

DOCUMENT RESUME

ED 167 599

TH 888 374

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 TITLE The Impact of the College Level Examination Program: A Four-Year Study.
 INSTITUTION Florida Univ., Gainesville, Office of Instructional Resources.
 PUB DATE 77
 NOTE 22p.; Best copy available
 EDRS PRICE MF-\$0.83 HC-\$1.67 Plus Postage.
 DESCRIPTORS *Academic Achievement; *Academic Standards; College Credits; College Freshmen; *Cutting Scores; *Equivalency Tests; Grade Point Average; Grade Prediction; *Graduation; Higher Education; Persistence; *Predictor Variables
 IDENTIFIERS *College Level Examination Program; Florida

ABSTRACT

The College Level Examination Program (CLEP) had a substantial impact upon the Florida State University System. Over 42% of the beginning freshmen in 1972 took CLEP examinations and over 38% received credit for passing one or more examinations with a score above the national 50th percentile. These freshmen received an average of 27 quarter-hours credit. A comparison was made of a group of 870 students who had taken CLEP and a group of 424 other students matched according to Florida Twelfth Grade Test scores. The two groups were found to have similar grade point averages and to have carried the same number of credit hours, but 66 students (15%) of the CLEP group graduated in 3 years whereas only one of the other group had. Also, a larger percent of the other group withdrew before graduation. Students who received credit for CLEP were less likely to experience academic difficulties than were those who took CLEP examinations but did not receive credit. The author concluded that the 50th percentile was a liberal cutoff score for University of Florida students; the CLEP examinations identified a group of highly motivated students; and CLEP credit alone did not insure an accelerated graduation date. (Author/CIH)

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THE IMPACT OF THE COLLEGE LEVEL EXAMINATION PROGRAM
A FOUR-YEAR STUDY

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GAINESVILLE

1977

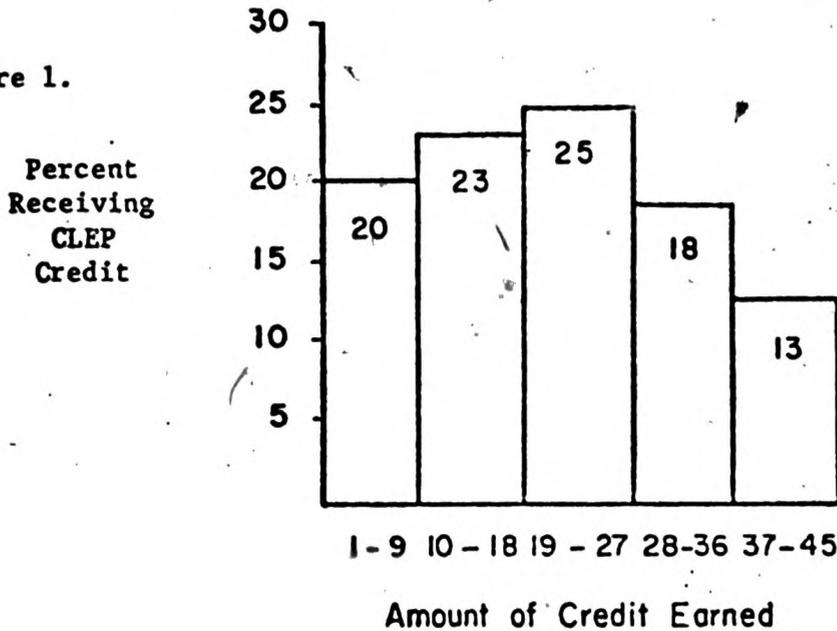
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ABSTRACT

The College Level Examination Program had a substantial impact upon the Florida State University System. Forty percent of the freshmen enrolled at the University of Florida wrote the CLEP General Examinations in 1972. These freshmen received an average of twenty-seven quarter hours credit. This study found that the fiftieth percentile was a liberal cutoff for University of Florida students. CLEP also served to identify a highly motivated group of students who excelled beyond the level of a comparison group of students with similar academic potential. CLEP credit was related to retention and academic major. However, CLEP did not appear to significantly accelerate student progress toward their degrees.

There were 2,709 beginning freshmen in the fall of 1972 at the University of Florida. Approximately forty percent of the freshmen wrote the CLEP General Examinations. These freshmen received an average of twenty-seven CLEP credits. Only 117 students who attempted a CLEP examination failed to receive any credit. The following graph (Figure 1) presents a distribution of CLEP credit awarded to entering fall 1972 freshmen.

Figure 1.



Instruments

The College Level Examination Program General Examinations were developed by the Educational Testing Service, Princeton, New Jersey for the College Entrance Examination Board. CLEP scores for University of Florida students were made available by the Educational Testing Service.

The Florida Twelfth Grade Test was administered statewide to all high school seniors until 1976. It was a general achievement battery which included an aptitude measure as well as English, mathematics, social science, and natural science sections.

A FOUR-YEAR STUDY

Introduction

The College Level Examination Program (CLEP) received a substantial amount of publicity across the state of Florida in 1972. Almost instantly, CLEP became a center of controversy. Some legislators saw CLEP as a way to accelerate graduation; thus reducing the cost per student of a college education. Some administrators had found a new recruiting device. Faculty generally questioned the validity of granting college credit on the basis of scores from a general achievement examination. It was felt that CLEP scores represented general abilities, not knowledge of specific course content.

The enigma in the controversy was the student. How did the student view the opportunity to earn CLEP credit? Would the student use CLEP credit to avoid courses in particular areas? Would the student accelerate his degree program? Was the student in fact adequately prepared for more advanced work if he achieved a certain level on the CLEP examinations?

The State University System Articulation Agreement between universities and community colleges standardized the amount of CLEP credit and the cutoff for awarding credit in Florida. The Agreement provided that a maximum of forty-five quarter hours of CLEP credit be awarded. Nine hours credit each was to be granted in English, mathematics, humanities, and social science. Biological and physical science received four and one half credits in each area. The cutoff scores were set at the fiftieth percentile of the national sophomore norms for the CLEP. The Agreement resolved some of the controversy. However, an evaluation of the effect of the CLEP on the students and the colleges was essential.

Sampling Procedures

A list of all beginning freshmen in September 1972 who earned CLEP credit by October 1973 was compiled (N = 1037). Five hundred additional beginning freshmen were chosen from those students who had never attempted a CLEP examination (non-CLEP group). Selection for the non-CLEP group was initially based upon random sampling procedures. However, the randomly selected group had lower average Florida Twelfth Grade Test scores than the CLEP group. Therefore, the two groups were matched for ability on the basis of FTGT Total scores and FTGT Aptitude scores. The resulting CLEP group was composed of all beginning September, 1972 freshmen with CLEP credit and Florida Twelfth Grade Test scores (N = 870). The non-CLEP group was composed of 424 beginning September 1972 freshmen. This group met the criteria of having FTGT scores and not having attempted a CLEP examination. Students who did not present FTGT scores were eliminated from the study due to the difficulty in establishing comparable levels of ability.

Analysis

The University of Florida undertook a four-year study to determine how students with CLEP credit fare academically. The study is divided into several sections. The first section reported the comparison of the CLEP and the non-CLEP groups at the end of three years (1972-1975). Questions during this phase of the study centered on grade point averages, withdrawal rates, and the number of accelerated degrees. During the fourth year, the major fields of CLEP graduates were considered in judging the impact of CLEP credit on particular colleges within the University. Finally, a summary of the utilization of CLEP credit in meeting degree requirements was prepared.

The second section reported the analysis of the diversity within the group of students with CLEP credit. Following the conclusions of the study in the third section were the recommendations of the CLEP Advisory Committee. This Committee was composed of faculty and administrators who reviewed the study and made policy recommendations to the faculty senate.

I. COMPARISON: CLEP VS. NON-CLEP STUDENTS

The comparison of the CLEP and non-CLEP groups revealed few differences in academic success. Grade point averages were virtually identical for the three-year period. A similar percentage of students in each group experienced academic problems. However, the proportion of students who had withdrawn from school in the non-CLEP group exceeded the withdrawals of the CLEP group. Also, the graduation rate for the two groups was very different (see Table I).

TABLE I. COMPARISON: CLEP VS. NON-CLEP

	CLEP N = 870	NON-CLEP N = 424
G.P.A.		
1972-73	2.77	2.77
1973-74	2.86	2.81
1974-75	2.91	2.86
Percent Withdrawn		
1972-75	28%	36%
Average Hours Carried	124	126
Academic Duress	5%	7%
Graduated in 3 Years	66	1

The question was asked if students with CLEP credit tended to specialize in certain fields. Table II summarizes the 80 different majors selected during the 1975 academic year by the CLEP and non-CLEP students. The percentage of students majoring in each category was similar with the exception of the sciences. Fewer students with CLEP credit majored in the sciences. The College of Business Administration did attract a larger proportion of students with CLEP credit than expected.

TABLE II. PERCENTAGE OF CLEP VS. NON-CLEP STUDENTS IN MAJOR FIELDS

<u>Major Fields</u>	<u>CLEP</u>		<u>Non-CLEP</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Business	127	20	37	14
Social Sciences	87	13	24	9
Language Related	46	7	12	4
Arts and Architecture	48	7	28	10
Sciences	73	11	45	17
Journalism	53	8	24	9
Education	53	8	24	9
Engineering	43	7	24	9
Health Related	43	7	15	6
Agriculture and Forestry	33	5	8	3
Mathematics and CIS	15	2	7	3
Undecided	27	4	22	8
Total enrolled in 1975	648		270	

CLEP credit did not differentiate students with similar ability. It was also clear that the CLEP group contained a large number of students with very diversified abilities. The following section examined the differences which existed within the CLEP group.

Forty-nine percent (N = 424) of the students with CLEP credit had graduated by the end of the fourth year. Only twenty-six percent (N = 110) of the non-CLEP group had graduated. The CLEP and non-CLEP groups had been

matched for ability on the basis of scores from the Florida Twelfth Grade Test (FTGT). Therefore, graduation rates should not have been influenced by differences in academic potential. A breakdown of the CLEP group graduates by the amount of CLEP credit earned appears in Table III.

TABLE III. CLEP STUDY GRADUATES BY CLEP CREDIT EARNED

Graduated	C L E P C r e d i t s					Total
	1 - 9	10 - 18	19 - 27	28 - 36	37 - 45	
To Spring 1975	0	7	13	23	23	66
Summer 1975	1	5	13	8	12	39
Fall 1975	6	12	13	15	7	53
Winter 1976	13	17	18	8	10	66
Spring 1976	43	62	51	24	20	200

Some of the students who graduated early did not earn enough CLEP credit to warrant early graduation. Therefore, these students carried additional credit hours and/or attended summer quarter in order to complete their credit requirements. Table IV shows that twenty-six percent of the CLEP students accelerated their degree programs while only seven percent of the non-CLEP group graduated in fewer than four years. A question remained: How many students from each group were still enrolled at the University? Of the original 870 CLEP group students, twenty-seven percent were enrolled and did not graduate during the spring quarter of 1976. There were thirty-six percent of the original 424 non-CLEP students enrolled during the same quarter who did not graduate.

TABLE IV. COMPLETION OF DEGREE PROGRAMS

	<u>Accelerated Degrees</u>	<u>4-Year Degrees</u>	<u>Remaining in School</u>	<u>Withdrawn</u>
CLEP group N = 870	N = 224 % = 26	N = 200 % = 23	N = 232 % = 27	N = 214 % = 24
Non-CLEP N = 424	N = 29 % = 7	N = 81 % = 19	N = 151 % = 36	N = 163 % = 38

A chi square test was used to determine whether the enrollment patterns differed for the two groups. The obtained $X^2 = 80.54$, $df = 3$ was significant at the .01 level. Follow-up difference of proportions tests indicated that differences were significant at $p < .05$ in all categories except for the difference in 4-year degrees.

The students with CLEP credit have a better retention rate than the comparison group. Approximately twenty-five percent of the CLEP students and thirty-eight percent of the non-CLEP students have left the University without completing a four-year degree program. It cannot be said that CLEP credit causes students to remain in school. It is apparent, however, that students who receive credit by examination are well motivated students; they tend to complete their degrees. Most of the students with CLEP credit did not accelerate their degrees.

The average hours earned and the average hours carried were computed for the five categories of CLEP credit (see Table V). In order to facilitate an interpretation of the table, an explanation of the variables influencing the magnitude of the numbers included in the table follows:

1. Major requirements differ in the number of hours necessary to graduate. Therefore, the number of hours earned will be influenced by the majors of the students as well as by the amount of CLEP credit earned.

2. The average hours carried by a student does not include CLEP credit, pass-fail credit, or transfer credit.
3. The average hours earned in excess was computed by subtracting the total hours earned from the minimum hours required for the particular major of the student. These differences were summed and averaged.

TABLE V. CLEP STUDY GRADUATES BY CLEP CREDIT EARNED

	<u>CLEP Hours</u>	<u>Graduates</u>	<u>Avg. Hrs. Earned</u>	<u>Avg. Hrs. Carried</u>	<u>Avg. Hrs. in Excess</u>
Summer 1975	1 - 9	1	191	175	5
	10 - 18	5	197	149	4
	19 - 27	13	191	148	3
	28 - 36	8	198	142	8
	37 - 45	12	196	137	8
Fall 1975	1 - 9	6	197	178	5
	10 - 18	12	190	145	2
	19 - 27	13	193	156	5
	28 - 36	15	196	146	8
	37 - 45	7	196	127	7
Winter 1976	1 - 9	13	191	166	2
	10 - 18	17	197	162	7
	19 - 27	18	194	152	6
	28 - 36	8	208	162	16
	37 - 45	10	203	152	14
Spring 1976	1 - 9	43	196	173	6
	10 - 18	62	197	164	6
	19 - 27	51	201	164	10
	28 - 36	24	205	157	16
	37 - 45	20	218	164	30

Table V is useful as an estimator of the amount of CLEP credit actually used in meeting degree requirements. Those students who graduated early tended to use a greater proportion of their CLEP credit than the CLEP students who graduated after four years. Apparently, CLEP students graduating in the spring of 1976 did reduce their course loads as a result of the

CLEP program. The hours earned in excess of the graduation requirements did indicate that while some CLEP credit was used, much of the credit was superfluous.

II. AN EXAMINATION OF THE DIVERSITY WITHIN THE CLEP GROUP

The study of the CLEP group centered around the differences relating to the amount of credit received, the scores received, and the area in which the credit was granted. These topics were selected to study the validity of cutoff scores currently used to grant CLEP credit, as well as to provide an understanding of the extent to which receiving CLEP credit influences a student's academic career.

Graphs were drawn to show at which point the cutoff scores intersected the distribution of scores for all beginning 1972 freshmen (see Figure 2). As the CLEP scores increased beyond the fiftieth percentile, the number of students achieving the higher scores decreased in English, humanities, and social science. In mathematics and physical science the number of students scoring in the fiftieth percentile was approximately the same as the number of students scoring in the ninetieth percentile.

A correlation between the number of CLEP hours earned, grade point averages, and Florida Twelfth Grade Test scores is reported in Table VI. It is apparent that the amount of CLEP credit earned, grade point average, and FTGT scores are positively correlated. It is interesting to note that the average number of hours the students carried did not vary with the amount of CLEP credit earned.

Figure 2. DISTRIBUTION OF CLEP SCORES BY PERCENTILES

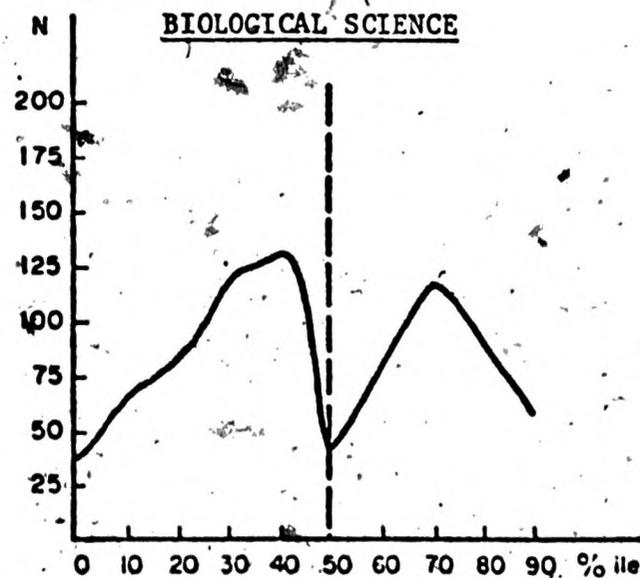
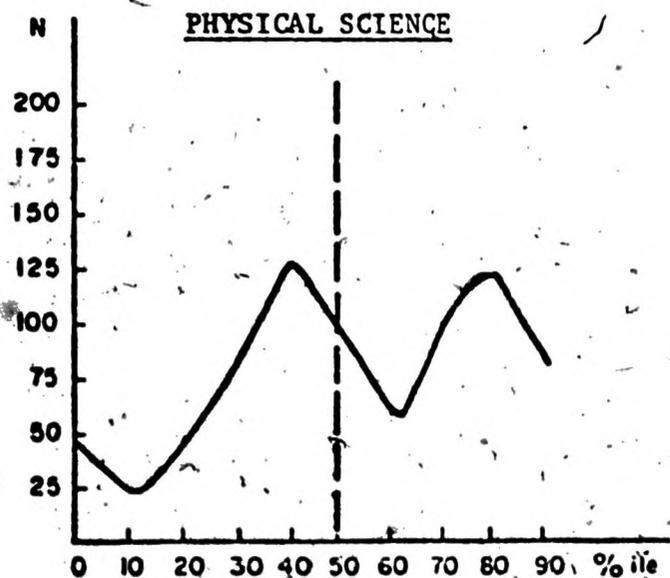
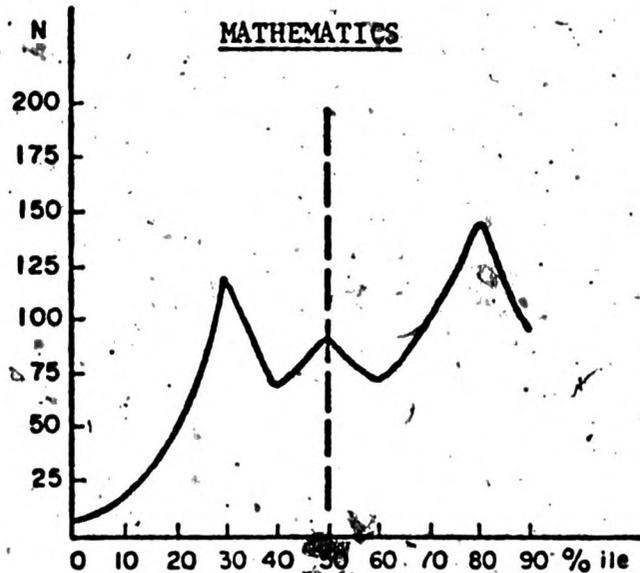
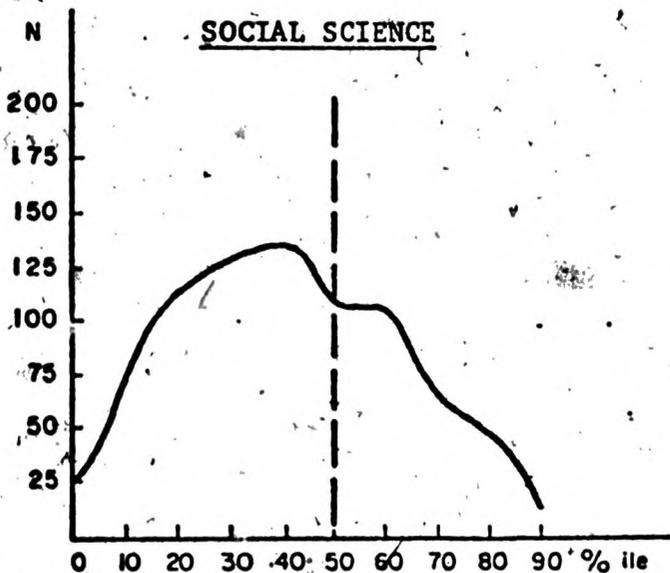
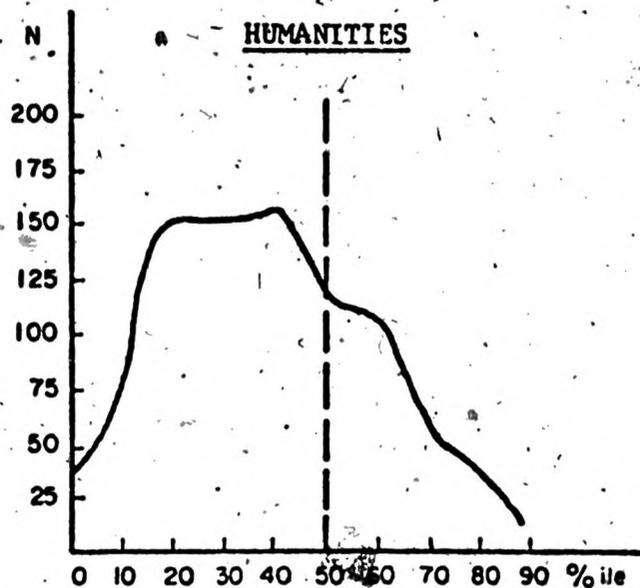
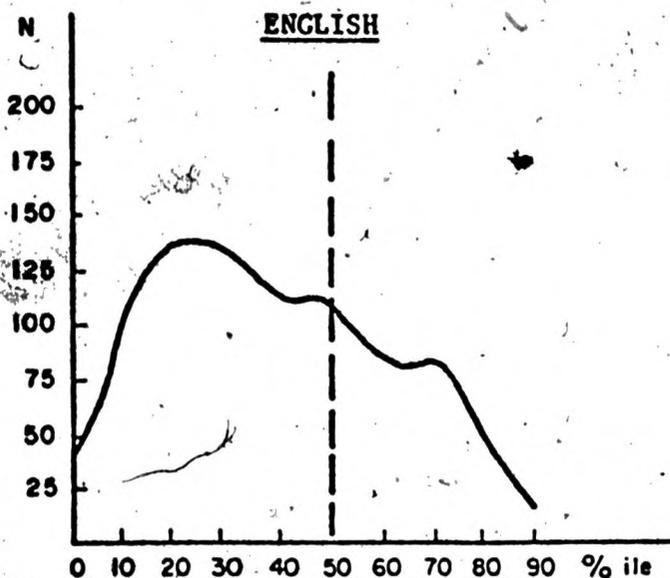


TABLE VI. DESCRIPTION OF CLEP GROUP BY CLEP CREDIT HOURS EARNED

	0 - 9 N = 147	10 - 18 N = 172	19 - 27 N = 179	28 - 36 N = 131	37 - 45 N = 101
Grade Point Average	2.69	2.77	2.83	2.86	3.02
Hours Carried	43.97	42.70	43.60	42.44	43.88
FTGT Aptitude	81.31	85.72	89.22	92.22	95.11
FTGT Median	393.75	418.50	433.33	453.38	471.63

In order to clarify the effect of the currently used cutoff, beginning fall 1972 freshmen who attempted but failed to earn any CLEP credit were identified. The distribution of the scores of the CLEP group and of those students who attempted CLEP but failed to receive credit is presented in Table VII. The strong positive relationship between FTGT and CLEP scores was confirmed. Grade point averages for students scoring at the fiftieth percentile in mathematics and physical science were lower than at the same percentile in other subject areas; FTGT scores were also lower. The implication of these findings would be that the fiftieth percentile cutoff for these two tests allowed less well qualified students to receive credit. The final item on the table, Academic Duress, applied to students with CLEP credit in the subject area who were on Academic Warning, Probation, or Suspension during the 1972-73 year. Grade point averages and FTGT scores of students who attempted and failed to earn CLEP credit declined with their CLEP scores. The figures supported the general contention that students who received low CLEP scores were more likely to experience academic difficulties.

Another concern has been expressed pertaining to the use of CLEP credit. University departments wanted to know whether students with CLEP credit in an area would specialize in or avoid the area. Related majors were grouped if the pattern of CLEP credit within the groupings was not dissimilar. The

TABLE VII. DESCRIPTIVE STATISTICS BY CLEP SCORE PERCENTILES

	CLEP GROUP N = 870					STUDENTS FAILING TO EARN CLEP CREDIT N = 117		
	90 %ile N = 14	80 %ile N = 54	70 %ile N = 81	60 %ile N = 85	50 %ile N = 112	40 %ile N = 10	30 %ile N = 11	Below 30 %ile N = 59
<u>ENGLISH</u>								
Grade Point Average	2.96	3.01	3.01	2.94	2.82	2.73	2.35	2.35
Hours Carried	44.71	43.20	42.77	43.44	42.43	37.38	42.42	41.94
FTGT Aptitude	96.43	95.06	93.15	90.82	89.22	78.00	70.77	73.37
FTGT Median	478	470	458	449	443	360	349	364
Academic Duress	.7%	16%	19%	14%	16%	20%	36%	30%
<u>HUMANITIES</u>								
	N = 12	N = 37	N = 54	N = 105	N = 115	N = 14	N = 19	N = 58
Grade Point Average	2.90	3.03	2.99	2.82	2.79	2.59	2.50	2.30
Hours Carried	44.50	44.51	44.00	43.47	43.31	43.44	38.70	44.28
FTGT Aptitude	97.18	92.59	91.63	90.42	87.93	83.66	68.88	75.21
FTGT Median	482	472	458	450	438	364	353	349
Academic Duress	16%	24%	14%	23%	21%	28%	31%	25%
<u>MATHEMATICS</u>								
	N = 94	N = 144	N = 100	N = 70	N = 90	N = 3	N = 34	N = 29
Grade Point Average	3.06	2.79	2.75	2.84	2.68	2.42	2.34	2.46
Hours Carried	45.07	43.19	42.72	42.57	42.18	40.33	42.32	39.00
FTGT Aptitude	95.29	91.28	88.69	86.93	83.94	81.33	72.03	72.44
FTGT Median	468	448	433	433	413	414	341	336
Academic Duress	12%	20%	21%	22%	31%	0	29%	34%

TABLE VII. DESCRIPTIVE STATISTICS BY CLEP SCORE PERCENTILES (Cont'd)

	CLEP GROUP N = 870					STUDENTS FAILING TO EARN CLEP CREDIT N = 117		
	90 %ile N = 15	80 %ile N = 49	70 %ile N = 68	60 %ile N = 111	50 %ile N = 111	40 %ile N = 12	30 %ile N = 11	Below 30 %ile N = 55
<u>SOCIAL SCIENCE</u>								
Grade Point Average	2.95	3.04	2.87	2.88	2.87	2.64	2.58	2.41
Hours Carried	41.73	43.20	43.25	42.94	43.00	41.88	43.29	41.58
FTGT Aptitude	96.67	94.02	92.29	90.17	88.39	67.63	77.87	72.86
FTGT Median	475	476	461	452	432	323	355	341
Academic Duress	13%	12%	22%	16%	26%	16%	27%	32%
<u>BIOLOGICAL SCIENCE</u>								
	N = 55	N = 88	N = 118	N = 77	N = 38	N = 11	N = 20	N = 46
Grade Point Average	2.91	2.83	2.87	2.82	2.86	2.49	2.64	2.33
Hours Carried	44.00	42.58	43.31	42.48	42.95	44.82	41.58	42.96
FTGT Aptitude	93.62	91.13	89.59	89.52	87.79	75.80	67.38	74.95
FTGT Median	473	452	448	439	425	375	341	342
Academic Duress	23%	25%	17%	32%	26%	27%	20%	30%
<u>PHYSICAL SCIENCE</u>								
	N = 83	N = 124	N = 102	N = 56	N = 94	N = 19	N = 24	N = 33
Grade Point Average	2.88	2.89	2.66	2.82	2.60	2.21	2.49	2.50
Hours Carried	43.43	43.41	43.51	44.52	42.78	44.94	43.26	41.22
FTGT Aptitude	94.45	91.57	88.30	89.04	85.26	70.38	74.27	73.93
FTGT Median	469	453	431	437	414	356	355	341
Academic Duress	32%	27%	26%	35%	19%	21%	33%	24%

passing rate of the entire group was calculated for each CLEP examination. The proportion of students with CLEP credit in an area was determined for each of the major fields.

A search of the records showed that over three fourths of the students who wrote the CLEP preferred to write all five examinations. The percentage of students with CLEP credit who wrote each CLEP examination is listed in Table VIII.

TABLE VIII. PERCENTAGE OF CLEP STUDENTS TAKING EACH EXAMINATION

<u>Examination</u>	<u>%</u>	<u>Examination</u>	<u>%</u>
English	90	Physical Science	91
Humanities	94	Biological Science	91
Social Science	89	Mathematics	81

Since students elected to write all of the General Examinations, there was considerable overlap between major area and CLEP credit. However, this tendency was stronger for English, social science and humanities than for mathematics and the sciences. There are some possible explanations for this discrepancy. If students elected to write only four CLEP examinations, they generally omitted mathematics. Students who took three examinations would usually opt for a combination of English, humanities and social science, or humanities, physical science and biological science. Mathematics was most often omitted. It should be noted that students competent in mathematics would normally exempt basic mathematics courses. Therefore, these students were less likely to seek CLEP credit in mathematics.

III. CONCLUSION

The study sought to answer two questions: Was the fiftieth percentile an appropriate cutoff for University of Florida students? What effect did CLEP credit have upon the students' academic careers? The data suggested that the fiftieth percentile was a liberal cutoff for University of Florida students. The distribution of scores and the percent passing were similar for the English, humanities and social science tests. The natural science and mathematics tests were less difficult. The cutoff allowed a substantially larger percentage of students to receive credit in these areas.

A notable characteristic of the CLEP group was its magnitude, approximately one third of the freshman class. The size of the group alone attested to the liberalness of the cutoff. Due to the large number of students receiving CLEP credit, there were few attributes which applied equally to all CLEP students. Some generalizations can be made. Students who earned CLEP credit had a higher potential for academic course work than the average freshman, and grade point averages were unaffected by acceleration through the use of CLEP credit. A second finding was the higher retention rate for students with CLEP credit. While CLEP students withdrew less frequently than students of similar academic ability, it cannot be stated that the retention rate was a function of the CLEP credit. Other motivational factors which caused the students to write the examinations in the first place may also have influenced the retention rate. Third, most students elected to write all of the CLEP General Examinations. It was logical to assume students took the examinations because they were available. They passed those areas in which they were most competent.

This fact explained why the CLEP credit area and student majors were related. Those students who were selectively taking CLEP tests usually omitted mathematics. The humanities examination was most frequently taken. It may be that some students used CLEP credit to avoid taking courses in a particular area. However, most CLEP students have CLEP credit in the area in which they have specialized. Finally, some CLEP students did use the credit granted to accelerate their degrees. Many of the CLEP students who graduated also carried higher than average course loads and enrolled during the summers. It was perhaps more significant that the proportion of students who graduated in three years of those eligible to graduate was small, about fifteen percent. It was clear that only a small, highly motivated group of the CLEP students chose to graduate early. The more usual pattern was for students to remain in school using some CLEP credit to reduce course loads.

IV. RECOMMENDATIONS

The data from the study indicated that superior students do not suffer from participation in the CLEP program. Faculty concerns that earning CLEP credit would have a negative effect on grade point averages were unfounded. The data also indicated any hopes that a sizable group of students would accelerate their baccalaureate programs a full year may be equally unfounded. Students who participated in the CLEP program may gain flexibility in course selection for their general education; however, CLEP credit alone did not seem to insure rapid acceleration.

The CLEP Faculty Advisory Committee at the University of Florida after receiving the foregoing data and conclusions made the following recommendations:

1. Students scoring substantially above the 50th percentile are encountering no unusual academic difficulties, except those receiving credit on the mathematics and physical science examinations. The minimum scores required to receive credit in these two examinations should be raised. In addition, the maximum credit for mathematics should be reduced to four (4) credits as this is the maximum precalculus math work that is required at the college level.
2. CLEP should be awarded on a sliding scale based upon the scores received. Thus, the student scoring from the 50 - 59th percentiles would receive three (3) hours credit, 60 - 69th percentiles would receive six (6) hours, and 70th percentile and above would receive nine (9) hours credit.