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A Study to Predict 01/01/1963-01/01/1970 Enrollments at Fort Hays Kansas State College

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Fort Hays Kansas State College

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A STUDY TO PREDICT 1963-1970 ENROLLMENTS AT
FORT HAYS KANSAS STATE COLLEGE

being

A Thesis Presented to the Graduate Faculty
of Fort Hays Kansas State College in
Partial Fulfillment of the Requirements for
the Degree of Master of Science

by

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A STUDY TO PREDICT 1963-1970 ENROLLMENTS AT
FORT HAYS KANSAS STATE COLLEGE

by
Rose Howard King

(An Abstract)

In this study, the problem was to predict enrollments at Fort Hays Kansas State College from 1963 to 1970, inclusive, so as to aid in preparing for future enrollments and to provide useful information for succeeding studies of this nature.

The main prediction method employed in the study was founded on enrollments in the elementary and secondary schools in the geographical area of Kansas which supplies the College with the majority of its students. The College geographical area was limited to the forty-eight counties which sent fifteen or more freshmen to the College in a recent fall semester, since this area supplied the College with about 90 percent of the freshmen class.

On the basis of the most recent enrollment data for elementary and secondary schools in the 48-County Area, and established trends in retention rates for them, the number of youth who will be eligible for college each year for the next eight years was predicted. Predicted freshmen enrollments at the College were derived from these figures and from the proportions of these youth who have enrolled at Fort Hays Kansas State College in the past. The remaining minority (about 10 percent) was then added for freshmen coming from places outside the 48-County Area.

Finally, the average percentage of freshmen to total student body at the College (about 30 percent) was applied to predict total student body enrollments.

In addition to the pre-college enrollment prediction method used above, other prediction methods described were mathematical extrapolation, college age population, and predicted college enrollments for the state of Kansas.

The findings of the study are summarized in the following table.

PREDICTIONS OF ENROLLMENTS AT FORT HAYS KANSAS STATE COLLEGE

Year	Results of Extrapolation Method	Results from College Age Population Method	Results from Kansas College Enrollment Predictions	Results from Pre-College Enrollment Method
1963	3895	3532	3800	3800
1964	4163	3827	4133	4500
1965	4435	3991	4565	5350
1966	4711	4369	5009	6000
1967	4992	4764	5553	6400
1968	5277	5173	5876	6700
1969	5566	5652	6157	7000
1970	5860	5920	6591	7400

The results of the fourth method were considered to be the most valid. Although the fall of 1963 total enrollment at Fort Hays Kansas State College will show about the same increase as that of recent years, the next fall, 1964, will see an unprecedented increase. The following years will continue to place great stress upon facilities at the College, and in the fall of 1970, the College will enroll twice as many students as were enrolled in the fall of 1962, provided that social conditions continue as at present and the College is equipped to accommodate all prospective students.

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CHAPTER I

INTRODUCTION

Recent years have brought increasing demands to bear upon educational institutions of the United States. In addition to attempting to meet public demands for raising academic standards, the schools have been challenged to continually expanding enrollments and concomitant problems, among them insufficient economic support and an inadequate supply of qualified teachers.

The colleges and universities of the country have encountered extensive portions of these problems, and no individual institution is exempt from them. The scope of this study was limited to one problem; impending enrollment expansion in one institution, Fort Hays Kansas State College.

I. PURPOSE OF THE STUDY

The principal aim of this study was to determine future enrollments of the College from the Fall Semester of 1963 to the Fall Semester of 1970, inclusive. Many factors may be interpreted as influencing these enrollments, but only those which evidence a profound bearing upon such enrollments were considered in this study. Of primary concern was justifying the basic assumption of

the thesis, that the future enrollments at Fort Hays Kansas State College will increase in close proportion to the increase in elementary and secondary school enrollments in Central and Western Kansas.

It was hoped that a successful forecast would be of aid to the College administration, faculty and staff. The results of the study were also expected to help others who are interested in, and responsible for, the prosperity of the college and its service to the residents of its main geographical area and to higher education generally. The developments in enrollments at the College in recent years have been pleasantly surprising to many people, since past forecasts had not anticipated their being so high. It can be expected that along with the positive aspects have come some difficult conditions for those who are responsible for policy formulation at this institution. Reliable projections of future enrollments may tend to alleviate such conditions.

It is also possible that this report can serve as a basis for future studies of the same nature. Such studies, to best serve the interests of the College, should be repeated at short intervals.

II. DEFINITIONS OF TERMS USED

College enrollments. In this study the terms "college enrollments," "college and university enrollments"

and "enrollments in higher education" were considered to be synonymous, and to include resident students enrolled in courses for degree-credit. Excluded are business and trade school enrollments. Unless otherwise specified, figures on record for fall semester were used.

Elementary and secondary schools. Also called grade and high schools, these encompass both public and non-public schools from kindergarten through twelfth grade, or high school senior level.

Non-public schools. Schools which are not supported by public funds or tax revenues are non-public. They include church-related, or parochial, and private schools.

Retention rates. These rates are occasionally expressed as perserverance ratios, or the holding power of the schools. This term means the proportion of pupils or students who begin at the first level of a school's offering as against the number who advance to the school's highest level, or graduate.

III. METHODS USED IN THE STUDY

The main method employed in the study was the computation of percentages of enrolling freshmen at the

College on the basis of pupils who have been, and presently are, enrolled in elementary and secondary schools in the area of Central and Western Kansas which supplies Fort Hays Kansas State College with the majority of its students.

In applying this method, some subsidiary calculations were used. The purpose of these was to take into account some other factors which were assumed to decidedly influence enrollment at the College. The first two of these factors tend to increase enrollments while the third and final factors tend to limit the increase in enrollments.

Rise in birth rates and growth of school and college age population. The first of these factors to be considered was the following: the elementary and secondary school enrollments in the area have been generally increasing in descending order of grade level. For example, there were more pupils in the ninth grade than in the tenth grade in the school year of 1960-1961 in this area, both in non-public and in public schools, as shown in Table I. The cause of this circumstance was, of course, not due to any action of the schools, but was apparently due mainly to rising birth rates in the area. In 1956 the birth rate in Kansas had risen to 26.9 per thousand, the highest in the history of the state, having come up from 16.1 in 1940.

TABLE I

ENROLLMENTS BY GRADES IN PUBLIC AND NON-PUBLIC SCHOOLS
IN THE SELECTED FORTY-EIGHT COUNTY
AREA* IN 1960-1961

Grade	High School Class of:	Enroll- ment	Grade	High School Class of:	Enroll- ment
12	1961	11,716	6	1967	17,193
11	1962	11,815	5	1968	17,730
10	1963	11,464	4	1969	18,803
9	1964	14,870	3	1970	20,123
8	1965	17,366	2	1971	20,943
7	1966	17,046	1	1972	22,243

Source: "1960-1961 Enrollment, Public and Non-Public Schools, 48 Selected Counties" (Unpublished data, Office of Statistical Services, Kansas State Department of Public Instruction, Topeka, 1962).

NOTE: *The geographical area upon which this study is based.

Pupils in kindergarten are not listed since about one-third of the five year olds in this area evidently do not attend kindergarten. The year of high school graduation is also the year in which these young people were, or will be, eligible to enter college.

Closely aligned to rising birth rates, was the growth of college age population. The increase in the number of eighteen to twenty-one year olds in the United States has been steadily climbing since 1958: a result of the rising birth rate since 1940. College age youth of Kansas have participated in this trend, and will number 165,000 by 1970, according to predictions in a study conducted at the University of Kansas.¹ Although the population of Kansas was not expanding at as rapid a rate as in the United States as a whole, and especially as the more urbanized areas of the nation, the population of the state is growing. In 1950 there were 1,904,584 people living in Kansas, and in 1960 there were 2,178,611. By July 1 of 1961 Kansas population was 2,195,000² having risen for the eighth successive year.

Increase in college enrollment as related to population. A second factor which seemed likely to influence enrollments at Fort Hays Kansas State College was the progressive increase in the percentage of persons who attend colleges and universities from the total population.

¹"College-Age Youth in Kansas" (from a study by the School of Education, University of Kansas, n.d.), p. 6. (Mimeographed.)

²Bureau of the Census, United States Department of Commerce, Current Population Reports, Population Estimates (Washington: Government Printing Office, November 21, 1962).

Howell reported that 1.6 percent of the total population of Kansas was enrolled as students in institutions of higher education in 1952.³ In 1962, 2.7 percent was in colleges and universities.⁴ If computed on the basis of the 18-21 year olds in the population of the state, a clearer picture of this cause for our burgeoning college enrollments can be seen. According to a study prepared for the Governor's Council on Higher Education in Missouri, college age youth of Kansas in college increased from 28.1 percent in 1953 to 42.9 percent in 1957,⁵ an increase of 14.8 percent; in the United States, the increase in the comparison of college students to the college age segment of the population has been about one percent per year since 1939 (see Table XIV, page 60). It is reasonable to assume, then, that Kansas institutions of higher education are receiving a greater proportion of the state's high school graduates yearly, and furthermore, that a constantly increasing proportion of these have been and will be admitted at Fort Hays Kansas State College.

³Howell, Lionel D., "A Study of Fort Hays Kansas State College Enrollments" (unpublished Master's Thesis, Fort Hays Kansas State College, Hays, Kansas, 1956), p. 57.

⁴College enrollment in Kansas divided by most recent population figure.

⁵Peterson, Warren A. "Future Enrollments in Missouri Colleges and Universities, A Report of the Governor's Council on Higher Education," (Community Studies, Inc., Kansas City, Missouri: 1960), p. 2.

School Drop-outs. The opposing factors, conditions which were assumed to limit enrollment increases at the College, are elementary and secondary school drop-outs, and transfers from the area that were not replaced. Although the retention rates of Kansas public schools have been strengthened in the generation just past, the ratio of twelfth graders in 1960 to the first graders who had started school in 1949 was 7 to 10. In the past eleven years the retention rates have increased from 55.8 percent to 70 percent. Consequently, the schools have provided a gradually more abundant source of supply of high school graduates for possible college enrollment. In extrapolating the increase of elementary and secondary school retention rates, it has been estimated that nearly 1.3 percent per year more of the pupils who begin elementary school in Kansas will remain until they are twelfth graders in the future.⁶

The future of the population is probably the least predictable of any factor in a study of this kind. It depends upon several variables: population movements in American society generally, trends in farm economy and technology, (the Central and Western sections of Kansas are at present primarily agricultural,) and the industrial

⁶The Kansas State Department of Public Instruction, The Kansas System of Public Schools, Topeka, Kansas: State Printing Plant, 1962), p. 46.

future of the area. Among other causes, the decreasing number of farmers needed to feed the urban population of the United States has caused a decline in population in rural areas, and the comparatively great distances to transport raw materials and manufactured goods appear to be a hindrance to industrial growth in this area. However, there are several signs pointing toward a brighter industrial future for Central and Western Kansas. Some of these are: more favorable tax laws for industry in Kansas, the varied and valuable natural and agricultural resources of this region, as well as the outlook for facilitated transportation available by air, rail and improved highways.

The existing situation in the 48-County Area of Kansas is that, although population loss is not as great as it was before 1942, nevertheless the population of this area is not growing in accord with the birth and death rates of the area; that is, there remains some population exodus from the rural areas of Central and Western Kansas.

IV. ORGANIZATION OF THE STUDY

The basic geographical unit of this study was the area from which Fort Hays Kansas State College obtained the majority of its students. Chapter II deals with this area, its extent and population; how the homes of

students of the college are located within it, and how the college enrollments relate to it.

Chapter III presents a picture of elementary and secondary school enrollments of the area, and shows how such enrollments have been changing and how they undergird the enrollment of entering freshmen at the college.

A comparison of Fort Hays Kansas State College enrollments with those of the state and nation is presented in Chapter IV, along with their implications.

In Chapter V the actual predictions of enrollments at the College to 1970 are made.

The final chapter contains a summary of the more important findings of the study and the conclusions reached by means of the study.

V. RELATED STUDIES

The most detailed and comprehensive study of Fort Hays Kansas State College enrollments that has ever been made was a Master's thesis by Lionel D. Howell⁷ which was completed in 1956. A meticulous work, made from the point of view of an economist, Howell's thesis fell short in projections of actual total enrollment at the College by one-third in 1960 (1,987 as against the actual figure of 2,888.) Two incorrect assumptions contributing to this

⁷Howell, op. cit.

error were a too conservative attitude regarding population growth of the area, and failure to foresee the increase in the percentage of college age population that would later attend college. It must be noted that the time when Howell conducted his research had been preceded by more than two decades of abnormal social and economic conditions caused by the Great Depression, World War II, and finally the Korean War. The writer believes that the seven years since 1955 have been more nearly normal so far as such conditions bear upon college enrollments.

The tendency to underestimate future college enrollments has, in the past, been general. For example, in 1955 the White House Study Group reporting on Kansas school enrollments predicted that in 1962 there would be 34,767 higher education students in Kansas,⁸ but actually there were 59,900.

In 1960 the Higher Education Study of Kansas predicted that the school year of 1962-1963 would see from 51,300 to 52,600 students on the State's campuses, but actual enrollments of only two years later were 13 percent

⁸White House Study Group No. II, The Impact of Increasing Enrollments (Topeka, Kansas: 1955), p. 11, Mimeographed.

more than the higher figure.⁹ The same year the Kansas State Teachers Association predicted that on-campus enrollments in Kansas would not reach 59,000 until 1965.¹⁰

Also in 1960, the United States Office of Education predicted that 37 percent and 37.5 percent respectively, of college age youth of the United States would be in college in 1961 and 1962.¹¹ The real percentages exceeded those assessments in both years: 38.12 percent in 1961 and 39.35 percent in 1962. Such disappointing results from former studies accentuate the complexity of estimating future college enrollments.

Thus, current studies, the prophecies of which have not been tested by known events, assume added interest and importance. Many agencies have sponsored such studies in recent years. For some, the data and their interpretations are carried out by students, or by committees of students directed by faculty members. College registrars frequently conduct or direct such studies. For those whose financial resources will allow, the work is done by professional research firms.

⁹Kansas Legislative Council, Comprehensive Educational Survey of Kansas, Vol. III (Topeka, Kansas: 1960), p. 73.

¹⁰Kansas State Teachers Association, The School For Tomorrow (Topeka, Kansas: 1960), p. 26.

¹¹United States Office of Education, Department of Health, Education and Welfare, Opening (Fall) Enrollment in Higher Education, 1962, Institutional Data (Washington, D. C., Government Printing Office: 1962), p. 3.

Researchers at the University of Kansas¹² expect the number of students in Kansas institutions of higher education to be 99,863 in 1970, more than half again as many as the 1962 figure of 59,900.

In 1959, Missouri carried out a study on higher education. "This report deals with the basic trends from which other problems derive, the expected increase in college and university enrollments."¹³ Primarily concerned with future enrollments of Missouri's institutions of higher education, this report is of value also to the contiguous states, including Kansas. It shows that, of eight midwestern states extending from the Canadian border to the Gulf of Mexico, Kansas had the highest enrollment increases between 1953 and 1957, and the highest percentage of college enrollment compared to college age population (42.9 percent) in 1957.

Institutions of higher education located in metropolitan areas have recently been predicting doubling, tripling and even quadrupling enrollments by 1975. Although Kansas City University and Kansas City Junior College together had 6,850 enrollees in the Fall of 1962, it was envisioned that the city and its environs would

¹²"College Age Youth in Kansas," op. cit.

¹³Peterson, op. cit., p. 2.

need higher education facilities for 30,000 students by 1975.¹⁴

In 1961, "The University of California announced a master plan to meet an expected enrollment of 119,000 by 1975. . ." ¹⁵ The second largest university in the United States, this institution enrolled 45,000 full-time students in 1961.

The perplexing issues that have been besetting other institutions of higher education have parallels with those confronting Fort Hays Kansas State College.

In summary, the purpose of this study was to determine future enrollments at the College in order to aid in partially solving the problem of preparing for increasing enrollments. In doing this, factors of increase in school age population, increase of college age youth attending college, changing school retention rates and population trends were considered as they affect future college enrollments. Almost all studies to predict college enrollments have, in the past, erred on the side of conservatism. Recent developments in college enrollments have compelled much higher predictions.

¹⁴Doyle, Patricia Jenson, "For M. U. Facility Here," The Kansas City (Missouri) Times, December 27, 1962, pp. 1, 10.

¹⁵Events of 1961, American Peoples Encyclopedia (Grolier Incorporated, New York: 1962), p. 218.

CHAPTER II

THE GEOGRAPHICAL AREA OF FORT HAYS

KANSAS STATE COLLEGE

As used in this study, the term "48-County Area" is synonymous with "the College geographical area" and means the counties in Central and Western Kansas which supply Fort Hays Kansas State College with a large majority of its students.

As stated in Chapter I, the principal projections in this study were based upon elementary and secondary school enrollments in the 48-County Area rather than population statistics and trends for college age youth as has been the practice in similar studies. However, the latter will receive consideration in this chapter as having a bearing upon the problem.

All institutions of higher education draw the larger bulk of their enrollees from places that are located at comparatively short distances from the college site, and Fort Hays Kansas State College is not an exception. The geographical area of Fort Hays Kansas State College covers most of Central and Western Kansas, with the most students having their homes within easy commuting distance from the college, while lesser percentages come from greater distances.

The major sources of information for this portion of the study were the Extension Office at the College, Howell's study (see page 10), the United States Bureau of Census and the United States Office of Education.

I. METHOD OF CHOOSING THE GEOGRAPHICAL AREA OF FORT HAYS KANSAS STATE COLLEGE

At the beginning of this study, when it was decided to base the main enrollment predictions of the College upon elementary and secondary school enrollments, it was found necessary to limit the area from which statistics on these enrollments would be obtained.

Some Fort Hays Kansas State College students have come great distances in the past, therefore it would not be feasible to attempt to secure enrollments from all of the elementary and secondary schools from which students at the college have come.

It was assumed that the homes of most students were located within an area of reasonably workable size, so far as obtaining public school and college enrollment statistics were concerned. Counties were chosen as the most convenient basic units. Enrollment data on students' home counties were available from the College.

Howell's study included fifty-one counties, each of which contributed an average of five students to the

total student body over a period ending in 1954. In 1954, the College enrollment was a little less than 1700, and since the enrollment in the fall of 1962 exceeded 3500, and since freshmen rather than all student classifications were to be counted, the number fifteen was chosen to be used in this study as a criterion for inclusion of counties in the study, on the basis of these facts.

An inventory was made of freshmen students sent from counties which contributed fifteen or more freshmen to the College in the fall of 1961, the most recent year for which complete records were available at the beginning of the present study. This showed that forty-eight contiguous counties of Central and Western Kansas fell into the "fifteen or more freshmen" category. It was then discovered that this category included 90.3 percent of the freshmen class of the fall of 1961. Inventories of records for the years 1958, 1959, 1960 and 1962 (the last became available while this portion of the work was in progress) showed that the same counties yielded similar percentages, averaging 89.1 percent, for the five year period. Since 89.1 percent was considered to be sufficiently representative of the freshmen class for the purpose of study and analysis, the forty-eight counties which sent fifteen or more freshmen students in the fall of 1961 were selected to comprise the geographical area of the College in this study. (see Figure 1).

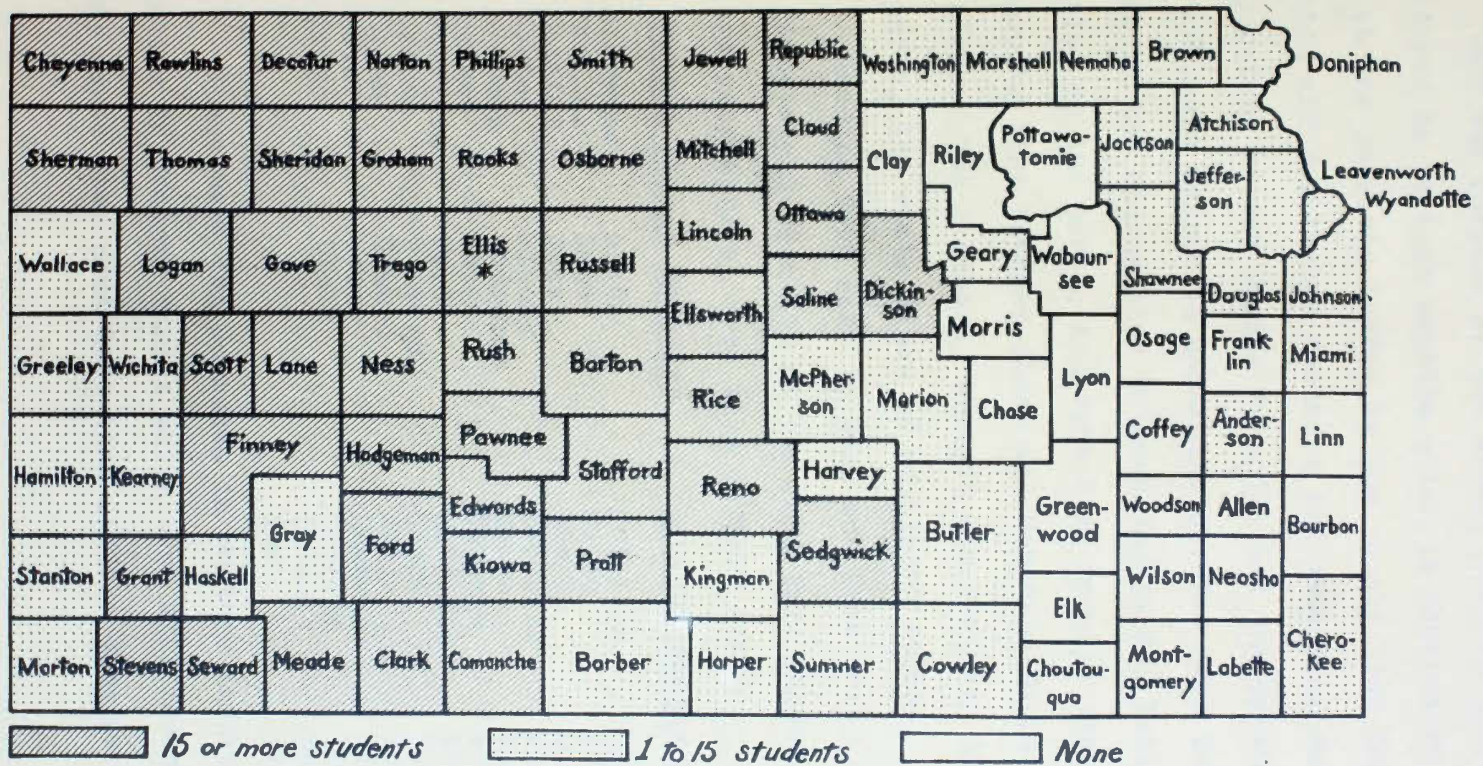


Figure 1

FORT HAYS KANSAS STATE COLLEGE GEOGRAPHICAL AREA AND FRINGE AREAS

For the purpose of the study, Central Kansas is considered to be that section which is demarcated on the east at the Nebraska border by the county line between Republic and Washington Counties and extending south to the juncture of the Kansas Turnpike and the Oklahoma border. Western Kansas is generally divided from Central Kansas by the county line between Norton and Phillips Counties on the north, and extending roughly southward to the county line between Clark and Comanche Counties on the south. The northern, western and southern limits are, of course, the state lines of adjoining states.

Reading from east to west and from north to south, the forty-eight counties of the Fort Hays Kansas State College geographical area thus defined are:

Western Kansas Counties

Cheyenne	Scott
Rawlins	Lane
Decatur	Ness
Norton	Finney
Sherman	Hodgeman
Thomas	Grant
Sheridan	Ford
Graham	Stevens
Logan	Seward
Gove	Meade
Trego	Clark

Central Kansas Counties

Phillips	Barton
Smith	Ellsworth
Jewell	Saline
Republic	Dickinson
Rocks	Pawnee
Osborne	Stafford
Mitchell	Rice
Cloud	Reno
Ellis	Edwards
Russell	Kiowa
Lincoln	Pratt
Ottawa	Sedgwick
Rush	Comanche

There were ten counties in Western Kansas and six counties in Central Kansas which were eliminated from this study since they sent less than fifteen freshmen students

to the college in 1961. Furthermore, one county in Eastern Kansas, Dickinson, can be included in the 48-County Area on the basis of the fifteen freshmen student criterion.¹⁶ As can be seen in Figure 1, there are twenty counties in Eastern Kansas that sent at least one, but not more than fourteen, freshmen to Fort Hays Kansas State College in the fall of 1961, while the remaining twenty-two counties sent no freshmen that year. Therefore, only 21 percent of Kansas' 105 counties was not represented at the college in 1961, 79 percent sent one or more students and 46 percent of the state can be considered as the primary geographical area served by the college.

It should be noted here that the 51-County Area used by Howell as a basis for study is approximately the same in geographical area as the 48-County Area being used in the present study. In the former, however, only three Western Kansas counties were excluded, while ten are excluded from this study; with nine Central Kansas counties excluded from Howell's study,¹⁷ while only six of those are excluded from the present study. This difference can be partly explained by the population movement in Kansas, which is generally from the northwest to east and southeast parts of the state.

¹⁶For convenience, Dickinson County will be subsequently considered as a Central Kansas county.

¹⁷Howell, op. cit., p. 14.

The incorporation of four Central Kansas counties in the present study, which were eliminated from the Howell study because they contributed less than 0.5 percent of their 18-24 year old population to the enrollment at Fort Hays Kansas State College does, however, create a considerable difference in figures on population. This difference is due to the fact that three areas of population concentration, Saline County, Reno County and Sedgwick County, were excluded from the area used by Howell but are included here.

II. DISTRIBUTION OF HOMES OF FORT HAYS KANSAS STATE COLLEGE STUDENTS IN CENTRAL AND WESTERN KANSAS

The attendance at Fort Hays Kansas State College as related to the home counties of students is illustrated in Table II, which is based on the total number of enrolling freshmen in the fall semesters of 1958 through 1962. Approximately eighty-nine percent, or forty-three of the forty-eight counties in the Area, each sent between thirty and 120 freshmen during the five year period, or about two-thirds of freshmen enrollees. In contrast, five counties in the upper portion of the table, Ellis and four counties adjoining it, (Rooks, Russell, Barton and Rush counties,) comprising the remaining eleven percent,

TABLE II

COMPARISON OF 1957-1962 ENROLLMENTS OF FALL ENROLLING FRESHMEN TO DISTANCE FROM HOME COUNTIES

County Group	Range of Enrollments of County Group	Total Enrollment of County Group	Number of Counties in Group	Average Enrollment per County	Average Distance from FHS in Miles
I	540-570	566	1	566	0
II	270-300	279	1	279	61
III	240-270	250	1	250	25
IV	210-240	211	1	211	40
V	120-150	134	1	134	25
VI	90-120	636	6	106	79
VII	60-90	825	11	75	93
VIII	30-60	913	20	46	125
IX	0-30	140	6	23	133

Source: Extension Office, "Fall Enrollment, Fort Hays Kansas State College," (Hays, Kansas: F.H.K.S.C., Mimeographed, 1958 through 1962), State Highway Commission of Kansas, Official 1962 Kansas Highway Map (Topeka, Kansas: State Printing Plant, 1962).

NOTE: Distance is measured from county seat town except in Gove and Logan Counties, where county center is used since the county seat is small compared to other towns in the county.

The increments between 150 and 210, and 300 and 540 are omitted from the above table since none of the total county enrollments fell within them.

Some Kansas students came from distances farther than 133 miles, but counties other than the 48-Counties in Kansas are not included, since counties with less than fifteen students at the college in 1961 are omitted from the study.

sent the remaining one-third of enrolling freshmen during that recent period. It is significant that Ellis County, in which the college is located, stands at the extreme upper limit of the table, with a total of 566 enrolling freshmen in the five year period. Thus it is obvious that counties located nearest to the college usually send the most students, and fewer students are sent as distance to students' home counties increases.

Exceptions to this feature of college enrollment can be noted in Table III, which, unlike Table II, is based upon the enrollment of the entire student body for one year, 1960. Here the effect of population variation can be seen. For example, Barton County and Ness County are virtually the same distance from the college, but the former, having a larger college age population, sends a greater number of students to the college.

In studying enrollment of a single institution it is well to also take cognizance of the attraction of other institutions of higher education within the area as a factor in attendance. Ford County is an example of such influence. In Table II, which is based only on freshmen enrollments, it is included in the eighth increment, actually in forty-first place, while in Table III, which is based on enrollments of all classifications it ranked fourteenth from the top. This can be explained by the

TABLE III

COMPARISON OF 1960 FORT HAYS KANSAS STATE COLLEGE
STUDENT BODY ENROLLMENT BY COUNTIES WITH
COLLEGE AGE POPULATION, TOTAL
POPULATION AND DISTANCE
FROM COLLEGE

Position by Enr.	County	FHS Enr. in Fall 1960	18-24 in '60	Total Pop. in 1960	% of Change '50-'60	Distance from College
1	Ellis	278	3,251	21,270	+11.2	0
2	Barton	148	2,246	32,368	+ 8.2	61
3	Russell	147	636	11,348	-15.4	25
4	Rooks	115	584	9,734	+ 7.6	40
5	Rush	88	300	6,160	-14.8	25
6	Osborne	69	397	7,506	-12.3	72
7	Ness	69	312	5,470	-13.5	62
8	Norton	66	429	8,035	- 8.8	94
9	Phillips	62	527	8,709	- 6.1	63
10	Decatur	51	296	5,778	- 6.6	123
11	Thomas	51	542	7,358	- 2.8	119
12	Stafford	50	411	7,451	-15.5	89
13	Gove	46	261	4,107	- 7.6	70
14	Ford	46	1,781	20,938	+ 6.4	100
15	Ellsworth	44	399	7,677	- 9.3	65
16	Graham	44	399	5,586	+11.3	59
17	Trego	42	357	5,473	- 6.7	34
18	Mitchell	41	400	8,868	-14.1	110
19	Pawnee	40	590	10,254	- 7.1	62
20	Lane	38	198	3,060	+ 9.0	94
21	Ottawa	38	420	6,779	- 6.7	105
22	Scott	37	375	5,228	+ 6.2	118
23	Edwards	36	271	5,118	-13.8	72
24	Rawlins	35	297	5,279	- 7.8	149
25	Smith	34	410	7,776	-12.1	93
26	Saline	31	7,640	54,715	+63.8	100
27	Jewell	30	346	7,217	-25.6	123
28	Rice	30	1,066	13,909	-11.0	92
29	Clark	29	185	3,396	-13.9	152
30	Dickinson	29	1,336	21,572	+ 1.8	125

TABLE III (continued)

Position by Enr.	County	FHS Enr. in Fall 1960	18-24 in '60	Total Pop. in 1960	% of Change '50-'60	Distance from College
31	Sheridan	29	282	4,267	- 7.4	84
32	Sherman	28	493	6,682	- 9.4	155
33	Reno	27	5,158	59,055	+ 9.2	123
34	Cheyenne	26	243	4,708	-16.9	192
35	Cloud	26	894	14,407	-10.5	138
36	Stevens	24	366	4,400	- 2.6	176
37	Comanche	23	192	3,271	-15.9	120
38	Kiowa	23	297	4,626	- 2.5	97
39	Lincoln	21	268	5,556	-16.4	73
40	Pratt	19	872	12,122	- 0.3	111
41	Logan	18	277	4,036	- 4.0	110
42	Republic	16	490	9,768	-14.9	115
43	Sedgwick	16	30,494	343,231	+54.5	180
44	Hodgeman	15	180	3,115	- 5.9	82
45	Seward	15	1,273	5,930	+59.7	180
46	Finney	14	1,427	16,093	+ 6.6	138
47	Grant	12	419	5,269	+13.6	194
48	Meade	10	350	5,505	- 3.6	140
Total		2,226	70,637	850,178		

Source: Bureau of Census, United States Department of Commerce, United States Census of Population, 1960, General Population Characteristics, Kansas, Washington: Government Printing Office, 1961, pp. 107-131; Extension Office, "Fall Enrollment at Fort Hays Kansas State College" (Hays, Kansas: F.H.K.S.C., Mimeographed, 1960).

NOTE: The total college enrollment omits students from Kansas counties outside of the 48-County Area, other states and foreign countries; also late enrollees. Distance from college site was computed as for Table II.

location of junior college facilities at Dodge City in Ford County.

In addition to the factors of the population of a community and its proximity to the College, there are other factors which are more difficult to evaluate in relation to attendance at the College, but which unquestionably exert an enormous influence upon it. Financial position, motivation for higher learning, mental ability and high school achievement of students are considered by some authorities to be primary determinants for or against college attendance.¹⁸ In view of the fact that Fort Hays Kansas State College enrollments have increased within the same decade in which population of many of the rural counties in its Area was decreasing, it can be assumed that these factors have been working in favor of such increases.

III. STABILITY OF THE FORT HAYS KANSAS

STATE COLLEGE GEOGRAPHICAL AREA

There is no evidence to support a supposition that the college geographical community is broadening out more rapidly than the growth of enrollments warrant. Approxi-

¹⁸Beezer, Robert H., and Howard F. Hjelm, Factors Related to College Attendance, Office of Education, United States Department of Health, Education and Welfare, Monograph #8 (Washington: Government Printing Office, 1961), pp. 6-27.

mately the same percentage of the students had their homes in the 48-County Area each year from 1958 through 1962 (see Table XVIII, page 73). It was stated by Howell¹⁹ that "The 51-County Area has contributed an average of 91.2 percent of the enrollment to Fort Hays Kansas State College for (the period 1929 to 1955). . . Thus, the enrollment contribution from the 51-County Area has increased by 1.5 percent over the first thirteen years of the period."

(Italics added.)

The fact that about ninety percent of Fort Hays Kansas State College enrollment has come from approximately the same geographical area surrounding the College for the past three decades does not, of course, mean that this situation will inevitably remain static. The changing conditions in areas of population concentration in the United States which have engulfed institutions of higher education in those areas and forced them to raise admission standards, excluding a greater proportion of prospective enrollees, may mean that colleges in comparatively sparsely populated areas, including Fort Hays Kansas State College, will receive the overflow.

¹⁹ Howell, op. cit., pp. 69, 71.

IV. POPULATION OF THE AREA

In 1960 the 48-County Area contained 850,178 people, or thirty-nine percent of the total population of the state. This was a gain of 1.5 percent over 1950. However, most counties in the 48-County Area did not keep pace with Kansas population growth during that ten year period according to the United States Bureau of the Census.²⁰ Thirty-four of the forty-eight counties lost an average of 14.1 percent from their population while fourteen gained an average of 18.5 percent (see Table III, column 6, page 24). The entire Area gained 135,347 people, but two counties within it, Sedgwick and Saline, gained 6,900 more than that. In other words, if Sedgwick and Saline Counties had been excluded from the study, the remaining area of forty-six counties would have shown a population loss of 6,900 between 1950 and 1960. This is a manifestation of the rural to urban trend which is nationwide, and which pulled 8.9 percent of rural Kansans into the cities of Kansas during the 1950 to 1960 decade.²¹

²⁰Bureau of the Census, United States Department of Commerce, United States Census of Population: 1960. General Population Characteristics, Kansas (Washington: Government Printing Office, 1961), pp. 36-37, 107-131.

²¹Ibid., p. 31.

Some observers in rural areas regard with foreboding the trend toward urbanization which these figures illustrate, but it is a popular fallacy that economic prosperity accompanies population growth and compression in a limited area when actually the buying power of the people within a community makes its prosperity or poverty. On the basis of its recent economic history and the confidence of some major national industries²² in the future buying power of this area, it can be confidently stated that the trend of population loss has not administered economic impairment to the area and will not do so in the foreseeable future.

The State of Kansas as a whole has been losing college age population, as indicated in Table IV, both in percentage of total population and in actual count. In reality the decrease in Kansas youth has not occurred in the 15-19 year old bracket,²³ since these have kept pace in percentage, 7.2 percent, increasing in numerical count, with Kansas population. The decline has been in the 20-24 year age group: in the decade from 1950 to 1960 this

²²Beach, Lloyd C., Manager, Twenty-One County Area in Northwest Kansas for Southwestern Bell Telephone Company, personal interview, January 3, 1963.

²³U. S. Census, 1960, General Population Characteristics, Kansas, op. cit., p. 41.

TABLE IV

COMPARISON OF TOTAL KANSAS POPULATION
WITH THE 18-24 YEAR OLD GROUP

<u>Year</u>	<u>All Ages in Population</u>	<u>18-24 Age Group</u>	<u>18-24 Percent</u>
1930	1,851,024	231,925	12.5
1940	1,778,248	212,431	11.9
1950	1,904,584	195,580	10.3
1960	2,178,611	190,689	8.8

Source: Bureau of Census, United States Department of Commerce, United States Census of Population, 1960, General Population Characteristics, Kansas, Washington: Government Printing Office, 1961, p. 40; Howell, Lionel D., A Study of Fort Hays Kansas State College Enrollments (Unpublished Master's Thesis, F.H.K.S.C., Hays, Kansas, 1956), p. 63.

group changed from 7.4 percent to 6.1 percent of the total population.

Of more direct concern to the purpose of this study is the status of college age population within the 48-County Area. As can be seen in Table V, which shows the 18-24 year old group of the Area as compared with the state as a whole, the 48-County Area had, in 1960, almost as many junior college age youth, the eighteen and nineteen year olds, in proportion to all age groups in the Area as had the remainder of the state, and slightly less senior college and graduate age youth, the 20-24 year olds. This indicates that college age youth are not emigrating from the 48-County Area in significantly greater numbers than they are emigrating from the state as a whole.

V. SUMMARY

The geographical area of Fort Hays Kansas State College was chosen by limiting its extent to counties where fifteen or more freshmen had permanent addresses in 1961. Forty-eight counties in Central and Western Kansas conformed to this criterion, and these contributed about ninety percent of the College's freshmen enrollment. Proximity to the college was found to be the primary factor

TABLE V

COMPARISON OF COLLEGE AGE POPULATION OF KANSAS
AND THE 48-COUNTY AREA IN 1960

(1) Age	(2) In Kans.	(3) % of All Ages in Kans.	(4) In 48- County Area	(5) % of All Ages in 48-Co's	% Kans. Pop. of Same Age in 48-Co's.
18	30,220	1.4	10,585	1.2+	35.0
19	27,917	1.3	9,639	1.1+	34.5
20	27,094	1.2	9,656	1.1+	35.6
Total 18-20 (3 yrs.)	85,231	3.9	29,880	3.5	35.1
21-24 (4 yrs.)	105,458	4.8	40,757	4.7	38.6
Total 18-24 (7 yrs.)	190,689	8.7	70,637	8.3	37.0
All age groups:	2,176,611:	100.0	850,178:	39.0	

Source: Bureau of Census, United States Department of Commerce, United States Census of Population, 1960, General Population Characteristics, Kansas, Washington: Government Printing Office, 1961.

NOTE: This table should be read as follows: 1.4 percent, or 30,220 Kansans were 18 years old in 1960, and 10,585 of these (35 percent) resided in the 48-County Area. The fifth column shows the size of the college age segment of all ages in the Area, thus 4.7 percent of the total population of the Area were 21-24 years old in 1960. The last figure in column (5) is the 48-County Area percentage of the state population of all ages.

in determining the number of enrollees from a county, with population a secondary factor.

The Area from which students come to the college has remained much the same for several decades. The overall population of the Area, while growing, has been shifting from rural areas to towns and cities. In 1960 there were more than 70,000 college-age youth in the Area, which was thirty-seven percent of Kansas youth of college age.

CHAPTER III

ELEMENTARY AND SECONDARY SCHOOL ENROLLMENTS

IN THE 48-COUNTY AREA

In order to establish a solid foundation upon which college enrollment predictions can be based, this chapter is devoted to a description of pre-college levels of school enrollments in the 48-County Area, their status as related to general population, their patterns of conduct in the recent past, and what these patterns mean in terms of future enrollments at Fort Hays Kansas State College.

Most of the data used in this chapter were obtained from records of the Kansas State Department of Public Instruction. Other sources were the Extension Office and Registrar's Office of the College and the results of a survey conducted for the purpose of determining the percentage of twelfth graders in the 48-County Area who enrolled as freshmen at the College in a recent five year period.

I. SCHOOL ENROLLMENT AND COUNTY POPULATION

Although the 48-County Area contained 39.0 percent of the state's population, it had 40.0 percent of the state's elementary and secondary school enrollments:

counties of less than 5000 population were contiguous to Ellis County. For this reason, Fort Hays Kansas State College enjoyed the same advantage of location in an area of comparative population concentration as do most thriving institutions of higher education.

The increase of enrollments in descending order of grade level was discussed in Chapter I as a factor tending to increase enrollment at Fort Hays Kansas State College in the years immediately ahead. This point was illustrated in Table I, page 5, which showed that there were nearly twice as many first graders as twelfth graders enrolled in the public and non-public schools of the 48-County Area in the school year of 1960-1961. This phenomenon can be explained by rising birth rates in the Area, which in a great measure cause younger people to proportionately outnumber older people, and by school drop-outs, which will be discussed later.

A comparison of the enrollments in elementary and secondary schools of the 48-County Area with the total population of the Area, and the school enrollments of the same levels in the whole state with the state population of all ages, revealed that there were, in 1960, 0.5 percent more school children in the 48-County Area than were in Kansas as a whole: 23.6 percent and 33.1 percent respectively (see Table VI).

TABLE VI

TOTAL POPULATION AND ELEMENTARY AND SECONDARY SCHOOL ENROLLMENTS IN EACH OF THE 48 COUNTIES

Over 10,000:14

(1) Rank by Population	(2) County	(3) Population 1960	(4) Grades 1-12
1	Sedgwick	343,231	81,652
2	Reno	59,055	13,145
3	Saline	54,715	11,735
4	Barton	32,368	8,129
5	Dickinson	21,572	5,158
6	Ellis	21,270	5,389
7	Ford	20,938	5,343
8	Finney	16,093	4,210
9	Seward	15,930	5,173
10	Cloud	14,407	3,311
11	Rice	13,909	3,318
12	Pratt	12,122	2,830
13	Russell	11,348	2,810
14	Pawnee	10,254	2,005
	Sub-Total	647,212	153,208

5000 to 10,000:24

(1) Rank by Population	(2) County	(3) Population 1960	(4) Grades 1-12
15	Republic	9,768	1,988
16	Rooks	9,734	2,538
17	Mitchell	8,866	2,084
18	Phillips	8,709	2,070
19	Norton	8,035	1,805
20	Smith	7,776	1,571
21	Ellsworth	7,677	1,735
22	Osborne	7,506	1,602
23	Stafford	7,451	1,745
24	Thomas	7,358	1,808
25	Jewell	7,217	1,449
26	Ottawa	6,779	1,471
27	Sherman	6,682	1,593
28	Rush	6,160	1,485
29	Decatur	5,778	1,389
30	Graham	5,586	1,234
31	Lincoln	5,556	1,116
32	Meade	5,505	1,413

TABLE VI (continued)

(1) Rank by Population	(2) County	(3) Population 1960	(4) Grades 1-12
33	Trego	5,473	1,210
34	Ness	5,470	1,382
35	Rawlins	5,279	1,357
36	Grant	5,269	1,483
37	Scott	5,228	1,322
38	Edwards	5,118	1,296
	Sub-Total	163,980	38,146

Less than 5000:10

(1) Rank by Population	(2) County	(3) Population 1960	(4) Grades 1-12
39	Cheyenne	4,708	1,051
40	Kiowa	4,626	1,202
41	Stevens	4,400	1,299
42	Sheridan	4,267	957
43	Gove	4,107	1,178
44	Logan	4,036	1,255
45	Clark	3,396	762
46	Comanche	3,271	764
47	Hodgeman	3,115	706
48	Lane	3,060	794
	Sub-Total	38,986	9,965
	Total	850,178	201,319

% of school children to population of 48-Counties:
23.6% of all ages

% of Kansas School children to entire state popu-
lation: 23.1%

Source: Bureau of Census, United States Department of Commerce, United States Census of Population, 1960, General Population Characteristics, Kansas, Washington: Government Printing Office, 1961, pp. 107-131; "1960-1961 Enrollment, Public and Non-Public Schools, 48-Selected Counties" (Unpublished Data, Office of Statistical Services, Kansas State Department of Public Instruction, Topeka, Kansas: 1962).

II. PUBLIC AND NON-PUBLIC SCHOOL ENROLLMENTS

Since graduates of non-public elementary and secondary schools are more inclined to attend non-public institutions of higher education than are graduates of public schools, the status of non-public education on elementary and secondary levels in the 48-County Area is of some import to enrollments at this publicly controlled college.

Twenty-six of the forty-eight counties contained state accredited non-public schools in 1960-1961, and at least one more, Thomas County, obtained non-public school facilities in 1961-1962. All told, there were ninety-five non-public schools in the Area, twenty-six of which were located in Sedgwick County.

The growth of non-public schools in Kansas from 1955 to 1961, inclusive, is shown in Table VII. During this seven year period the percentage of school children attending non-public schools of the state increased by 2.6 percent, the rate of increase averaging about .37 percent a year. In the 48-County Area, 17,770 pupils were in non-public schools in 1960-1961, the only year for which complete enrollment data are available for that Area as separate from the state. This number represents 8.1 percent of the total elementary and secondary enrollment of the Area, less than the figure for Kansas for that

TABLE VII

KANSAS PUBLIC AND NON-PUBLIC SCHOOL
ENROLLMENTS IN GRADES 1-12

School Year	Public School Enrollment	Non-Public School Enrollment	Number of Non-Public Schools Reporting	Total Enrollment in Public and Non-Public	Non-Public Percent of Total Enrollment
1954-1955	396,078	29,805	240	425,883	07.0
1955-1956	403,884	38,151	253	442,035	08.6
1956-1957	408,936	40,190	247	449,126	08.9
1957-1958	420,853	43,494	248	464,347	09.4
1958-1959	434,418	45,054	248	479,472	09.4
1959-1960	439,793	47,265	219	487,058	09.7
1960-1961	455,165	48,197	242	503,362	09.6

Source: Kansas State Department of Public Instruction, Statistical Annual Reports for 1954-1961. Topeka, Kansas: Mimeographed, 1955, 1956, 1957, 1958, 1959, 1960, and 1961.

school year (see Table VII).

In the United States, non-public schools have been enrolling an ever increasing proportion of elementary school children since the turn of the century. In 1900, 7.6 percent of all pupils were in non-public schools, and by 1959 the percentage had increased to 14.8.²⁶ By this standard Kansas, and especially the 48-County Area, had comparatively few non-public school pupils during this period.

III. RETENTION RATES AND PREDICTED ENROLLMENTS IN ELEMENTARY AND SECONDARY SCHOOLS IN KANSAS AND THE 48-COUNTY AREA

In most schools, not all pupils who enroll progress to higher levels of the schools' offerings. The percentage of first graders who, in due course, become twelfth graders in an elementary and secondary system is called the retention rate of the system. Its opposite, the percentage which leaves school at some time before reaching the highest level, is called the drop-out rate.

For the purpose of this study, it was necessary to determine, as accurately as possible, the following facts

²⁶Rossi, Peter and Alice Rossi, "Some Effects of Parochial School Education in America," The Sociology of Education, Robert R. Bell, editor (Homewood, Illinois: Dorsey Press, Inc., 1962), p. 59.

about retention rates of recent years in the schools that give pre-college training to young people who will eventually make up the majority of Fort Hays Kansas State College students: (1) the percentage of pupils who have stayed in school until they became twelfth graders, (2) whether this percentage has increased, and if so, how much, (3) what the retention rates by grades have been, and (4) what these rates promise to be in the future. Arriving at these retention rate facts was necessary in this study in order to project the available enrollment data into the future.

The retention rate statistics for elementary and secondary public schools for the entire state of Kansas were readily available for grades one through twelve as a unit for each of eleven recent, consecutive years (see Table VIII). These statistics show that the retention rates in the pre-college public schools of Kansas were, between 1949 and 1960, increasing at the rate of 1.3 percent yearly on the average. If this trend continues, and calculations were based on the assumption that it will continue, progressively more and more pupils will be staying in school into progressively higher levels in the future. The twelfth grade class of 1949 in Kansas was 55.8 percent of the number entering first grade in 1938, and the twelfth grade class of 1960 was 70.0

TABLE VIII

INCREASED RETENTION RATES OF KANSAS SCHOOLS

Year Entering Grade 1	Grade 1 Enrollment (in thou's)	Year in 12th Grade	12th Grade Enrollment (in thou's)	Percent Reaching 12th Grade	Percent Difference From Previous Yr.
1938	33.9	1949	18.9	55.8	
1939	31.8	1950	18.8	59.1	+3.3
1940	32.3	1951	19.0	58.7	-0.4
1941	32.6	1952	19.5	59.8	+1.1
1942	34.4	1953	19.9	57.7	-2.1
1943	33.1	1954	20.1	60.7	+3.0
1944	33.6	1955	21.1	63.0	+2.3
1945	33.8	1956	20.9	61.8	-2.2
1946	32.4	1957	21.5	66.5	+4.7
1947	33.2	1958	22.4	67.5	+1.0
1948	36.2	1959	24.5	67.9	+0.2
1949	37.9	1960	26.5	70.0	+2.1
Total increase					+14.2
Increase from 1955-1960, inclusive					+8.1
Average increase per year					+1.3

Source: Kansas State Department of Public Instruction, The Kansas System of Public Schools. Topeka, Kansas: State Printing Office, 1962.

percent of the number entering first grade in 1949. The present study predicts on the basis of the above, that 88.5 percent of children who were third graders in 1960 will go into twelfth grade in the fall of 1969. (See Table X.) Thus, the information in Table VIII answers the questions implied in (1) and (2), above.

Retention rates by grades were not so readily available as those for the pre-college levels as a unit. It was essential, however, that such rates be determined in order to predict the number of twelfth graders in the 48-County Area (the chief source of Fort Hays Kansas State College freshmen students) by years. To this end, research was conducted with published data of the State Department of Public Instruction. The Statistical Annual Reports of this department list enrollments in the public schools of the state by grades. Seven of the reports, from the year 1954 through 1961, were used to compile the data in Table IX. The result of the calculations which made up this table was a series of drop-out percentages by grades, which, when added, yield an accumulative drop-out percentage for any number of years from third through twelfth grades. By this criterion, for example, any second grade class of Kansas will lose 1.63 percent of its pupils sometime after their entering second grade and before entering third grade. The class will lose

considerably more before entering high school, and the losses will accelerate during the high school years. However, the high school class of 1970 will have lost fewer members between third and twelfth grades than the class of 1963 will have lost between ninth and twelfth grades. The reason for this seeming paradox is the established trend for retention rate increase as described above.

Table IX, then, tells what retention rates were by grades, at the time when the most recent data were in effect, 1961. Table X predicts what these rates will be through 1970. The information derived from this series of tables (VIII through X) made possible the calculation of predicted twelfth grade enrollments in the 48-County Area for each year from 1963 to 1970.

It should be noted here that the purpose of this study is not to compare these rates with those of any particular school system or with those of any other state. The purpose here is to determine these rates solely to put them to use in predicting future enrollments at the College. However, it should be recognized that many retention rate tables begin with the fifth grade, while the rates in this study were carried down through second grade. Inclusion of second, third and fourth grades in the present study made possible prediction of college enrollments to 1970 rather than 1967.

TABLE IX

DROP-OUT FROM PUBLIC SCHOOLS OF KANSAS,
1954 TO 1961

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Grade	Total Enrollment For Six Years	Change from Former Grade	Average Drop-Out Percent	Percent Added For Transfers And Retention Rate Increase	Adjusted Drop-Out Percent (4)+(5)	Accumulative Drop-Out Percent
2	263,198	-13,653				
3	256,581	- 8,462	-3.30	+1.67	-1.63	-1.63
4	244,548	- 8,013	-3.28	+1.67	-1.61	-3.24
5	231,857	- 4,104	-1.77	+1.67	-0.10	-3.34
6	218,843	- 7,589	-3.47	+1.67	-1.80	-5.14
7	211,801	- 2,137	-1.01	+1.67	+0.66	-4.48
8	200,815	- 5,080	-2.53	+1.67	-0.86	-5.34
9	189,012	- 1,363	-0.72	+1.56	+0.84	-4.50
10	172,128	- 9,767	-5.66	+1.56	-4.10	-8.60
11	156,054	-13,051	-8.36	+1.56	-6.80	-15.40
12	137,061	-14,565	-10.62	+1.56	-9.06	-24.46

Source: Kansas State Department of Public Instruction, Statistical Annual Reports for 1954-1961. Topeka, Kansas: Mimeographed, 1955, 1956, 1957, 1958, 1959, 1960, and 1961; Kansas State Department of Public Instruction, The Kansas System of Public Schools. Topeka, Kansas: State Printing Office, 1962.

NOTE: Figures in column (2) included the years for which comparisons could be made, i.e., six years rather than seven. Column (5) takes into account the fact that a pupil is counted even if attending only part of a year, thus those who move to another place in Kansas would be counted more than once. This duplication is estimated at 3 percent for secondary schools and six percent for elementary schools, by Fay Kampschroeder, Director, School Finance Section, Kansas State Department of Public Instruction. Therefore, .75 percent is added to each year of secondary school and .86 percent to each year of elementary school. The adjustment figure in (5) allows also for the increase that has taken place in retention rates of Kansas schools since 1954: 8.1 percent (see Table VIII), or .81 percent per year. $.75 + .81 = 1.56$ per year for secondary school years, $.86 + .81 = 1.67$ for elementary school years.

Following the finding of drop-out rates and retention rates by grades, it was possible to apply them to the enrollment figures of elementary and secondary school grades that were available at the time the study was made. The results of this application for Kansas is shown in Table X. However, the results of such an application for the 48-County Area are shown in Chapter V, since they have direct bearing on enrollment at the College.

In Table XI an attempt was made to estimate the retention rates in the elementary and secondary schools of the 48-County Area, but since much less complete data for this table were obtainable (enrollments for only two years and for only eighteen of the forty-eight counties), the figures quoted should be regarded as merely indicative of the school retention rates of the 48-County Area. There are similarities between Table X and Table XI, however, which tended to assure the validity of applying the state rates to enrollments in the Area. Column (4) in Table XI collates column (4) in Table X, and in both a comparatively regular drop-out rate is apparent from the second to the tenth grade, when it climbs abruptly and remains high through the twelfth grade.

The drop-out percentages from the high school years for the state and the 48-County Area varied by only 1.48 percent, being 19.96 percent and 21.44 percent respectively.

TABLE X

PREDICTED ENROLLMENTS OF KANSAS TWELFTH GRADERS TO 1970

(1) Class of:	(2) Grade in 1960- 1961	(3) Enrollment in 1960-1961	(4) Drop-Out Percent from Former Grade	(5) Accumu- lated Drop-Out Percent	(6) Projected Increased Holding Power Over 1960	(7) Predicted Drop-Out Percent- ages (5)-(6)	(8) Percent Who Will Reach 12th Grade 100% - (7)	(9) Predicted 12th Grade Enrollment in Kansas
1961	12	26,541	-9.06	-9.06	+1.30	-8.93	91.07	
1962	11	27,920	-6.80	-15.86	+2.60	-13.26	86.74	25,426
1963	10	28,480	-4.10	-19.96	+3.90	-16.06	83.94	24,710
1964	9	35,017	+0.84	-19.12	+5.20	-13.92	86.08	29,393
1965	8	39,824	-0.86	-19.98	+6.50	-13.48	86.52	34,280
1966	7	38,627	+0.66	-19.32	+7.80	-11.52	88.48	33,521
1967	6	38,416	-1.80	-21.12	+9.10	-12.02	87.98	33,990
1968	5	39,692	-0.10	-21.22	+10.40	-10.82	89.18	34,931
1969	4	41,722	-1.61	-22.83	+11.70	-11.13	88.87	37,208
1970	3	44,237	-1.63	-24.46	+13.00	-11.46	88.54	39,313

Source: Kansas State Department of Public Instruction, Statistical Annual Reports for 1954-1961. Topeka, Kansas: Mimeographed, 1955, 1956, 1957, 1958, 1959, 1960, and 1961; Kansas State Department of Public Instruction: The Kansas System of Public Schools. Topeka, Kansas: State Printing Office, 1962.

NOTE: This table is read by applying the retention percentage in column (8) to the enrollment in the line below it in column (3), thus acquiring a prediction. Unlike column (7) in Table IX, the figures in column (5) are cumulative from twelfth through third grades to provide predictions on future school leavers. Column (6) extrapolates 1.30 percent per year on the basis of retention rate increases in the last decade in Kansas schools (see Table IX).

Moreover, the total enrollment reduction percentage for the state (see column (6), Table IX, p. 46) virtually duplicates the estimated figure for the Area which is comparable to it (see Table XI).

The data used for Table XI were more complete than those for the two preceding tables in that they included enrollments from non-public as well as public schools, although any difference in results would be minor.

If fully complete elementary and secondary school enrollment data were obtained and processed for retention rates of the 48-County Area, the results would probably show somewhat higher school retention than those for the state as a whole, in view of the Area's high twelfth grade enrollment compared to enrollment in all of the twelve grades of the Area (see page 35). However, since school retention rates for the 48-County Area as separate from Kansas are not specifically known, it was concluded that greater accuracy could be achieved by applying the state rates to the 48-County Area elementary and secondary school enrollments for the purpose of predicting future enrollments at Fort Hays Kansas State College. This constituted the first basic method which was applied in achieving the purpose of this study.

TABLE XI

ESTIMATED RETENTION RATES IN PUBLIC AND NON-PUBLIC
SCHOOLS OF THE 48-COUNTY AREA

Based on Two Years and Eighteen Counties

(1) Grade	(2) 1961-1962 Enrollment	(3) Change From 1960-1961	(4) Percentage of Change
12	2590	192	- 8.00
11	2464	188	- 7.62
10	3052	178	- 5.82
9	3567	14	- .39
8	3444	80	- 2.32
7	3546	89	- 2.50
6	3803	+ 22	+ 0.58
5	3949	+ 42	+ 1.06
4	4040	118	- 2.92
3	4193	22	- 0.52
Total			-28.49
Percent Added for Increased Holding Power:			+ 2.60
Percent Added for Transfers Within the Area:			+ 1.50
Estimated Enrollment Reduction:			-24.39
Estimated 1962 Retention Rate:			+75.61

Source: Kansas Department of Public Instruction, Statistical Services Section, Unpublished Data from County Superintendent's Reports, 1962.

IV. PERCENTAGE OF TWELFTH GRADERS OF THE 48-COUNTY AREA WHO ENROLL AS FRESHMEN AT THE COLLEGE

In the past it has been mistakenly estimated that birth rates and population figures have been the only important prepotent factors affecting college enrollments. Recently it has become apparent to observers of the upsurge in college enrollments that other factors are at work: the higher academic qualifications of high school graduates, the increasing proportion of these graduates who are financially able to go to college, increasing emphasis on scholarships, and the attitudes toward a college education as a social necessity.

These trends, affecting the whole nation, have not passed over the 48-County Area which Fort Hays Kansas State College primarily serves. Although population in thirty-four of these counties declined in the decade from 1950 to 1960 (see page 30) enrollments of freshmen students at the college decreased in only thirteen of the forty-eight counties of the Area between 1958 and 1962 (see Table XII). Of the thirty-three counties from which an increasing number of freshmen enrollees came to the college between 1958 and 1962, twenty-one had lost population between 1950 and 1960. The factor of population growth or shrinkage is,

TABLE XII

FRESHMEN ENROLLMENT CHANGES AND POPULATION CHANGES
IN 48-COUNTIES

Rank By Enrollment Change	County	Freshmen Enrollment 1958	Freshmen Enrollment 1962	Enrollment Change	Percent of Total Population Change 1950-1960
1	Ellis	99	139	+40	+11.7
2	Rooks	31	56	+25	+ 7.6
3	Saline	3	22	+19	+63.8
4	Sedgwick	2	21	+19	+54.4
5	Barton	58	68	+15	+ 8.2
6	Hodgeman	3	18	+15	- 5.6
7	Seward	3	18	+15	+59.7
8	Sherman	7	22	+15	- 9.4
9	Ottawa	4	18	+14	- 6.7
10	Phillips	21	35	+14	- 6.1
11	Logan	5	18	+13	- 4.0
12	Ness	15	27	+12	-13.5
13	Thomas	13	25	+12	- 2.8
14	Mitchell	8	19	+11	-14.1
15	Graham	12	22	+10	+11.3
16	Dickinson	5	13	+ 8	+ 1.8
17	Osborne	22	30	+ 8	-12.3
18	Reno	3	11	+ 8	+ 9.2
19	Russell	45	53	+ 8	-15.4
20	Trego	13	21	+ 8	- 6.7
21	Cloud	9	15	+ 6	-10.5
22	Lincoln	4	8	+ 4	-16.4
23	Pratt	0	6	+ 6	- 0.3
24	Sheridan	8	14	+ 6	- 7.4
25	Smith	4	18	+ 4	-12.1
26	Lane	7	10	+ 3	+ 9.0
27	Decatur	8	10	+ 2	- 6.6
28	Pawnee	24	27	+ 3	- 7.1

TABLE XII (continued)

Rank By Enrollment Change	County	Freshmen Enrollment 1958	Freshmen Enrollment 1962	Enrollment Change	Percent of Total Population Change 1950-1960
29	Finney	1	3	+ 2	+ 6.6
30	Grant	4	6	+ 2	+13.6
31	Rawlins	8	9	+ 1	- 7.8
32	Republic	8	9	+ 1	-14.9
33	Stevens	5	6	+ 1	- 2.6
34	Comanche	5	5	--	-15.9
35	Gove	17	17	--	- 7.6
36	Rice	8	7	- 1	-11.0
37	Rush	27	26	- 1	-14.8
38	Scott	9	8	- 1	+ 6.2
39	Cheyenne	10	8	- 2	-16.9
40	Edwards	10	7	- 3	-13.8
41	Ford	8	4	- 4	+ 6.4
42	Jewell	11	7	- 4	-25.6
43	Stafford	18	14	- 4	-15.5
44	Clark	10	5	- 5	-13.9
45	Meade	7	2	- 5	- 3.6
46	Kiowa	12	6	- 6	-25.0
47	Ellsworth	21	13	- 8	- 9.3
48	Norton	24	15	- 9	- 8.8

Counties decreasing freshmen enrollments at the college: 13

Counties increasing freshmen enrollments at the college: 33

Counties remaining constant in freshmen enrollments at the college: 2

Source: Extension Office, "Fall Enrollment, Fort Hays Kansas State College" (Hays, Kansas: F. H. K. S. C., Mimeographed, 1958 and 1962).

NOTE: The enrollment figures cited are for fall enrolling freshmen only, and do not include late enrollees.

therefore, the only factor in determining college enrollments in this, as in other areas.

In order to determine whether an increasing percentage of the 48-County Area twelfth graders enrolled at Fort Hays Kansas State College in recent years, and at what rate such an increase may have taken place, it was necessary to have data on both the college enrollments and the Area twelfth grade enrollments for several consecutive years. At the beginning of the study, data available on twelfth grade enrollment in the Area were confined to the school year of 1960-1961, therefore it was deemed necessary to conduct a survey of county superintendents' records of twelfth grade enrollments to supply the needed data for four additional years. Accordingly, a short questionnaire and an explanatory letter were sent to the county superintendents of each of the forty-eight counties (see Appendix). Replies were received from forty-four, thirty-nine of which contained useable data, yielding a sampling representative of more than eighty percent of the Area counties.

These data were processed and incorporated into Table XIII along with freshmen fall enrollment figures at the college for the appropriate terms. The resulting percentages (see column (6), Table XIII) reveal that an increasing proportion of Area twelfth graders have come to Fort

TABLE XIII

RESULTS OF SURVEY TO FIND THE PERCENT OF TWELFTH
GRADERS IN THE 48-COUNTY AREA WHO ENROLL
AS FRESHMEN AT THE COLLEGE

(1) Class of:	(2) 12th Grade Enrollment at	(3) Enrolled at FHKSC in Fall	(4) Adjust- ment Percent	(5) Adjusted FHKSC Enrollment	(6) Percent of 12th Grade Enrolled at FHKSC	(7) Change From Previous Year
1958	7226	602	2.7	618	8.53	
1959	7557	625	7.0	669	8.85	+ .30
1960	8507	655	3.2	676	7.95	- .90
1961	9640	815	4.0	848	8.80	+ .85
1962	8640	855	4.6	894	10.39	+1.59
Average yearly change						+0.36

Source: Data obtained from questionnaires returned by county superintendents of thirty-nine counties in the 48-County Area; Extension Office, "Fall Enrollment, Fort Hays Kansas State College," (Hays, Kansas: F. H. K. S. C., Mimeographed, 1958, 1959, 1960, 1961, 1962); "Bulletin, FHKSC, 1960-1961," Fort Hays Kansas State College, State Printing Office, Topeka, Kansas, 1961; Registrar's Office, Fort Hays Kansas State College, Hays, Kansas: unpublished data, 1962.

NOTE: Public and non-public school enrollments were requested from the county superintendents. The adjustment percentage was added to compensate for late enrollees who were not included in the extension office records from which the figures in column (3) were taken. This percentage was determined by comparison of Registrar's Office records with Extension Office records. The figures in column (6) were obtained by dividing the figures in column (2) into those in column (5).

Hays Kansas State College for the past five years. By extrapolating on the postulate that this proportion will continue to increase at the same rate, a second basic procedure for predicting future enrollments at the college was established.

V. SUMMARY

One-half of the counties in the 48-County Area had between 5,000 and 10,000 population per county, and the remainder were fairly evenly divided into two more groups, one of which had more than 10,000 population per county and the third had less than 5,000 population per county.

Although an increase in county population usually was accompanied by an increase in enrollment at the College, it was also a common occurrence for a county to send an increasing number of students to the College during the same period in which it was losing population.

Of the 850 thousand people in the forty-eight counties, 200 thousand were in elementary and secondary schools in 1960. These pupils are the resource for the major part of Fort Hays Kansas State College enrollments of the next decade.

The retention rates of the pre-college levels of Kansas public schools have increased in recent years. At the present rate of increase, 88.5 percent of 1960's third graders will reach twelfth grade in Kansas in 1970. Furthermore, an increasing proportion of the Area's twelfth graders have been coming to the College annually.

CHAPTER IV

TRENDS AND COMPARISONS OF COLLEGE ENROLLMENTS

A survey of national trends in college and university enrollments cannot be construed to specifically affect an individual institution, since influences of economy, population and public opinion vary from one locality to another. However, the controlling powers, the problems and the aims of all institutions of higher education have much in common, and a general overview of these was believed to be applicable in this study.

Higher education enrollments at Fort Hays Kansas State College are compared with national and state enrollments in this chapter, and a short history of these and a list of future sources of increased enrollments at the College is included.

The main sources of basic information used in this chapter were the United States Office of Education, the University of Kansas and other state sources.

I. COLLEGE ENROLLMENTS IN THE UNITED STATES

The most distinct trend in enrollments in colleges and universities in recent years is one of increased enrollments. In the United States 1962 was the eleventh

consecutive year which saw an unsurpassed record in total degree-credit enrollment. Not only has the number of high school graduates, the source of supply, been expanding in the past decade, but the percentage of these who go to college has been rising in the nation as a whole.

Looking at college enrollments in this country over a span of two decades following the economic depression of the "thirties," it is interesting to note that the vast increases in these enrollments were based upon nearly the same population figures, about 9,600,000 college age youth. The years 1939 and 1960 were equally free of conditions which tend to distort college enrollments, such as unusual economic conditions, war and its aftermath, or other widespread disasters. Therefore, these years provide excellent bases of comparison and contrast from the point of view of college enrollment dynamics. Table XIV illustrates what happened to college enrollments during those decades.

The most striking aspect of this table is that the percentage of college students to college age students more than doubled between 1939 and 1954. In 1958, when the second decade was closing, college enrollments were two and one-fourth times those of 1939. By 1960, when there were, for the first time since 1939, 9,600,000 college age youth in the United States, the enrollment rate

had climbed to almost two and two-thirds of the 1939 figure. The early fall enrollment figures for 1962 continued this upward trend, with 4,206,672 enrollees.²⁷ In 1960 the United States Office of Education had predicted that this proportion, nearly 40 percent of college age youth of this country, would be reached for the first time in 1964.²⁸

TABLE XIV

COLLEGE ENROLLMENT IN RELATION TO COLLEGE
AGE POPULATION IN THE UNITED STATES

Year	Estimated Population 18-21 years (in thousands)	Fall Enrollment	Percentage of College Students to 18-21 year olds
1939	9,582	1,364,815	14.2
1946	9,403	2,078,095	22.1
1950	8,948	2,281,298	25.5
1954	8,494	2,446,633	28.8
1958	8,935	3,226,038	35.6
1960	9,605	3,610,007	37.6

Source: Office of Education, United States Department of Health, Education and Welfare, Opening (Fall) Enrollment in Higher Education, 1960, Analytic Report, Washington: Government Printing Office, 1961, p. 29.

II. COLLEGE ENROLLMENTS IN KANSAS

What was occurring in our own State of Kansas during those years? The low point in the downward swing in the

²⁷Enrollment in Higher Education, 1962, Institutional Data, op. cit., p. 3.

²⁸Office of Education, United States Department of Health, Education and Welfare, Opening (Fall) Enrollment in Higher Education, 1960, Analytic Report (Washington: Government Printing Office, 1961), p. 8.

college age group in the population of the state, caused by the lowered birth rates of the "thirties" and the general population exodus from Kansas brought on by the "Dust Bowl Era," had reached its lowest extreme and had begun to climb. College age youth of Kansas numbered 76,284 in 1954, and by 1962 had swelled to more than 95,000.²⁹

World War II brought subnormal enrollments in the early part of the 1940-1950 decade, and returning veterans abnormally expanded enrollments in the latter part of that decade. A similar situation existed when veterans of the Korean War brought disproportionate rates of increase in college enrollment from 1953 to 1956. The influence of Korean War veteran enrollments can be seen in Table XV in the first four lines. By 1957 such increases had subsided and college enrollments could, for the first time in many years, be considered to be based upon normal economic and social conditions.

In the six year period from 1957 through 1962, enrollments in higher education in Kansas experienced steady increases amounting to thirty-three percent over the 1957 figure, as shown in Table XV. Kansas birthrates rose from year to year from a 1940 low of 19.1 per thousand to a

²⁹"College-Age Youth in Kansas," op. cit., p. 6.

TABLE XV

HIGHER EDUCATION ENROLLMENTS IN KANSAS AND
AT FORT HAYS KANSAS STATE COLLEGE

Year	College Enrollment in Kansas	Percentage of Change from Previous Year	Enrollment at F.H.K.S.C.	Percentage of Change from Previous Year	Percentage of (2) at F.H.K.S.C.
(1)	(2)	(3)	(4)	(5)	(6)
1953	30,554		1,277		
1954	34,130	+11.7	1,664	+30.3	
1955	38,495	+12.8	2,090	+25.6	
1956	43,483	+13.0	2,357	+12.8	
1957	45,039	+ 3.7	2,326	- 1.3	5.2
1958	48,194	+ 6.9	2,548	+ 9.5	5.3
1959	50,102	+ 4.0	2,781	+ 9.1	5.5
1960	52,052	+ 3.9	2,888	+ 3.8	5.5
1961	56,148	+ 7.9	3,191	+10.5	5.7
1962	59,900	+ 6.7	3,469	+ 8.7	5.8
Total increase since 1957:		+33.0		+49.1	
Average increase since 1957:		+ 5.5		+ 8.2	

Sources: Office of Education, United States Department of Health, Education and Welfare, Fall Enrollment in Higher Educational Institutions, 1953 through 1955, Washington: Government Printing Office, 1954 through 1956; Office of Education, United States Department of Health, Education and Welfare, Opening (Fall) Enrollment in Higher Education, 1955 through 1957, Washington: Government Printing Office, 1956 through 1958; Office of Education, United States Office of Health, Education and Welfare, Opening (Fall) Enrollment in Higher Education, 1958 through 1962, Institutional Data, Washington: Government Printing Office, 1958 through 1962.

NOTE: These data are not the same as those in Fort Hays Kansas State College Bulletin. Figures from these sources were used for uniformity, and are generally about 5% less than maximums.

1956 high of 26.9 per thousand population³⁰ but college enrollments outpaced them. Table XVI shows the relationship between Kansas youth of college age (eighteen to twenty-one years inclusive,) and actual degree-credit enrollments in the state since 1958. "Kansas has consistently ranked among the leaders in the nation in college students per 1,000 population. . ." ³¹ and has ranked first among neighboring midwestern states (see page 13). Table XVI also shows that Kansas had 48.2 percent of its college age youth in college, which was more than ten percent over the national percentage (see Table XIV, page 60).

III. FORT HAYS KANSAS STATE COLLEGE ENROLLMENTS COMPARED TO KANSAS AND THE UNITED STATES

In the past decade, higher education in the United States has increased by nearly eighty percent (see Table XVII). Kansas almost doubled its higher education enrollment of 1953 in the fall of 1962, while Fort Hays Kansas State College outdistanced both by a wide margin.

³⁰Kansas State Board of Health, Division of Vital Statistics, Eighteenth through Twenty-ninth Biennial Reports (Topeka, Kansas: State Printing Plant, 1937 through 1959); State Board of Agriculture, Thirtieth through Forty-first Biennial Reports of the Kansas State Board of Agriculture (Topeka, Kansas: State Printing Plant, 1937 through 1959).

³¹Ibid., p. 7.

TABLE XVI

COLLEGE ENROLLMENT IN RELATION TO COLLEGE
AGE YOUTH IN KANSAS

Year	Age 18-21 in Kansas	Enrollment in College	Percent in College	Percent Increase Over Previous Year
1958	109,826	48,194	43.9	
1959	110,855	50,102	45.2	1.3
1960	112,031	52,052	46.5	1.3
1961	118,541	56,148	47.4	0.9
1962	124,245	59,900	48.2	0.8
Total increase:			4.3	

Source: "College-Age Youth in Kansas," School of Education, University of Kansas, Lawrence, Kansas: n.d. (Mimeographed), p. 11; Kansas State Teachers Association, The School for Tomorrow, Topeka, Kansas: 1960, p. 11; Office of Education, United States Department of Health, Education and Welfare, Opening (Fall) Enrollment in Higher Education, 1958 through 1962, Institutional Data, Washington: Government Printing Office, 1958 through 1962.

This growth rate can be explained by the existence, in the past few years, of the same influential factors which are favorable to college growth as have been previously discussed in connection with future growth at the College.

In addition, Fort Hays Kansas State College has occupied a unique place in Kansas' state higher education system. It has been the only state supported four-year institution of higher education in Central and Western Kansas, and the only publicly supported four-year institution of higher education west of Wichita. Several private accredited four-year colleges exist within the 48-County Area, accounting for a comparatively minor percentage of four-year college enrollments. However, the four publicly supported junior colleges within the Area which are located in Garden City, Hutchinson, Pratt and Dodge City, totalled 2,010 students in 1962,³² and supplied the College with many upper-classmen. For this reason the freshmen classes at the College have been comparatively small, averaging 31.1 percent of the College's total enrollment, while four-year institutions in the

³²The Kansas State Department of Public Instruction, Kansas Educational Directory, 1962-63, Bulletin 340 (Topeka, Kansas: State Printing Plant, 1962), pp. 127-130.

TABLE XVII

HIGHER EDUCATION ENROLLMENTS IN THE UNITED STATES,
 IN KANSAS AND AT FORT HAYS KANSAS
 STATE COLLEGE IN
 1953 AND 1962

Year	U. S. Enrollment	Kansas Enrollment	F. H. K. S. C. Enrollment
1953	2,231,054	30,554	1,277
1962	4,206,672	59,900	3,469
Increase:	1,775,618	29,346	2,192
Percent of Increase	79.6	96.0	171.6

Source: Office of Education, United States Department of Health, Education and Welfare, Fall Enrollment in Higher Educational Institutions, 1953, Washington: Government Printing Office, 1954; Office of Education, United States Department of Health, Education and Welfare, Opening (Fall) Enrollment in Higher Education, Institutional Data, 1962, Washington: Government Printing Office, 1962.

United States as a whole have had 42.7 percent of their students in freshmen classes.³³

In view of these trends in the nation, in Kansas and at Fort Hays Kansas State College, it can be confidently expected that enrollments at the College will grow at least as rapidly as higher educational institutions generally.

IV. SOURCES OF FUTURE INCREASE IN ENROLLMENTS AT FORT HAYS KANSAS STATE COLLEGE

The possible sources of the increased college enrollments of the future are anticipated to be as follows:

- (1) The larger number of college age youth as part of a growing population of all ages.
- (2) A larger number of college age youth who will be academically eligible for college.
- (3) The greater proportion of high school graduates with college ambitions.
- (4) A larger proportion of women students. (In 1962, the ratio of men to women students was 5/3 in Kansas, and about the same at the College.)
- (5) A greater proportion of upper classmen and graduate students as persistence toward advanced work increases.

³³Enrollment in Higher Education, 1960, Analytic Report, op. cit., p. 5.

(6) A possible larger number of students from other states. "In some eastern states . . . shortages (of college facilities) are now so critical that many high school graduates are forced to seek college admission in other states, including Kansas. There is no question that more will do so in the future as ever increasing numbers of students seek admission."³⁴

The first three of these points have been fully discussed in previous parts of this study, especially in the third section of Chapter I, and in the third and fourth sections of Chapter III. Although a full investigation of sources (4), (5) and (6) was outside of the scope of this study, their inclusion was requisite to a complete listing of sources of future enrollment increases.

In brief, most of the prospective enrollees at the college are in the elementary and secondary schools of the 48-County Area now. Some will leave the Area, but most of the transfers will be replaced by others of the same age.

³⁴Kansas Legislative Council, op. cit., p. 5.

V. SUMMARY

The enormous increases in college enrollments that have occurred all over the United States in recent years have stemmed from two fundamental causes: (1) a greater number of college age youth, and (2) a greater percentage of these youth who attend college.

Enrollments at Kansas institutions of higher education, always comparatively high, have been affected by both of these influences. Fort Hays Kansas State College has been acutely affected, and has sustained a growth rate about twice that of the state and nation. The causes of this growth rate will continue, and their combined effect, rapidly growing enrollments at the College, will continue also.

CHAPTER V

FUTURE ENROLLMENTS AT FORT HAYS

KANSAS STATE COLLEGE

The purpose of this chapter is to relate the enrollments of Fort Hays Kansas State College freshmen with the enrollments of schools that will be sources of these freshmen, and to predict total student body enrollments on the basis of freshmen enrollments.

The data used in serving these functions were procured from the Extension Office and the Registrar's Office of the College, and these data were combined with the data emerging from the different sections of Chapter III.

I. THE RELATIONSHIP OF ELEMENTARY AND SECONDARY SCHOOL ENROLLMENTS TO COLLEGE ENROLLMENTS

Rather than looking upon high school graduation and college entrance as unconnected, with a wide and definitive break between the two, it would be more valid, in this era of prolonged formal education, to consider formal education at all levels as a continuum, with enrollment figures and trends a part of the continuum. Sound as this may seem in principle, however, there are hindrances to its practice. Fort Hays Kansas State

College, like most degree granting institutions, draws students from a broad geographical area. Pre-college enrollment statistics for that Area are the responsibility of a state agency which is separate from the college. Therefore, such statistics are not so readily accessible to the college as, for example, elementary school enrollment figures usually are to the secondary school affected by them.

Records of actual past enrollments at Fort Hays Kansas State College were readily available from both the Extension Office and the Registrar's Office of the College. Coupled with the enrollment figures of elementary and secondary schools of the 48-County Area, and with past behavior patterns of such enrollments applied as probably future behavior, projection of future freshmen enrollments were made to 1970. That will be the year in which pupils who were in the third grade when the available data were recorded, the end of the 1960-1961 school year, will enter college.

The first step in the process of traversing the breach between knowledge of secondary and college enrollments was choice of a primary geographical area for study. It was found that the counties of Kansas which sent fifteen or more students to the College in the fall of 1961, the same year for which complete Area elementary and secondary

enrollments were obtainable, altogether sent close to ninety percent of the enrolling freshmen to the college that fall. (See Chapter II, Section I.) Calculations of Fort Hays Kansas State College freshmen enrollments for four more years, 1958, 1959, 1960 and 1962, showed that the enrolling freshmen percentage from the same forty-eight counties had, in each of the other four years, closely approximated the ninety percent figure, (see Table XVIII). However, application of the exact average, 89.1 percent, was used in the prediction tables as the more precise of the two.

The second step in creating a bond between Fort Hays Kansas State College enrollments and enrollments in the schools of the Area which furnish the majority of its students, was to procure enrollment data of those schools, compile them and arrive at past, and probable future retention rates, which made up the behavior patterns to which previous reference was made. This process was described in Chapter III, and the retention rates thus established were employed in Table XIX of this chapter, columns (4) and (5).

The third step in linking college freshmen enrollments with secondary school enrollments was finding the percentages of twelfth graders of the appropriate schools who enroll as freshmen at Fort Hays Kansas State College.

TABLE XVIII

ACTUAL FRESHMEN ENROLLMENTS AT FORT HAYS KANSAS STATE COLLEGE
FROM THE 48-COUNTY AREA AND OTHER PLACES
1958 TO 1962

Freshmen from:	1958		1959		1960		1961		1962		Average	
	Enroll- ment	Per- cent	Enroll- ment	Per- cent	Enroll- ment	Per- cent	Enroll- ment	Per- cent	Enroll- ment	Per- cent	Enroll- ment	Per- cent
The 48- County Area	685	90.3	747	88.8	753	88.8	950	90.3	987	87.3	826	89.1
Homes Outside the 48- County Area	74	9.7	94	11.2	95	11.2	103	9.7	144	12.7	102	10.9
Total	759	100	841	100	848	100	1062	100	1131	100	928	100

Source: Extension Office, "Fall Enrollment, Fort Hays Kansas State College" (Hays, Kansas: F.H.K.S.C., Mimeographed, 1958); Bulletin, General Catalog, 1961-1963, Fort Hays Kansas State College, State Printing Plant, Topeka, Kansas: 1961, pp. 190, 191; Registrar's Office, Fort Hays Kansas State College, unpublished data, 1962.

NOTE: Enrollment figures were obtained by adding the needed percentage of freshmen on record at the Registrar's Office to the count obtained from Extension Office records, thus including late enrollees. The "Homes Outside the 48-County Area" category included the other fifty-seven Kansas Counties, other states and foreign countries.

This procedure was also described in Chapter III, and the average percentage of gain (see Table XIII, page 55) was applied in Table XIX, column (6). The 1970 prediction, based on the procedures used in completing this table, is that 13.3 percent of those who will reach twelfth grade in the 48-County Area in 1970 will enroll as freshmen at the College. When compared with the twenty-eight percent of Kansas young people in college in 1960 and the six percent more who will be there by 1970,³⁵ the predicted increase of about three percent at one college seemed conservative.

II. PREDICTED FRESHMEN ENROLLMENTS

The final step necessary for the completion of predicted freshmen enrollment figures was the addition of 10.9 percent for students coming from outside the 48-County Area. This percentage was not based upon secondary school enrollments, for obvious reasons. It was based upon the number who will enroll from the 48-County Area (see Table XIX). Thus, these figures are projections of the 48-County Area enrollments. The enrollees from outside the 48-County Area came from most of the

³⁵Kansas Plans for the Next Generation, Board of Regents for Higher Education in Kansas (Topeka, Kansas: 1962), p. 3.

TABLE XIX

PREDICTED FRESHMEN ENROLLMENTS AT FORT HAYS KANSAS STATE COLLEGE AS DERIVED FROM
1960-1961 ELEMENTARY AND SECONDARY SCHOOL ENROLLMENTS IN THE 48-COUNTY AREA

(1) Grade in 1960-61	(2) Year of H. S. Graduation	(3) Enr. in 60-61	(4) Percentage Who Will Reach 12th gr.	(5) Number Who Will Reach 12th Grade	(6) Percent of 12th gr. to Enr. at FHS	(7) No. to Enroll at FHS	(8) *10.9% Added	(9) Total Predicted Freshmen
10	1963	11,464	84.14	9,645	10.75	1,037	127	1164
9	1964	14,870	80.04	11,902	11.11	1,322	162	1484
8	1965	17,366	80.88	14,045	11.47	1,611	197	1808
7	1966	17,046	80.02	13,680	11.83	1,618	198	1816
6	1967	17,193	80.68	14,800	12.19	1,814	222	2036
5	1968	17,737	78.88	13,991	12.55	1,746	213	1959
4	1969	18,803	78.78	14,813	12.91	1,912	234	2146
3	1970	20,123	77.17	15,528	13.27	2,060	252	2312

Source: "1960-1961 Enrollment, Public and Non-Public Schools, 48 Selected Counties," (Unpublished data, Office of Statistical Services, Kansas State Department of Public Instruction, Topeka, Kansas: 1962); Extension Office, "Fall Enrollment, Fort Hays Kansas State College," (Hays, Kansas: F.H.K.S.C., Mimeographed, 1958 through 1962; Registrar's Office, Bulletin, General Catalog, 1961-1963, Fort Hays Kansas State College, State Printing Plant, Topeka, Kansas: 1961, pp. 190, 191; Registrar's Office, F.H.K.S.C., Unpublished data, 1962.

NOTE: Column (4) means that 15.86 percent of pupils who were tenth graders at the time these enrollment data were taken dropped out of school in the school year of 1960-1961 or 1961-1962. Column (6) extrapolates the average increase, 0.36 percent, in the percentage of 48-County Area twelfth graders who enroll at F.H.K.S.C during the same calendar year. The figures in column (7) are considered to be 89.1 percent of predicted freshmen enrollees, hence the added 10.9 percent, column (8), yields the predicted total in column (9).

*The added 10.9 percent represents students from outside the 48-County Area, and is the average percentage of those students in the entering freshmen group in the last five years.

other fifty-seven counties of Kansas, from other states and from foreign countries, with the first group predominating. Table XX shows actual freshmen enrollment at F.H.K.S.C. from places outside the 48-County Area.

TABLE XX

FRESHMEN AT FORT HAYS KANSAS STATE COLLEGE FROM
PLACES OUTSIDE THE 48-COUNTY AREA

Location of Permanent Address	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>
The other 57 Kansas counties:	50	64	54	57	99
Other states:	21	21	36	34	33
Foreign countries:	0	1	2	7	4
Total	71	86	92	95	136

Source: Extension Office, "Fall Enrollment, Fort Hays Kansas State College," (Hays, Kansas: F. H. K. S. C., Mimeographed, 1958 through 1962).

NOTE: These figures do not include late enrollees, which would add approximately five percent.

The ninth column in Table XIX shows a prediction of sporadic increases in freshmen enrollments at the College that will result in almost twice as many freshmen in 1970 as enrolled in the fall of 1962. Table XXII, page 82, shows that such a doubling has taken place in the past nine years. It should be noted here that while the freshmen estimates in Table XIX, and the estimates for total enrollments in Table XXIII, page 84, far outdistance

the most recent and the most liberal guesses concerning future enrollments at Fort Hays Kansas State College, they were grounded upon the premise that present, established, social trends, including trends of population, economy and increasingly greater demands for more education for more young people, will continue uninterrupted by war or other widespread disaster. This premise included the assumption that the College will not be forced to resort to selective admissions because of limited faculty and facilities.

The possibility that a greater proportion of enrollees from outside the 48-County Area may attend the College in the future was not taken into account in making these predictions, nor was the possibility of increased competition from other four year state institutions. The former would, of course, tend to increase enrollments beyond the predicted levels, while the latter would tend to decrease them. An effort to include either or both of these factors could not, at the time the study was made, be based on concrete data, and hence would involve conjecture only.

III. PERCENTAGE OF FRESHMEN TO TOTAL STUDENT BODY

The percentage of freshmen to the student body as a whole is important because the number of freshmen sooner

or later determines the size of the total student body. Two factors that tend to make this statement a generality and not a rule are described in the following paragraphs.

In a four-year institution such as the College, there may be more or fewer transfers from other degree-credit institutions, especially junior colleges, but in general the number of out-transfers have equalled the number coming in for a given year, or for a few consecutive years at the most.

In addition to transfers there are attrition rates which, while varying somewhat from year to year, nevertheless are characteristic of each college class. Table XXI was made from statistics obtained in a study of Fort Hays Kansas State College Enrollments,³⁶ and shows that while there was a substantial decrease between the freshmen and sophomore classes for the four year period, this was counteracted in the senior college classes for which data were available at the time the study was made. Since this table follows through only two college classes it can be considered as only indicative of the dynamics of the College enrollment by classes. Undoubtedly, some of the changes in progressive motion can

³⁶"The Percentage of Attrition for Fort Hays Kansas State College Classes," from a study by Division of Education and Psychology, Fort Hays Kansas State College, unpublished data, 1962.

TABLE XXI
 ATTRITION RATES AT FORT HAYS KANSAS
 STATE COLLEGE BY CLASSES

Year	<u>Freshmen</u>	<u>Sophomore</u>			<u>Junior</u>			<u>Senior</u>		
	Maximum Enroll.	Max. Enr.	Number Changed	Percent Changed	Max. Enr.	Number Changed	Percent Changed	Max. Enr.	Number Changed	Percent Changed
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
'57-'58	772									
'58-'59	864	598	-174	-22.5						
'59-'60	955	679	-185	-21.4	879	+281	+46.8			
'60-'61	1036	733	-222	-23.2	820	+141	+20.8	859	-20	-2.3
'61-'62	1248	785	-251	-24.2	800	+67	+9.1	892	+72	+8.9
	Average		-208	-22.8		+161	+25.6		+26	+3.3

Source: "The Percentage of Attrition for Fort Hays Kansas State College Classes," from a study by the Division of Education and Psychology, Fort Hays Kansas State College, unpublished data, 1962.

NOTE: Each number in column (3) was subtracted from the number in column (2) in the line above to yield the number in column (4) and the percentage in column (5). (Columns (3) and (6) produced columns (7) and (8) in the same way, etc.)

The enrollment in, for example, the second line of column (3) might be only 450 of the same students in school the year before, while the remainder of the 598 sophomores are re-entries from former years or transfers from other institutions.

All of the enrollment figures used are maximums, which are from 15 percent to 35 percent more than fall enrollments, averaging about 24 percent more.

be influenced from time to time by such forces external to an institution as general economic conditions and teacher certification requirements, and such internal forces as scholarships and professional offerings.

For the past decade, "concomitant with annual increases in total enrollment there have been consistent increases in first-time enrollment"³⁷ in the degree-credit institutions of the United States. This has been generally true at the College, although enrollments at any single institution, being much smaller than those of the nation, show greater fluctuations. In Table XXII, the correspondence between fall freshmen enrollments at the College (almost identical with what the United States Office of Education terms first-time enrollments) and total student enrollments is shown for a nine year period. Over this span of time, the greatest effect of an unusually high or an unusually low freshmen enrollment was apparent in the same year, with a lesser effect the following year and some effect extended into the third year.

An unusually high freshmen enrollment in one year meant that the next year's freshmen class would be smaller in proportion to total student enrollment, if the next class were more nearly average in size. An example of

³⁷Enrollment in Higher Education, 1960, Analytic Report, op. cit., p. 8.

this can be seen in the years 1961 and 1962 in Table XXII. Conversely, an unusually small freshmen class portended the opposite, that freshmen would compose a somewhat larger percentage of all students the following year, as shown in 1956 and 1957 in Table XXII. Such extremely large or small classes made expansions and compressions in the advancing flow of students for a year or two, causing the adjacent classes to seem abnormal by contrast, when actually they may have been fairly average. By the senior year, however, the evidence of unusual size had been almost effaced by the many drop-outs and re-entries that prevail in college attendance.

An egregious example of the smoothing process that occurs along with upward progression of college classes can be also seen in the years 1956 and 1957 in Table XXII. In 1957, the freshmen enrollment decreased by 12 percent from the figure of the year before, while total enrollment decreased less than one percent from 1956.

The end result was one of sharper fluctuations in freshmen enrollment than in total enrollment from year to year. For example, while the enrolling freshmen averaged about 30 percent of the total student body, their range of variation in enrollment (302) was 73 percent of that of the whole student body (413) in the past nine years.

TABLE XXII

COMPARISON OF FRESHMEN ENROLLMENTS WITH TOTAL ENROLLMENTS
AT FORT HAYS KANSAS STATE COLLEGE

Year	Fresh- men Enr.	Change from Previous Year	Total Students	Change from Previous Year	Percent Freshmen to Total Same Yr.	Percent Freshmen to Total Next Yr.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1954	574		1691		33.9	27.6
1955	692	+118	2082	+391	33.2	29.2
1956	741	+ 49	2370	+288	31.3	31.5
1957	653	- 88	2348	- 22	27.8	25.5
1959	841	+ 82	2806	+240	30.0	28.9
1960	848	+ 7	2888	+ 82	29.4	26.4
1961	1062	+214	3208	+320	33.1	29.8
1962	1131	+ 69	3565	+357	31.7	
Range of variation: 302				413	6.1	6.0
Average:					31.1	28.2

Source: Fort Hays Kansas State College Catalogue, 1957-59, F. H. K. S. C., State Printing Plant, Topeka, Kansas: 1957, pp. 178-179; Fort Hays Kansas State College Catalogue, 1959-61, F. H. K. S. C., State Printing Plant, Topeka, Kansas: 1959, pp. 194, 195; Bulletin, General Catalog, 1961-1963, Fort Hays Kansas State College, F. H. K. S. C., State Printing Plant, Topeka, Kansas: 1961, pp. 190, 191; Registrar's Office, Fort Hays Kansas State College, unpublished data, 1962.

Thus, the freshmen classes of the past have varied widely in size, while the total enrollment, as a result of the stabilizing influence of the other classes, has shown a greater degree of uniformity.

IV. PREDICTED FALL STUDENT BODY ENROLLMENTS

As was shown in Table XXII, the freshmen percentages of total enrollment at Fort Hays Kansas State College have ranged between 25.8 percent and 33.9 percent of the total student body, with the average close to thirty-one percent. With variations, then, the figures in the final column in Table XIX, page 75, were taken as a 31 percent base for future enrollment of the total student body.

These variations were assumed to be on the side of modification of the sharp peaks and dips that would result from simply adding 69 percent to the predicted freshmen enrollments which were an outcome of the calculations for Table XIX. For this reason, the "raw total enrollments" recorded in column (3) of Table XXIII were modified, as illustrated in Figure 2, page 96, and were recorded in column 8, Table XXIII.

In addition to the close relationship between freshmen enrollment and total enrollment of the same year, in which freshmen enrollment averaged 31 percent of total enrollment, it was found that the degree of correspondence

TABLE XXIII

PREDICTED ENROLLMENTS AT FORT HAYS KANSAS STATE COLLEGE BASED ON ELEMENTARY
AND SECONDARY SCHOOL ENROLLMENTS

(1) Year	(2) Predicted Freshmen Enrollments (31% of (5))	(3) 69 Percent Added for Other Students	(4) Freshmen Change From Previous Yr.	(5) Raw Total Enrollment	(6) Total Enr. Change from Previous Year	(7) Predicted Total Enrollment	(8) Increase Over Previous Year
1962*	1131	2434	+ 69	3565	+ 357	3565	+357
1963	1164	2591	+ 33	3755	+ 190	3800	+235
1964	1484	3303	+320	4787	+1032	4500	+700
1965	1808	4024	+324	5832	+1045	5350	+850
1966	1816	4024	+ 18	5858	+ 26	6000	+650
1967	2036	4532	+220	6568	+ 220	6400	+400
1968	1959	4260	- 77	6219	- 349	6700	+300
1969	2146	4776	+187	6922	+ 703	7000	+300
1970	2313	5146	+166	7458	+ 536	7400	+400
Range of variation:			324		1394		615

NOTE: *The first line of this table is based on actual enrollments for 1962.

The raw totals in column (5) were modified in column (7) to allow for the "smoothing effect" exerted by student classifications other than freshmen (see Figure 2, p. 96).

between freshmen enrollment and total enrollment the following year was also close, and the range of variation for both was 6 percent (see Table XXII). The average percentage for the latter was smaller, however: 28.2 percent. Therefore, the freshmen enrollment each fall should be at least as close to 28.2 percent of the total enrollment for the following fall as has been the case with past enrollments. The predicted enrollments shown in column (7) of Table XXIII and in the solid line curve in Figure 2, "predicted total enrollments," conform to this criterion, with an even smaller range of variation: 6.1 percent in actual past enrollments and 4.5 percent in future enrollments (see Table XXIV).

It is significant to note that Tables XXII and XXIII show the results of the birth rates of 1944 and 1945, which were dissimilar to the gradually rising rates before those years and following them. Most of the students who entered college as freshmen in 1962 were born in 1944, and those who will enter in the fall of 1963 were born in 1945. There was a slight drop in otherwise steadily rising birth rates eighteen years ago, which can be noted in the latter part of Table XXII and the first part of Table XXIII, and in the years 1962 and 1963 in Figure 2, page 96. The prediction tables based on population and total state enrollments, Tables XXVI

and XXVII, pages 90 and 91, reflect the lowered birth rates of 1944 and 1945, but to a lesser extent, while the table based on mathematical extrapolations (Table XXV, page 87) is unaffected by the lowered birth rate years.

TABLE XXIV

PREDICTED FRESHMEN AND TOTAL ENROLLMENTS AND PERCENTAGES
AT FORT HAYS KANSAS STATE COLLEGE

(1) Year	(2) Predicted Freshmen Enrollments	(3) Predicted Total Enrollments	(4) Percent of Fr. to Total Enr. Same Yr.	(5) Percent of Fr. to Total Enr. Next Yr.
1962	1131	3565	31.0	29.2
1963	1164	3800	28.0	25.9
1964	1484	4500	33.0	27.7
1965	1808	5350	33.8	30.1
1966	1816	6000	30.3	28.4
1967	2036	6400	31.8	30.4
1968	1959	6700	29.2	28.0
1969	2146	7000	32.1	29.0
1970	2312	7400	31.2	
	Range of variation:		5.8	4.5
	Average		31.3	28.5

IV. AUXILIARY PREDICTION METHODS

Predictions of future enrollments at colleges and universities are frequently made by means of mathematical extrapolations because of the simplicity of the method. Such extrapolations require no information not included

in the college records. While enrollment predictions acquired in this way provide some forewarning, they are less reliable than those based upon pre-college enrollments or upon population figures.

Of the many possible ways of applying this method to Fort Hays Kansas State College enrollments, one example appears in Table XXV.

TABLE XXV

TOTAL ENROLLMENTS AT FORT HAYS KANSAS STATE COLLEGE
BASED ON EXTRAPOLATION

<u>Hypothetical Past Enrollments</u>			<u>Projected Enrollments</u>		
Year	Enr.	Increase for Next Year	Year	Enr.	Increase for Next Year
1954	1691*	210	1963	3895	268
1955	1901	239	1964	4163	275
1956	2140	242	1965	4435	276
1957	2382	246	1966	4711	281
1958	2628	249	1967	4992	285
1959	2869	253	1968	5277	289
1960	3122	257	1969	5566	294
1961	3379	261	1970	5860	
1962	3630	265			

NOTE: *Actual enrollment for 1954. Beginning here, it was assumed that the rate of increase was 210, and that the acceleration rate was 1.5 percent of the total enrollment per year.

Beginning with 1954, and assuming that the normal yearly increase was 210 at that time, and that this increase

accelerated at the rate of 1.5 percent of total enrollment each year thereafter, the total of 3,630 was reached in 1962: 1.7 percent more than the actual figure of 3,565. Continuing with this method, the total enrollment in 1970 would be 5,860, which was approximately 1,600 less than the figure based on pre-college enrollments.

In comparing the actual total enrollments in column (4) of Table XXII, page 82, with the second column in Table XXV, a substantial excess over the expected enrollment would have been received in 1955 and 1956, while the year 1960 brought an abnormally small class, significantly less than would be expected if this prediction method were followed. Although the remaining five years' projections were similar to actual enrollments, the deviations mentioned point up the main weakness of mathematically extrapolated enrollment predictions: failure to foresee abnormally large or small classes.

Another method for predicting college enrollments is one based upon population figures and trends. While this method has much in common with that which is based upon elementary and secondary school enrollments, it was considered to be less valid, for while population trends and movements can be traced and the future of them predicted, school and college enrollments have frequently varied from them (see Table VI, page 37).

Table XXVI was compiled from data on actual and projected college age youth in Kansas. Assuming that percentages of Kansas college age youth who have attended Fort Hays Kansas State College in the past few years will continue to increase at the same rate as shown in the first part of Table XXVI, the total enrollment at the college was found to be almost six thousand in 1970 by use of this method. The vast difference between results in this table and that which is based on elementary and secondary school enrollments may be explained by low population estimates, by an increase percentage constant that is too low, or by the narrow age group which, while frequently used for such predictions, comprised from fifty-five to sixty percent of college students in 1960. For these reasons, the "population method" was, like the other three auxiliary methods of college enrollment prediction described in this study, regarded as less accurate than predictions based on pre-college enrollments.

A fourth method for predicting college enrollments at a single institution might be one that is based upon a study to predict degree-credit enrollments for the entire state. Results of such a study for Kansas were available from the University of Kansas, and they revealed that enrollments at Fort Hays Kansas State College were increasing in proportion to college enrollments in Kansas

TABLE XXVI

ENROLLMENTS AT FORT HAYS KANSAS STATE COLLEGE PROJECTED
ON BASIS OF COLLEGE AGE POPULATION OF KANSAS

Actual:

Year	18-21 yr. olds	F. H. S. Enr.	Percent Enr. at F. H. S.	Increase Over Pre- vious Yr.
1958	109,826	2566	2.34	
1959	110,855	2806	2.53	0.19
1960	112,031	2888	2.57	0.04
1961	118,541	3208	2.70	0.13
1962	124,245	3565	2.87	0.17
		Average increase:		0.106

Predicted:

Year	18-21 yr. Olds	Predicted Percent at F. H. S.	Predicted Enrollment
1963	118,541	2.98	3532
1964	124,243	3.08	3827
1965	127,299	3.19	3991
1966	132,483	3.29	4369
1967	140,134	3.40	4764
1968	147,396	3.51	5173
1969	156,843	3.61	5662
1970	159,403	3.72	5920

Source: "College-Age Youth in Kansas," School of Education, University of Kansas, p. 11; Fort Hays Kansas State College Catalogue, 1959-61, F.H.K.S.C., State Printing Plant, Topeka, Kansas: 1959. Bulletin, F.H.K.S.C., 1961-1963, Fort Hays Kansas State College, State Printing Plant, Topeka, Kansas: 1961.

NOTE: The predicted percentage in the latter part of the table was based on the average increase in the actual past enrollments in the first part, i.e., 0.106 percent was added for each year.

as a whole at about the same rate as shown in Table XXVI.

Table XXVII demonstrates this method.

TABLE XXVII

PREDICTED ENROLLMENTS AT FORT HAYS KANSAS STATE COLLEGE
BASED ON COLLEGE ENROLLMENTS IN KANSAS

Year	College Enr. in Kansas	Percent to Enr. at FHS	Predicted FHS Enr.
1963	64,413	5.9	3800
1964	68,891	6.0	4133
1965	74,832	6.1	4565
1966	80,773	6.2	5008
1967	88,146	6.3	5553
1968	91,816	6.4	5876
1969	94,727	6.5	6157
1970	99,863	6.6	6591

Source: "College-Age Youth in Kansas," School of Education, University of Kansas, Lawrence, Kansas: n.d. (Mimeographed), p. 11.

V. SUMMARY

A relationship between twelfth grade enrollments in the 48-County Area, and freshmen enrollments at the college was established by dividing figures for the latter into the former for matching years, thus obtaining percentages of the Area twelfth graders who have entered Fort Hays Kansas State College over a period of five years. These percentages were then applied to

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enrollments in grades below twelfth grade to arrive at predicted freshmen enrollments at the College for the next eight years.

The percentage of freshmen to total student body was computed, and then applied to the predicted freshmen enrollments, thus obtaining rough estimates of the total student body enrollments to 1970. These estimates were then modified to allow for the "smoothing action" which the upper college classifications have brought to bear upon total enrollments.

Three other prediction methods were demonstrated. Their results were all lower than those based upon the pre-college enrollments method, which was considered to be the most valid. The high prediction estimates were founded upon established social trends and the assumption that prospective enrollees will not overflow facilities at the college.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Almost all studies directed toward college enrollment predictions have, in the past, so far underestimated the real enrollments, as they later transpired, as to be of little practical value. The results of this study will assist with the solution of the problem of rapidly increasing college enrollments, and with solutions to other problems arising from it, by providing a more accurate forecast of enrollments at Fort Hays Kansas State College.

In 1960, thirty-seven percent of Kansas youth of college age resided within the geographical area primarily served by the College; this was more than 70,000 people between the ages of eighteen and twenty-four years. While these represent a continually diminishing percentage of the total population, a continually augmented proportion of them have attended degree credit institutions, including Fort Hays Kansas State College, in recent years. The enlarged proportion of college age youth attending college has more than offset their numerical reduction from the point of view of college enrollments.

Compared to overall population, the elementary and secondary school enrollments of the 48-County Area are

extraordinarily large, and retention rates for these enrollments have been increasing through the pre-college levels and into college. In 1962 Kansas enrolled 4.3 percent more of its eighteen to twenty-one year olds in college than in 1958. Fort Hays Kansas State College has been more profoundly affected by this trend than have most other degree granting institutions.

The causes of this trend have shown no sign of abatement, and therefore the rapidly growing enrollments at the College can be expected to continue. In 1970 Fort Hays Kansas State College will enroll twice as many freshmen as in 1962, and the total student enrollment will be somewhat more than double the 1962 figure.

Of more immediate concern are the predictions for the years directly ahead. Although the fall 1963 total enrollment at the College will show about the same increase as the average of the last seven years, the next year, 1964, will see an unprecedented number of both freshmen and other classifications seeking admission to the College. These young people, born during the "baby boom" of the latter part of World War II and the years immediately following it, will continue to place great stress upon facilities at the College during 1965 and 1966. The year 1967, and the remaining years through

1970 will, however, see more moderate enrollment demands (see Figure 2).³⁸

Different methods of predicting college enrollments yield different results. Table XXVIII presents a compilation of the results of four methods of predicting enrollments at Fort Hays Kansas State College, which are described in detail in Chapter V. The results of the fourth method, that which was based on pre-college enrollments in the geographical area of the College, was considered to be the most valid because it was established on numbers of pupils who are now in elementary and secondary schools in the area, and the percentages of them who have been, and presently are, preparing for enrollment at the institution. While Methods II and III are also based on factual material, their preparation was not so carefully detailed as in Method IV; and Method I, the extrapolation method, was based on past enrollments at the College and is regarded as the least reliable of the four methods.

These predictions will be fulfilled if the following conditions, involving the United States, Kansas and the 48-County Area, continue: (1) no war or other

³⁸For an explanation of the terms "Raw Total Enrollments" and "Predicted Total Enrollments, see pp. 82 and 84.

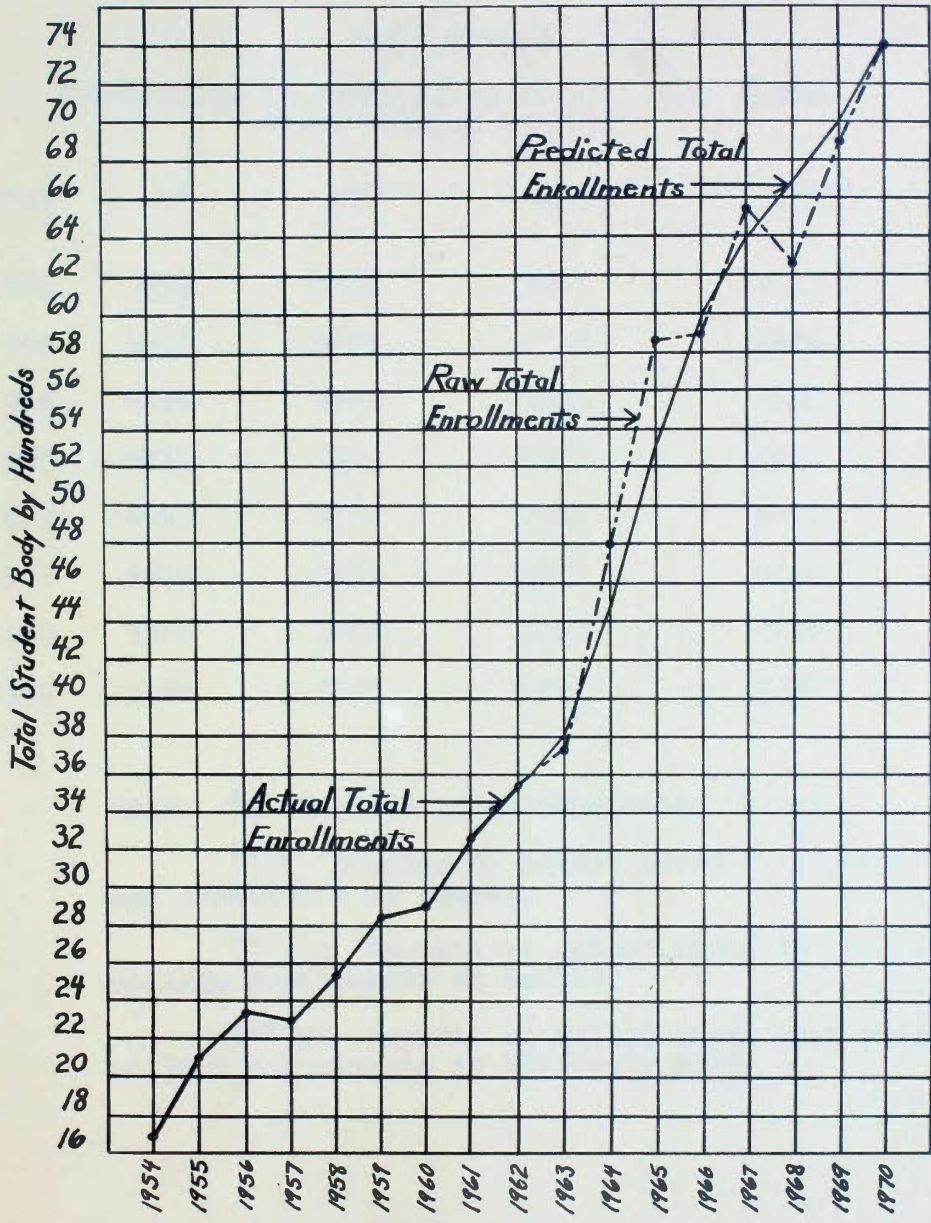


Figure 2
Total Fall Enrollments At Fort Hays Kansas State College

TABLE XXVIII
 PREDICTIONS OF ENROLLMENTS AT FORT HAYS KANSAS
 STATE COLLEGE TO 1970

Year	I*	II**	III***	IV****
1963	3895	3532	3800	3800
1964	4163	3827	4133	4500
1965	4435	3991	4565	5350
1966	4711	4369	5009	6000
1967	4992	4764	5553	6400
1968	5277	5173	5876	6700
1969	5566	5652	6157	7000
1970	5860	5920	6591	7400

NOTE: *I Results of extrapolation method.

**II Results of method based on college age population of Kansas.

***III Results of method based on predicted college enrollments in Kansas.

****IV Results of method based upon pre-college enrollments in 48-County Area.

widespread disaster, (2) continuation of social, economic and population trends that are established at present, and (3) expansion of College facilities to accommodate all prospective students.

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State of Kansas, County of ...
I, the undersigned, being duly sworn, depose and say that ...

Subscribed and sworn to before me this ... day of ... 19...
Notary Public for Kansas

STATE OF KANSAS

Whereas the Legislature of this State has enacted the law ...
relating to the ... of ... and ...
and whereas the ... of ...
has been ...
I, the undersigned, being duly sworn, depose and say that ...

APPENDIX

... of ...
... of ...
... of ...
... of ...
... of ...

... of ...
... of ...
... of ...

Witness my hand and seal this ... day of ... 19...

Notary Public for Kansas

Filed for record this ... day of ... 19...

FORT HAYS KANSAS STATE COLLEGE
HAYS, KANSAS



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(This form letter, with the questionnaire on the following page, was mailed to county superintendents of the forty-eight counties.)

December 1, 1962

Dear County Superintendent:

Under the direction of Dean John D. Garwood and Dr. Calvin E. Harbin, I am engaging in research which should enable us to predict Freshman enrollments at Fort Hays State for the next five years. This will be of great value to the Administration in planning for future classes.

Almost all of the data are already collected and available for use. However, we need the 12th grade enrollment figures from your county for the years 1958 through 1962. As you realize, the most accurate information on this subject is in your official records. We know that you are very busy, and particularly so at this time of year, but we feel that you wouldn't mind helping us with this particular problem.

Enclosed is a short blank form, and a stamped, self-addressed envelope for your convenience. We will appreciate very much your courtesy and help with this research project.

Sincerely yours,

Rose King

RK:c1

Enrollments of High School Seniors (12th Grade) in Schools of _____
County.

1958

Public Boys _____

Girls _____

Non-Public Boys _____

Girls _____

1959 Public

Boys _____

Girls _____

Non-Public Boys _____

Girls _____

1960

Public Boys _____

Girls _____

Non-Public Boys _____

Girls _____

1961

Public Boys _____

Girls _____

Non-Public Boys _____

Girls _____

1962

Public Boys _____

Girls _____

Non-Public Boys _____

Girls _____