.15	1.21	2.13	2.47	1.94	2		3.00	
36	1	1315		3.07	1.34	1.50	1.43	2.22	S				
37	0	0	6	1.73	1.87	1.50	2.18	2.40	1.93	2		2.25	
38	0	0	5	2.41	3.00	3.29	2.94	3.35	2.80	2	4.00		
39	0	0	6	1.04	2.21	1.93	3.06	2.88	S				
40	1	3	6	1.87	1.35	1.50	2.75	2.56	2.08	2		2.154	
41	1	7	6	2.70	2.75	1.92	1.00	2.14	2.27	2		2.67	
42	0	0	11	2.17	2.53	2.63	2.22	3.00	2.42	2		2.93	
43	0	0	15	3.00	3.50	WD							
44	1	9	6	1.70	1.53	1.77	1.27	2.33	1.93	2	4.00	2.06	2.45
45	0	0	6	2.67	2.53	3.00	2.67	2.94	2.73	1			
46	0	0	12	2.91	3.15	2.72	3.36	3.25	3.12	2		3.61	3.20
47	1	9	6	2.20	3.10	2.14	3.00		2.50	2	2.50		
48	1	3	15	2.30	1.19	2.64	2.88	3.00	2.38	2		2.65	2.84
49	0	0	1	1.18	2.60	2.53	2.25	3.36	S				
50	0	0	1	1.62	3.00	3.25	3.82	3.21	2.29	2	2.66		
51	1	9	5	2.69	1.33	2.12	1.50	2.88	2.07	2	3.00		
52	0	0	12	1.78	2.56	1.90	2.00	2.85	2.23	2	4.00		
53	0	0	6	2.40	3.00	2.00	3.00	2.71	2.42	1			
54	1	7	6	3.40	2.59	2.65	3.00		3.00	1			
55	0	0	11	3.10	2.44	2.20	2.35	2.44	2.58	2		2.93	
56	0	0	12	2.45	2.33	2.80	2.47	WD					
57	0	0	11	2.84	3.13	3.31	3.41	3.38	3.10	2		3.00	
58	1	7	3	2.20	1.80	0.93	1.77	0.76	S				
59	1	135		2.30	2.69	3.00	2.06	2.67	2.60	2			

60	0	0	2	3.76	3.84	4.00	4.00	4.00	3.86	1			
61	0	0	2	2.63	2.71	3.73	3.16	3.53	2.94	1			
62	0	0	3	2.39	3.85	3.21	3.60	3.47	3.02	2		3.53	
63	1	1311		1.40	2.18	1.07	WD						
64	1	136		2.19	2.00	2.36	2.47	2.59	2.37	2			
65	0	0	1	3.05	2.56	3.44	3.08		3.14	2			
66	0	0	1	1.27	1.93	S							
67	1	1315		2.29	1.94	2.00	2.46	2.17	2.34	2		3.25	
68	0	0	12	1.94	2.47	3.19	3.50	3.00	2.54	2		2.39	
69	0	0	6	2.41	3.81	2.92	2.79	3.25	2.76	2		3.00	
70	0	0	5	1.58	1.69	1.00	WD						
71	1	3	2	2.00	1.93	2.40	3.11	2.88	2.34	1	2.83		
72	0	0	6	1.42	1.67	1.33	2.20	1.50	S				
73	1	8	15	2.24	1.50	2.07	WD						
74	0	0	1	3.02	3.47	3.81	3.65	3.81	3.45	1			
75	1	7	6	2.98	0.50	2.00	1.50	1.89	1.75	2		2.59	
76	0	0	9	2.68	2.76	3.67	2.94	3.31	2.97	1			
77	1	6	11	2.32	1.93	2.07	2.00	2.44	2.34	2		3.00	
78	0	0	1	4.00	4.00	3.83	3.80	4.00	3.95	1			
79	0	0	6	1.80	2.00	1.80	1.36	1.43	1.89	2	2.00	2.50	
80	0	0	3	2.15	1.94	2.63	2.50	2.80	2.32	2		2.50	
81	1	3	6	2.10	1.34	WD							
82	1	1312		2.30	2.00	2.35	WD						
83	0	0	15	1.93	1.07	2.14		1.00	1.92	2		2.06	
84	0	0	15	2.28	1.93	2.14	1.33	1.00	2.04	2	2.00	2.06	2.50
85	0	0	5	1.44	1.75	1.94	2.20	3.25	1.90	1	3.33		
86	1	8	5	2.92	2.72	3.07	3.56	3.37	2.96	2	3.37		
87	0	0	2	1.82	2.81	1.67			2.12	2	4.00		
88	0	0	2	2.30	2.20	3.29	3.57	3.11	2.74	1	4.00		
89	0	0	13	2.13	0.93	2.63	WD						
90	0	0	12	1.74	1.71	1.15	3.00	2.75	S				
91	0	0	6	1.81	1.63		3.00	1.67	2.03	2		3.00	
92	1	7	2	3.30	3.31	3.17	3.30	3.58	3.37	1			
93	0	0	15	2.25	2.94	2.90			3.01	2	2.11		
94	1	3	6	2.20	1.94	1.76	2.89	2.17	SS				
95	0	0	13	1.88	2.33	2.63	2.74	2.47	2.26	2	2.50		
96	1	7	5	4.00	4.00	4.00	4.00	3.72	3.92	1			
97	0	0	6	2.46	2.93	3.47	3.00	2.79	2.70	1			
98	0	0	11	2.21	3.18	3.44	3.65	2.89	2.80	1	2.00	3.43	
99	0	0	6	2.52	3.00	2.00			2.60	1			
100	0	0	12	2.67	2.57	2.40	2.40	3.00	2.67	2	2.00	3.15	
101	1	8	6	2.68	2.58	1.27	WD						
102	0	0	11	2.04	2.50	1.80	2.33	2.75	WD				
103	0	0	1	1.88	2.79	2.31	2.69	3.20	2.45	2		2.75	
104	0	0	2	2.50	2.70	2.40	3.05	2.22	2.59	1			
105	1	5	6	2.84	3.00	1.71	3.31	2.88	2.70	1			
106	1	4	5	2.71	1.73	1.93	2.13	2.56	2.24	2		2.64	
107	0	0	15	1.96	2.47	WD							
108	0	0	6	1.96	2.38	2.69	3.39	3.29	2.95	2			
109	1	136		2.10	2.00	0.80	0.70	S					
110	0	0	1	2.14	2.00	1.47		1.88	2.08	2		2.79	
111	1	3	5	3.52	3.00	3.22	3.40	3.80	3.44	1			
112	1	1315		2.59	2.54	2.73	WD						
113	1	6	5	2.77	2.82	3.50			2.75	1			
114	0	0	9	3.04	3.19	3.13	3.35	3.33	3.12	1			
115	0	0	2	3.26	3.13	3.06	3.24	3.57	3.20	1			
116	0	0	6	1.47	1.90	1.77	2.76	2.58	S				
117	0	0	6	1.61	2.73	1.00	1.60	1.40	SS			2.38	3.05
118	1	3	2	2.60	1.34	2.29	1.34	2.28	WD				

119	1	9	11	2.26	2.88	3.82	3.46	3.75	3.29	2			
120	0	0	13	2.20	2.63	2.67	3.00	3.13	WD				
121	0	0	2	2.70	3.57	3.00	3.40	3.30	3.09	1			
122	1	9	5	2.46	2.07	2.88	2.00	2.72	2.38	2		1.87	
123	0	0	11	2.00	2.65	3.61	3.00	3.06	2.82	2		3.57	
124	0	0	6	2.10	2.23	1.69	1.29	WD					
125	0	0	6	1.65	2.46	2.56	2.29	3.56	2.12	2		3.25	
126	0	0	3	3.00	3.00	4.00	WD						
127	0	0	6	2.40	2.50	3.23	3.00	2.95	2.67	2			
128	1	3	15	2.55	1.79	1.18	2.21	1.53	2.05	2	2.00	1.93	
129	1	7	12	1.97	1.79	1.73	3.13		2.22	2			
130	0	0	6	3.00	2.88	3.00	2.75	2.67	2.88	1	2.50		
131	1	9	6	2.79	1.76	1.00	2.36	2.47	2.05	2		2.62	
132	0	0	15	2.61	2.92	3.36	3.41	3.77	WD				
133	0	0	11	2.04	2.87	3.00	2.28	2.46	2.32	2	2.87		
134	1	3	15	2.06	1.60	S							
135	0	0	6	2.06	2.62	3.25	3.31	3.44	3.11	2		3.38	3.87
136	0	0	11	3.60	3.47	2.53	2.56	3.50	3.24	2		2.92	
137	0	0	13	2.67	1.86	2.67	2.29	3.30	2.54	1			
138	0	0	6	3.65	3.15	3.12	3.60	3.41	3.48	1			
139	1	7	15	3.30	3.67	3.13			2.98	2		2.89	
140	0	0	14	1.86	1.86	1.86	2.50	2.00	2.06	2			
141	1	7	5	2.83	1.67	2.07	1.75	S					
142	1	4	6	2.43	2.00	1.80	2.80	2.63	2.34	1			
143	1	1312		2.20	1.50	1.31	2.00	2.42	WD				
144	0	0	6	2.21	1.67	1.47	1.94		2.15	2		2.28	2.85
145	0	0	7	3.79	3.71	3.76	3.60	3.50	3.62	1	3.00		
146	1	135		1.90	3.19	2.78	3.37	2.44	2.95	2			
147	1	8	1	2.07	0.94	1.40	2.00	WD					
148	1	7	1	2.25	2.20	2.40	2.00	1.95	2.18	2	2.66		
149	0	0	1	2.53	3.69	3.75	3.81	3.43	WD				
150	0	0	1	2.84	2.73	2.33	3.12	3.24	2.83	2		2.67	
151	0	0	1	0.90	2.31	2.19	2.75	2.59	1.91	2	2.00	2.57	
152	0	0	12	1.34	1.82	1.47	1.40	2.25	1.70	2			
153	1	6	2	2.16	1.87	1.69	1.47	WD					
154	1	7	6	2.30	1.47	0.47	1.60	WD					
155	0	0	1	2.34	2.44	2.19	2.42	2.83	2.46	1			
156	1	3	2	2.78	3.00	3.00	3.50		2.97	1	3.00		
157	1	7	11	2.30	0.67	1.38	S						
158	1		312	2.50	3.53	3.67			3.56	2	3.50		
159	0	0	6	1.34	1.25	0.75	S						
160	0	0	13	3.72	3.72	3.47	4.00		3.57	1			
161	0	0	11	3.11	2.23	2.44	1.82	1.95	2.30	1	2.38		
162	0	0	6	2.06	2.00	1.79	3.00	3.00	2.12	2			
163	0	0	6	2.50	3.00	3.00	3.21	3.35	2.89	1			
164	1	7	9	2.53	2.54	3.12	2.88	3.19	2.87	2		2.56	
165	1	1313		3.36	3.17	2.69			2.76	1			
166	1	3	15	2.19	2.80	1.38	2.79	2.75	2.43	2	3.11	3.31	3.47
167	1	6	6	1.90	2.00	1.55	S						
168	0	0	5	1.60	1.44	2.00	1.86	1.00	S				
169	1	3	2	3.20	2.59	3.20	3.19	3.59	3.26	2	3.00	4.00	
170	0	0	2	1.50	2.92	1.93	2.05	2.04	2.04	2		2.94	3.18
171	0	0	6	1.69	1.36	1.38	S						
172	0	0	15	2.74	3.07	2.54	2.50	2.41	2.49	2		2.16	2.89
173	1	5	11	3.19	3.57	3.42	3.05	3.10	3.27	1		3.87	
174	0	0	12	2.20	2.40	2.20	2.75	2.20	2.29	1			
175	1	6	9	1.90	2.41				2.04	2			
176	0	0	6	3.12	3.00	2.53	2.53	2.93	2.93	1			
177	0	0	6	2.29	2.36	2.21	1.36	2.50	2.03	2	2.00	2.75	2.60

178	0	0	5	2.04	1.88	1.60	1.33	2.20	WD					
179	0	0	6	1.73	S									
180	0	0	1	1.93	2.54	2.00	2.36	3.15	2.16	2		2.92		
181	1	7	6	2.30	2.20	1.50	2.40	1.14	2.11	2		2.43		
182	0	0	15	2.30	2.10	2.75	WD							
183	1	6	2	2.04	1.90	2.39	2.17	2.95	2.21	2	2.62			
184	1	136		3.43	4.00	3.83	3.69	4.00	3.84	1				
185	0	0	15	2.58	3.27	3.67	3.05	2.89	2.84	2		2.83	2.88	
186	1	4	5	2.93	1.46	2.23	1.50	3.00	WD					
187	0	0	1	1.53	2.40	2.60	0.94	2.43	1.76	1				
188	0	0	6	2.55	2.35	3.53	3.36	4.00	3.21	2	3.60			
189	0	0	11	2.02	2.29	2.29	2.63	2.72	2.28	2	2.62			
190	1	3	11	2.00	1.50	1.46	WD							
191	1	8	2	2.40	2.93	2.55	3.10	3.17	2.70	1				
192	1	5	2	3.33	2.60	3.29	3.00	2.90	3.17	1	2.90			
193	1	9	2	2.74	2.44	1.93	2.88	3.07	2.56	2		2.50		
194	0	0	9	1.93	3.50	4.00	2.20	3.00	2.24	2		2.69		
195	0	0	5	2.83	2.67	3.18	3.56	3.56	3.10	1				
196	0	0	13	3.02	3.47	3.68	3.50	3.42	3.35	1				
197	0	0	6	2.63	3.18	3.00	3.60	2.95	2.91	1				
198	1	6	2	2.10	2.28	2.76	2.77	2.82	2.38	1		2.00		
199	0	0	6	2.00	1.87	2.67	2.57	1.65	WD					
200	0	0	6	2.73	3.06	3.38	3.65	3.82	3.21	2		3.33		
201	1	3	11	1.77	1.38	0.71	2.31	2.31	2.05	2	3.25	3.07	1.92	
202	0	0	1	3.75	3.82	4.00	4.00	4.00	3.53	1				
203	1	139		2.80	2.82	2.14	2.18	2.70	2.64	1				
204	0	0	13	3.29	3.81	3.72	3.29	3.84	3.21	1				
205	1	1311		1.78	0.72	1.27	S							
206	1	9	2	1.81	1.29	2.07	2.00	1.89	1.92	2		3.33		
207	0	0	1	1.83	1.34	2.00	2.00	1.60	1.82	2		2.00	2.25	
208	0	0	1	1.70	2.40	2.40	2.43		2.01	2				
209	1	9	2	2.70	2.39	2.39	2.33	2.71	2.64	1				
210	1	7	1	3.11	2.00	2.00	1.66	2.00	2.57	2	3.37	2.00	3.00	
211	0	0	2	1.98	2.10	2.29	2.38	3.58	2.58	2	2.40			
212	0	0	1	2.75	3.47	2.82	3.47	2.83	2.94	2	2.00			
213	0	0	2	2.80	2.68	2.86	3.36	2.80	2.88	1				
214	1	7	6	2.12	1.81	2.12	2.29	2.67	2.22	2	3.00	2.25		
215	0	0	2	1.80	2.80	2.83	2.82	3.11	2.55	2		3.79		
216	1	6	5	2.13	1.93	2.24	2.47	1.93	2.15	2				
217	0	0	5	2.02	2.07	1.80	3.38	3.80	2.62	2		4.00	3.67	
218	0	0	2	1.87	2.25	2.73	2.07	2.17	2.08	2	2.00			
219	0	0	15	1.59	2.80	3.00	WD							
220	0	0	15	3.10	3.27	2.87	WD							
221	0	0	15	2.00	2.07	2.80	3.86	3.20	2.95	2	3.00	3.20	3.67	
222	0	0	6	1.44	2.14	2.73	1.93	2.73	2.01	2	2.00	3.25		
223	1	3	1	1.90	1.50	1.31	1.55	2.85	2.15	2		2.33		
224	1	137		3.50	4.00	3.50	3.27	3.31	3.53	1				
225	1	7	5	3.98	3.24	3.00	3.47	3.65	3.67	1				
226	1	5	2	2.00	2.00	1.56	WD							
227	0	0	6	2.62	2.00	2.40	2.20	2.44	2.41	2		2.23		
228	0	0	5	2.90	0.69	2.42	3.40	3.61	2.77	2		2.92		
229	0	0	6	2.60	2.71	1.63	3.21	3.56	2.31	1	2.00			
230	0	0	5	2.20	2.60	2.94	2.39	2.38	2.38	2				
231	1	3	6	3.21	3.19	2.44	3.53	3.65	3.22	1				
232	1	6	2	2.78	3.63	3.00	3.40	4.00	3.31	1				
233	0	0	2	1.45	2.00	2.50	2.50	1.77	WD					
234	0	0	15	3.26	3.65	3.00	WD							
235	0	0	9	2.64	3.39	3.40	3.60	3.47	3.10	2		3.50		
236	0	0	11	2.16	2.17	1.67	1.47	3.10	2.22	2	3.00			

237	0	0	6	1.79	1.94	2.46	2.81	2.94	2.34	2		3.24	
238	1	131		2.40	3.79	3.35	3.40	3.40	3.47	1			
239	1	136		2.19	1.54	2.00		2.29	2.20	2	2.25	2.65	
240	0	0	9	2.30	2.13	3.13	2.08	2.57	2.40	2		2.83	
241	0	0	5	2.96	3.38	2.20	3.00	3.20	2.93	2			
242	1	112		2.23	2.39	2.63	2.63	3.21	2.43	1	3.50		
243	0	0	2	2.83	3.00	3.16	3.42	3.11	3.03	1			
244	1	8	6	2.75	2.00	1.67	3.00	3.33	2.67	2	3.00	3.29	
245	0	0	11	1.24	1.87	2.62	1.95	1.93	WD				
246	1	136		2.52	3.27	3.29	3.50	2.80	3.21	1	3.00		
247	0	0	6	1.00	0.64	S							
248	1	3	2	2.70	3.00	2.93	3.11	3.74	2.98	1			
249	0	0	6	1.43	1.50	1.63	S						
250	0	0	6	2.47	2.60	2.33	2.50	2.73	WD				
251	1	3	15	2.87	3.25	3.79	2.44	2.37	2.54	2		2.72	2.72
252	0	0	11	2.26	2.53	3.33	3.63		2.84	2			
253	0	0	15	1.86	0.40	WD							
254	0	0	11	1.65	1.73	1.46	WD						
255	1	136		2.35	0.79	1.63	2.00	2.36	S				
256	0	0	1	3.53	4.00	4.00	4.00	4.00	3.77	2			
257	1	6	11	1.90	1.33	0.73	S						
258	1	136		3.39	3.82	3.61	WD						
259	0	0	2	2.98	2.94	3.56	3.00	3.14	3.16	1			
260	0	0	11	2.08	2.35	1.78	2.40	2.73	2.21	2		3.00	
261	0	0	2	3.40	3.10	2.76	3.20		3.17	2	3.00		
262	0	0	6	1.51	1.85	1.56	1.75	0.62	S				
263	1	6	2	2.70	2.88	2.74	2.70	3.60	2.93	1	3.00		
264	0	0	15	2.02	1.94	2.14	2.40	2.23	2.10	2			
265	1	3	2	1.74	2.57	2.00	3.25		2.50	2			
266	0	0	6	1.98	0.60	S							
267	0	0	2	2.24	2.56	2.74	2.80	3.14	2.68	2		3.61	
268	0	0	11	2.11	2.00	1.31	2.81	1.94	2.18	2	2.37	2.33	2.20
269	0	0	6	1.98	2.13		2.24	2.00	2.10	2		2.40	2.00
270	0	0	6	3.33	1.38	WD							
271	0	0	1	2.87	2.86	3.65	3.21	3.00	3.13	2	3.50		
272	0	0	6	3.80	3.63	4.00	3.50	3.00	3.65	1	3.00		
273	1	5	2	2.20	1.35	2.00	2.11	2.70	2.21	2	2.67		
274	0	0	12	1.78	1.46	WD							
275	0	0	11	2.57	3.33	2.84	2.47	2.11	2.63	2		2.38	
276	0	0	6	2.15	2.28	1.25	3.00	2.88	2.61	2		2.17	
277	1	7	6	3.24	2.13	1.83	2.75	2.93	2.32	2			
278	1	7	6	3.02	1.86	2.00	2.24	2.29	2.00	2			
279	0	0	6	1.87	1.69	1.19	S						
280	0	0	1	0.80	1.56	2.00	2.16	2.79	1.58	2			
281	1	8	5	2.07	0.80	1.47	S						
282	1	1315		2.11	2.25	WD							
283	0	0	5	3.00	2.71	2.41	2.84	2.58	2.74	1			
284	0	0	11	2.90	3.56	3.67	3.00	3.37	3.24	1			
285	1	7	6	2.19	1.33	0.53	1.75	1.41	WD		2.00		
286	1	8	11	2.41	1.25	1.50	1.66	2.63	1.92	2	2.50	2.31	
287	0	0	3	1.51	0.36	WD							
288	0	0	1	2.00	3.29	4.00			2.88	1	4.00	4.00	4.00
289	0	0	12	1.95	1.87	1.81	1.14	0.25	S				
290	1	7	2	1.80	1.41	0.58	S						
291	1	5	5	2.06	2.25	1.33	1.88	2.40	1.98	2		2.43	
292	0	0	11	1.91	2.27	2.07	2.53	WD					
293	1	7	6	1.97	0.50	1.77	S						
294	0	0	2	3.10	3.14	3.44	3.33	3.50	3.25	2	3.00		
295	1	4	2	1.80	2.19	2.41	1.67	WD					

296	1	7	12	2.19	0.46	1.31	1.36	1.77	WD				
297	0	0	1	2.83	2.24	2.80	3.17		2.79	2	4.00		
298	0	0	1	2.46	3.00	3.00	3.35	2.86	2.83	1			
299	0	0	1	3.32	3.11	3.29	3.56	3.40	3.39	1			
300	0	0	6	1.54	1.53	1.67	2.40	1.82	1.88	2	3.00	2.56	
301	0	0	13	3.76	4.00	3.59	WD						
302	1	3	2	3.80	3.83	3.65	4.00	3.79	3.85	1			
303	1	3	2	3.80	3.61	3.47	4.00	3.79	3.79	1			
304	1	4	6	2.61	2.31	1.71	2.80	3.40	2.61	2	3.00		
305	0	0	6	1.58	1.29	1.50	2.14	WD					
306	0	0	13	2.43	3.13	3.00	3.82	3.43	2.90	1	2.00		
307	1	5	2	2.20	1.33	0.76	S						
308	1	7	15	2.94	2.67	1.83	2.88	3.71	2.93	2			
309	0	0	11	2.10	2.07	2.38	2.06	2.18	2.24	2	1.87	2.30	2.73
310	0	0	1	3.45	3.73	3.80	3.68	3.44	3.59	1			
311	0	0	5	2.61	2.88	2.19	2.18	2.67	2.50	1			
312	1	9	1	2.29	1.88	3.64	3.00	2.56	2.67	2	2.42		
313	0	0	5	2.43	2.25	3.06	2.88		2.58	2			
314	1	6	12	2.26	1.00	0.70		2.50	1.96	2	4.00	2.18	3.22
315	1	6	1	1.82	0.70	1.56	2.53	2.36	1.92	2	2.50	1.80	2.00
316	0	0	15	2.76	2.47	2.44	3.00	WD					
317	0	0	1	3.15	1.93	1.22	2.08	2.72	2.40	2	1.00		
318	1	3	2	2.50	2.99	2.55	2.93	3.05	2.74	1			
319	1	3	3	2.90	2.88	3.13	2.88	3.21	2.95	2		3.17	
320	0	0	12	1.29	1.92	1.23	0.85	0.92	WD				
321	1	3	1	2.17	1.30	1.50	SS					3.00	
322	0	0	13	2.22	2.31	2.81	2.56	2.93	2.42	2			
323	0	0	2	2.75	2.93	2.93	3.60	3.38	2.98	1			
324	1	6	1	2.72	2.56	2.29	3.14	2.07	2.63	2		3.18	
325	0	0	6	2.61	3.19	3.00	2.69	3.14	2.97	1			
326	0	0	6	2.78	WD								
327	0	0	2	2.81	3.00	3.00	3.05	3.05	2.89	2			
328	0	0	6	1.33	2.70	2.00	3.29	2.50	1.78	2		2.00	
329	1	3	6	2.68	2.40	3.38	3.12	3.40	2.87	1			
330	1	9	2	2.30	2.19	2.13	2.35	3.00	2.44	2	3.22		
331	1	9	5	3.00	2.80	2.13	2.79	3.10	2.76	1			
332	0	0	1	3.16	2.76	3.35			3.78	2			
333	0	0	1	1.68	2.00	2.36	2.27	3.12	2.12	2		2.61	
334	0	0	9	1.97	1.94	2.28	2.47	2.65	2.30	1			
335	0	0	1	2.76	2.00	2.67	3.27	2.47	2.76	1			
336	0	0	2	2.91	3.00	3.10	3.16	3.61	3.20	1	3.66		
337	0	0	1	3.04	3.38	3.33	3.12	3.00	3.12	1			
338	1	1311		2.26	1.50	1.25	WD						
339	1	8	1	2.29	3.31	2.40	3.21	1.62	2.74	2			
340	0	0	1	3.34	2.85	2.44	2.50	2.33	2.80	1			
341	1	1311		1.90	1.94	1.23	S						
342	0	0	5	2.26	1.56	2.69	2.40	2.67	2.30	1			
343	0	0	2	2.04	2.13	3.47	3.73	3.27	2.77	2		4.00	
344	0	0	5	1.83	2.07	WD							
345	0	0	6	2.09	2.44	2.60	2.00	2.88	2.30	2		2.50	
346	0	0	1	3.78	3.65	4.00	4.00	3.08	3.66	2			
347	0	0	5	2.89	3.14	3.50	3.38	3.67	3.17	2			
348	0	0	1	1.76	1.93	2.06	2.73	2.60	2.27	2		4.00	
349	1	9	2	2.30	2.07	2.13	1.71	1.93	2.20	2		2.50	
350	0	0	1	2.50	2.76	3.67	2.00	3.29	2.82	1			
351	0	0	8	3.01	4.00	WD							
352	1	1311		2.49	2.00	2.46	2.22	2.28	WD				
353	0	0	15	1.77	0.87	1.38	2.00	1.35	WD				
354	1	7	6	2.47	1.25	1.94	1.82	2.13	2.35	2		3.12	3.52

355	1	8	6	1.49	1.50	1.27	1.86	2.67	2.12	2		2.94	
356	1	3	2	2.69	2.81	2.58	2.39	2.95	2.68	1			
357	1	133		1.70	2.42	2.20	WD						
358	1	4	9	3.67	3.81	3.67	3.86	3.79	3.72	1			
359	1	3	6	2.93	0.79	2.38	2.38	3.25	2.22	2	4.00	2.89	
360	0	0	2	2.52	3.06	3.05	2.62	3.62	2.89	1			
361	0	0	1	3.04	3.07	2.83	3.32	3.20	3.05	1			
362	0	0	6	3.18	2.88	2.81	3.75	4.00	3.21	1			
363	0	0	11	1.85	2.33	1.93	2.42	3.79	2.19	1			
364	0	0	10	3.41	3.67	3.38	3.00	2.83	3.34	1			
365	0	0	6	1.38	1.94	2.19	2.17	2.83	1.91	2			
366	0	0	9	2.64	3.88	3.33	3.07	2.00	2.92	2			
367	1	3	5	3.17	2.27	2.29	3.08	3.57	2.98	1			
368	0	0	7	2.94	2.72	2.39	3.11	2.31	2.75	1			
369	1	3	2	2.00	1.63	1.76	2.50	2.05	2.00	1			
370	1	7	11	2.21	0.00	1.50	0.60	WD					
371	0	0	1	1.44	1.79	2.50	2.30	2.40	2.30	2		2.06	
372	1	136		2.10	WD								
373	0	0	15	1.20	S								
374	0	0	1	2.40	2.31	2.20	2.47	3.12	2.48	1	4.00		
375	1	135		2.23	2.00	2.22	1.89	2.33	WD				
376	0	0	12	1.68	1.71	1.47	1.88	1.47	WD				
377	1	4	1	2.27	3.75	3.46	3.47	4.00	3.30	2			
378	1	3	2	3.10	3.28	3.31	3.24	3.50	3.25	1	3.00		
379	0	0	1	2.00	2.15	2.25	2.35	1.75	2.00	2	1.00	1.50	2.35
380	1	3	6	2.36	2.20	1.76	1.60	2.40	2.20	2		2.75	2.81
381	0	0	3	2.17	2.40	1.94	2.33	2.88	2.28	1			
382	0	0	7	1.71	1.94	1.92	2.06	2.31	WD				
383	0	0	6	2.58	2.08	2.21	2.76	2.67	2.79	2	3.14	3.57	
384	1	5	1	3.22	2.59	3.60	2.00	2.50	2.65	1			
385	0	0	5	2.45	2.44	2.71	2.00	3.20	2.52	1			
386	1	6	11	3.14	2.13	2.41	2.29	2.25	2.60	2		2.00	
387	1	6	2	3.10	3.12	3.47	3.61	2.94	3.23	1			
388	0	0	5	2.44	3.17	3.41	3.18	3.79	3.06	1			
389	1	136		2.48	4.00	4.00	4.00	4.00	3.79	2	3.00	3.78	
390	1	136		2.20	1.94	1.93	WD						
391	1	4	2	2.50	2.80	1.69	3.13	3.13	2.67	2		3.25	
392	1	4	5	4.00	4.00	3.35	3.27	2.41	3.24	1			
393	1	6	2	2.70	2.93	3.13	3.00	3.28	2.99	1			
394	0	0	1	2.27	2.53	2.35	3.00	3.35	2.58	1			
395	1	6	2	2.37	3.00	3.00			2.97	2	3.00		
396	1	3	2	3.50	3.71	3.40	3.65	3.60	3.57	1			
397	0	0	10	1.51	2.00	1.50	0.00	S					
398	0	0	1	1.87	1.88	2.33	2.47	2.18	2.09	1			
399	0	0	14	2.70	3.13	3.47	3.33	4.00	3.10	1			
400	1	7	6	2.34	1.69	2.14	2.56	2.82	2.53	2		3.12	2../
401	1	3	2	2.30	0.80	S							
402	1	3	2	2.60	2.06	2.81	2.11	3.43	2.63	1			
403	0	0	1	2.56	2.25	3.07	3.00	3.67	2.80	1			
404	0	0	13	2.13	0.93	2.63	WD						

VITA

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Candidate for the Degree of

Master of Science

Thesis: A COMPARISON OF THE SCHOLASTIC ACHIEVEMENTS OF TRANSFER AND NATIVE STUDENTS IN THE COLLEGE OF AGRICULTURE AT OKLAHOMA STATE UNIVERSITY

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