

A COMPARISON OF HIGH SCHOOL SIZE WITH ATHLETIC SUCCESS
AT KANSAS STATE UNIVERSITY

by

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PART I

INTRODUCTION

The Academic Advising Office of the University of Missouri at Kansas City recently conducted a descriptive study concerning academic performance of members of the 1968-69 freshman class who had completed both the fall and the spring semesters.

Although the sample of freshmen from the smaller high schools was not as large as was the sample of freshmen from the larger schools, the study indicated that the students from the smaller schools did at least as well academically as did the students from the larger schools. The results are shown in Table I.¹

¹Editorial in The St. Marys (Kan.) Star, Feb. 19, 1970.
(Study by Leo Kerwin of the University of Missouri in Kansas City)

TABLE I

RELATIONSHIP BETWEEN THE SIZE OF HIGH SCHOOL
AND ACADEMIC SUCCESS IN COLLEGE

Size of Grad. Class	Total Number of Students	Performance*	
		Good Standing	Probation
0-49	17	70.6%	29.4%
50-99	50	60.0	40.0
100-199	141	66.6	34.0
200-299	85	50.6	49.4
300-399	35	80.0	20.0
400-499	151	64.9	35.1
500-above	282	71.3	28.7
All Freshmen	761	66.4	33.6

*Good standing is a G.P.A. of 2.00 or better on a 4.00 system. Probation is a G.P.A. of less than 2.00.

PART II

PURPOSE OF THE STUDY

The purpose of the study was to determine if students who graduated from high schools with larger enrollments are more successful in athletics at Kansas State University than the students who graduated from the smaller high schools in Kansas or whether athletes from the smaller schools do just as well if not better.

PART III

METHOD OF STUDY

The method of study used in trying to arrive at an answer to the question of athletic success as related to high school size was fairly simple. The eligibility list was obtained for the 1965-66, 1966-67, 1967-68, and the 1968-69 athletic seasons. The names of the athletes who had competed during these years in basketball, baseball, and track were taken from this list. Then the head coach of each sport was given a list with the names of the athletes who had competed in his sport.

The eligibility lists contained the following set of instructions for the coach. Rate these men on the basis as to the qualifications you are looking for to compete in (sport) at Kansas State University. Give the highest rating to those men that you would select to participate on your team first. Use your knowledge of how they did compete in college or have competed in college so far. Obviously, some of the men on the list are sophomores and juniors and still have some years of competition left. Rate them one through five with a five being the best and a one being the poorest.

Each coach then rated the players on the eligibility list in his respective area.

A study was not made of the football players because the head coach had only been at Kansas State for three seasons and as a result, was not familiar with all the players on the list. Consequently, he would not be able to rate all the players. Swimming and gymnastics

were also excluded from this study because only the larger high schools offer these sports.

The next step was to place the athletes into a classification according to the size of high school from which they had graduated. The same classification of high schools as is used by the Kansas State High School Activities Association was used. This classification is shown in Table II.

TABLE II

KANSAS HIGH SCHOOL CLASSIFICATION BY ENROLLMENT

Classification	Enrollment*	Number of Schools
5A	2,581 to 1,656	16
4A	1,632 to 616	32
3A	612 to 229	64
2A	229 to 110	128
1A	110 to 20	183

*The enrollment includes only the tenth, eleventh, and twelfth grades

The athletes were therefore rated one through five according to the size of high school they graduated from, using the same formula as the one in Table II. Consequently, each athlete had two ratings, the one the coach gave him and the one given him according to the size of

high school from which he came. A correlation between these two ratings was then taken to determine if the results were significant. All numbers were carried out three places past the decimal point and rounded to two.

Rating of trackmen by coach. The first sport used in this study to compare was track. Over the past four years, the eligibility list in track included 106 athletes. Eighty-nine were from Kansas high schools and seventeen were from out-of-state high schools. In this study only the students who graduated from high schools in Kansas were considered.

Classification of trackmen by enrollment. The trackmen were rated one through five according to the size of high school they graduated from, using the formula in Table II. The results of this classification of athletes are shown in Table III.

TABLE III

NUMBER OF TRACKMEN BY HIGH SCHOOL CLASSIFICATION

Size of School	Number of Trackmen	Percentage of Trackmen
5A	30	33.7
4A	16	18.0
3A	16	18.0
2A	19	21.3
1A	8	9.0
Total	89	100.0

As one can see, most of the trackmen came from the larger 5A schools. However, this figure does not appear to be so high when the fact is considered that the largest amount of high school students in Kansas come from the 5A schools. In fact, almost thirty percent of all students in Kansas high schools are in 5A high schools. Table IV shows the breakdown and percentage of enrollment for each of the classifications of high schools.

TABLE IV

TOTAL ENROLLMENT BY CLASSIFICATION IN KANSAS

Size of School	Total Enrollment	Percent of Total
5A	35,211	29.2
4A	29,404	24.2
3A	23,281	19.4
2A	20,551	17.1
1A	12,412	10.1
Total	120,859	100.0

If the figures in Table IV are compared with the number of trackmen in each classification, the results are fairly close. So the number of athletes that participate in track that come from a 5A school should be more because there is a larger number to select from. The results are shown in Table V.

TABLE V

COMPARISON OF PERCENTAGE OF TOTAL HIGH SCHOOL ENROLLMENT
AND PERCENTAGE OF TOTAL TRACKMEN ACCORDING TO CLASSIFICATION

Size of School	% of Total High School Enrollment	% of Total Trackmen
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In order to partially answer the question posed by this study, DeLoss Dodds, head track coach at Kansas State University, was given the list of names that had been taken from the eligibility list. The results of the ratings Mr. Dodds gave the trackmen are shown in Table VI.

TABLE VI
RATING OF TRACKMEN BY COACH

Rating	Number of Trackmen	Out-of-State	Kansas
5	20	7	13
4	24	4	20
3	27	3	24
2	22	0	22
1	13	3	10
Total	106	17	89

These results show that the majority of the trackmen from out-of-state are rated high. This is logical due to the higher cost of out-of-state tuition; a full scholarship for an out-of-state athlete will cost Coach Dodds more, so he has to be more selective.

The rating of DeLoss Dodds was then compared with the size of high school the athlete came from. A breakdown of the ratings and the size of school that the high school trackmen attended is shown in Table VII.

TABLE VII

RATING BY COACH COMPARED TO THE SIZE OF THE HIGH SCHOOL

Size of School	Rating of Coach				
	One	Two	Three	Four	Five
5A	1	8	8	8	5
4A	3	3	5	2	3
3A	2	3	3	6	2
2A	3	3	7	4	2
1A	1	5	1	0	1

The results indicate that a large percentage of good athletes come from the larger schools. But one must remember that the largest selection of athletes comes from the larger schools. (Table IV). If the success in athletics is correlated with the size of high school, there is only a very slight correlation of .16 which is insignificant.

Satisfactory or Unsatisfactory rating of trackmen. If trackmen are rated, however, with a one or two being below satisfactory and a three, four, or five rating being satisfactory, the results in Table VIII are obtained.

TABLE VIII

PERCENTAGE OF TRACKMEN RECEIVING SATISFACTORY
OR UNSATISFACTORY RATING

Size of School	Total Number of Trackmen	Unsatisfactory		Satisfactory	
		No.	%	No.	%
5A	30	9	30.3	21	70.0
4A	16	6	37.5	10	62.5
3A	16	5	31.2	11	68.8
2A	19	6	31.5	13	68.5
1A	8	6	75.0	2	25.0

These statistics indicate that all of the schools are fairly equal except for the 1A schools. Only twenty-five percent of the trackmen who graduated from a 1A school received a satisfactory rating as compared to between sixty and seventy percent for the other four classifications. The least that one can conclude is that over the last four years trackmen at Kansas State University who were graduated from a high school with an enrollment between 20 and 110 were rated much lower by DeLoss Dodds than the other four classes of schools.

Classification of basketball players by enrollment. The next sport which was compared was basketball. The same procedure was used as that used for track. The names of the basketball players were taken from the eligibility list of the last four years. Only those basketball players from Kansas were rated as to the size of enrollment. The students were given a one to five score based on high school enrollment using the same method as was used in track. The results of these figures are shown in Table IX.

TABLE IX

NUMBER OF BASKETBALL PLAYERS BY HIGH SCHOOL CLASSIFICATION

Size of School	Number of Basketball Players from Kansas Schools	% of Basketball Players
5A	1	5.3
4A	8	42.1
3A	4	21.0
2A	3	15.8
1A	3	15.8
Total	19	100.0

These figures show that an overwhelming percentage of basketball players come from 4A schools. As one can observe, eight out of nineteen basketball players from Kansas come from 4A schools. Also, an interesting fact is that out of these eight basketball players, five of them are from Manhattan High School.

Rating of basketball players by coach. The next step was to have the coach rate them. Since Cotton Fitzsimmons, head basketball coach at Kansas State University, had only been there for three years, he was not the logical person to rate the players who were here previously. So Larry Weigel, who has been at Kansas State longer and is the freshmen basketball coach, rated them.

Mr. Weigel was given the list of basketball players taken from the eligibility list with the same set of instructions as those given to DeLoss Dodds, the track coach. The results of the ratings, including out-of-state basketball players, are shown in Table X.

TABLE X

RATING OF BASKETBALL PLAYERS BY COACH

Rating	Number of Players	Out-of-State	Kansas
5	8	5	3
4	8	7	1
3	6	2	4
2	11	4	7
1	8	4	4
Total	41	22	19

These figures indicate that over half of the basketball players are from out-of-state. Also, most of these out-of-state players are rated fairly high by the coach.

When the rating by the coach is compared to the size of high school the basketball players came from, the results arrived at are shown in Table XI.

TABLE XI

RATING BY COACH COMPARED TO SIZE OF HIGH SCHOOL

Size of School	One	Two	Rating of Coach Three	Four	Five
5A	0	1	0	0	0
4A	1	6	1	0	0
3A	0	0	2	1	1
2A	1	0	0	0	2
1A	2	0	1	0	0
Total	4	7	4	1	3

Satisfactory or unsatisfactory rating of basketball players.

Since there are only nineteen basketball players from Kansas, it is difficult to arrive at any conclusions. However, if the players who were given a rating of one or two by their coach are regarded as unsatisfactory and the players who received a three, four, or five rating are considered as satisfactory by their coach, some interesting results are obtained. as shown in Table XII.

TABLE XII

PERCENTAGE OF BASKETBALL PLAYERS RECEIVING
SATISFACTORY OR UNSATISFACTORY RATING

Size of School	Total Number of Basketball Players	Unsatisfactory		Satisfactory	
		No.	%	No.	%
5A	1	1	100.0	0	0.0
4A	8	7	87.5	1	12.5
3A	4	0	0.0	4	100.0
2A	3	1	33.3	2	66.6
1A	3	2	66.6	1	33.3
Total	19	11	57.8	8	42.2

There were not enough total basketball players to arrive at any significant conclusions. But the results indicate that basketball players from 3A and 2A schools have better success than those from other schools at Kansas State University. A .13 correlation was calculated when the rating by the coach was correlated with the size of the high school. The reason for this can readily be seen when only one basketball player out of nine from a 5A and 4A school received a satisfactory rating, which was only a three. Actually, the results indicate the best basketball players at Kansas State University come from out-of-state and the remainder come from the smaller 3A and 2A schools.

Classification of baseball players by enrollment. The last sport that was studied was baseball. The same procedure was followed as that for track and basketball. The results of the breakdown of the classification of high schools from which the baseball players graduated are shown in Table XIII.

TABLE XIII

NUMBER OF BASEBALL PLAYERS BY HIGH SCHOOL CLASSIFICATION

Size of School	Number of Baseball Players from Kansas	% of Baseball Players
5A	17	47.2
4A	6	16.7
3A	1	2.8
2A	5	13.9
1A	7	19.4
Total	36	100.0

These figures indicate that almost one-half of the baseball players at Kansas State University come from a 5A school, and a very small percentage comes from the 3A schools. One reason for the high selection of baseball players from the 5A schools might be because the smaller schools offer only track programs in the spring while the larger

5A schools offer both track and baseball. However, almost all towns play baseball in the summer and this should not result in any significant difference.

If one compares the figures in Table IV with the number of baseball players, the results are very interesting, as shown in Table XIV.

TABLE XIV

COMPARISON OF PERCENTAGE OF TOTAL HIGH SCHOOL ENROLLMENT
AND PERCENTAGE OF TOTAL BASEBALL PLAYERS
ACCORDING TO CLASSIFICATION

Size of School	% of Total High School Enrollment	% of Total Baseball Players
5A	29.2	47.2
4A	24.2	16.7
3A	19.4	2.8
2A	17.1	13.9
1A	10.1	19.4
Total	100.0	100.0

These results indicate that the 5A and 1A schools are high in baseball representatives at Kansas State University and the rest of the classes are low, especially the representatives from the 3A schools.

Rating of baseball players by coach. The next step was to have the head coach rate the players. The head baseball coach at Kansas State University is Bob Brasher, who was given a list of seventy-one players. Thirty-five of the players were from out-of-state. The list had the same set of instructions as those given to Coach Dodds and Coach Weigel. The results of the rating are shown in Table XV. The ratings of the out-of-state baseball players are also included.

TABLE XV

RATING OF BASEBALL PLAYERS BY COACH

Rating	Number of Players	Out-of-State	Kansas
5	8	2	6
4	16	15	1
3	22	5	17
2	19	9	10
1	6	4	2
Total	71	35	36

These figures indicate that about one-half of the baseball players are from Kansas and about one-half of the baseball players are from out-of-state. The best ball players come from Kansas; six out of the eight players that received a rating of five came from Kansas.

When the ratings of the coach were compared to the size of high school the baseball players graduated from, these results, shown in Table XVI, are obtained.

TABLE XVI

RATING BY COACH COMPARED TO SIZE OF HIGH SCHOOL

Size of School	Rating of Coach				
	One	Two	Three	Four	Five
5A	0	3	10	0	4
4A	1	3	0	1	1
3A	0	0	1	0	0
2A	1	2	2	0	0
1A	0	2	4	0	1
Total	2	10	17	1	6

Satisfactory or unsatisfactory rating of baseball players.

Since there are only thirty-six baseball players from Kansas, it is difficult to arrive at any conclusion. However, if the baseball players given a rating of one or two by their coach are regarded as unsatisfactory and the players who received a three, four, or five rating are regarded as satisfactory, these results are obtained, as shown in Table XVII.

TABLE XVII

PERCENTAGE OF BASEBALL PLAYERS RECEIVING
SATISFACTORY OR UNSATISFACTORY RATING

Size of School	Total Number of Baseball Players	Unsatisfactory		Satisfactory	
		No.	%	No.	%
5A	17	3	17.6	14	82.4
4A	6	4	66.7	2	33.3
3A	1	0	0.0	1	100.0
2A	5	3	60.0	2	40.0
1A	7	2	28.5	5	71.5
Total	36	12	33.3	24	66.7

These results show that the baseball players that came from the 5A schools were more successful at Kansas State. Particularly since the greatest percentage of ball players came from the 5A schools. Even though 3A has a 100 percent rating, this is not too significant since there was only one ball player from a 3A school, and he only received a rating of three.

A correlation of .17 resulted when the rating by the coach was correlated with the size of high school.

PART IV

CONCLUSION

To conclude, beginning with track, the results indicate that the students from the 1A schools were not nearly as successful as those students from the larger schools. Only twenty-five percent of them received a successful rating of three or above from the coach, while in the other classes of schools a successful rating was received by sixty to seventy percent of the students. A correlation of .16 was formulated when comparing the rating of the coach to the size of high school.

The next sport was basketball. Since there were only nineteen basketball players from Kansas, the figures can be very misleading. But the results indicate that basketball players from 3A and 2A schools have much more success than students from other high school classifications. A correlation of -.13 was figured when comparing the size of high school with the rating of the coach. The results also indicated that the majority of good basketball players at Kansas State University come from out-of-state.

The last sport was baseball. The results show that only one baseball player at Kansas State University during the last four years came from a 3A school. By far the greatest majority of baseball players graduated from 5A high schools. These ball players have been very successful at Kansas State University. Eighty-two and four-tenths percent received a rating of three or above. Players from 1A schools

also had good success at Kansas State with 71.5 percent getting a rating of three or above by the coach. Four A and 2A schools have a low representation in baseball. Also 3A schools were low in representation with only one player. A correlation of .17 resulted when comparing the rating by the coach with the size of the high school.

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A study was made to determine whether students from the smaller high schools in Kansas perform as well in athletics at Kansas State University as students who graduated from larger high schools. The coaches rated the players of the last four years on the basis of the qualities that were necessary for competition in varsity athletics at Kansas State. The scores ranged between one and five, with a five being the highest score given when an athlete was rated by the coach.

The high schools were also broken down into five classes. The largest high schools were given a rating of five. Then these two numbers were correlated.

The results indicate, beginning with track, that students from the 1A schools do not perform nearly as well as those students from the larger schools. Only twenty-five percent of them received a successful rating of three or above from the coach. While in other classes of schools a successful rating was received by sixty to seventy percent of the students. A correlation of .16 was formulated when comparing the rating by the coach to the size of high school.

The next sport was basketball. Since there were only nineteen basketball players from Kansas, the figures can be very misleading. But the results indicate that basketball players from 3A and 2A schools have much more success than students from other high school classifications. A correlation of $-.13$ was figured when comparing the size of high school with the rating by the coach. The results also indicated that the majority of good basketball players at Kansas State University come from out-of-state.

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