A STUDY ON BACKGROUNDS, PREFERENCES, AND DISLIKES OF COLLEGE MEN IN PHYSICAL EDUCATION ACTIVITIES

by

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OF AGRICULTURE AND APPLIED SCIENCE

## TABLE OF CONTENTS

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INTRODUCTION	2
MATERIALS AND METHODS	8
RESULTS	ll
DISCUSSION	
CONCLUSIONS	
ACKNOWLEDGMENTS	40
RECOMMENDATIONS	

## INTRODUCTION

During the World War physical education activities received the greatest impetus they have ever enjoyed. The United States Army made use of these activities for two purposes: the first, physical conditioning of the soldiers, and the second, recreation. Competition also entered into the training process, although it is generally known that the whole military system includes it in practically all phases, both individual and group.

Men who returned from the army to civilian life had had experiences in physical education activities, some of them for the first time in their lives. All of them learned the value of these various activities in helping

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to bring the body to its highest point of physical efficiency and in furnishing sport and recreation for the participants. Because of the increased demand for all athletics and similar activities, organizations which promoted them, such as Y. M. C. A.s, Athletic Clubs, Park and Playground Associations, and Educational Institutions flourished like never before. A veritable era of building and construction was the result to provide facilities for all who wished to take part themselves or who wanted to be spectators, in which latter case, they paid for the privilege of seeing others play. This was the period of new stadia. holding thousands of spectators for football games; of field houses, accommodating thousands for basketball and other indoor sports; of gymnasia, supplying additional space and facilities for individual participation; of parks and playgrounds, meeting the need for outdoor activities of all kinds.

Two aspects were therefore in evidence. First, the commercial aspect with million dollar gate receipts for a season and even for a single event. In this class were found some of the larger colleges and universities whose football receipts ran into the hundreds of thousands of dollars for a season. Here belonged, also, such collosal

promotions as the Dempsey-Tunney fight with over a hundred thousand spectators, paying more than a million dollars in admissions for this one contest. The second aspect was the increased personal participation for enjoyment and recreation on the part of the general public. It was this demand which called for additional facilities and equipment for such activities as golf, tennis, swimming, and the The lack of enough private golf courses and the exlike. pense of playing on them brought about the municipal and public courses now covering the country; city governments and park boards were hard-pressed to satisfy the demands for enough tennis courts. while public swimming pools were being provided by even the smallest communities. This same aspect of individual participation was the cause of the phenomenal increase in the sales of athletic and other sports equipment. Sporting goods manufacturers were literally swamped with demands for equipment of all kinds. Where formerly four ordinary clubs and a bag in which to carry them sufficed for most golfers, they now found it necessary to keep up with their comrades by buying more clubs, better-made and more expensive clubs, until the ultimate demand called for a set of ten matched irons and three matched woods. plus a bag of comparable elegance,

which equipment alone required a considerable outlay of money to say nothing of the actual expenses of playing.

In professional sports the promoters took advantage of the demand to enrich themselves and others associated with them. The educational institutions, on the other hand, used the income from athletic contests to provide facilities for the entire student body, as, for instance, the University of Michigan, whose equipment for participation on the part of all students is second to none. It was the schools and colleges, also, who recognized the educational value of physical activities with the result that these activities were made a part of the curriculum, in most instances required of all freshmen and in some cases of freshmen and sophomores.

One of the important justifications for physical education activities is health. When the seven cardinal principles of education were announced by the National Education Association, health was placed first. In this connection it might be said that, without health, education is diminished. Physical activity is necessary for health just as health is necessary for education.

Physical education activities have been and still are the most popular leisure time activities. The spirit of play and competition is widespread. New adjustments following the recent economic dislocation will provide less time for work in order to earn a living, and more time for leisure in which to enjoy it. It is practically certain that the length of the working day will be much shorter than it has been, thus making it possible for the working class to enjoy more time of their own. Concerning the recent unemployment situation, it is significant that physical education activities were extensively used to keep up the morale of people out of work, and of those who were working on a greatly reduced schedule. 6

With these newer applications of physical education activities on the threshold of the near future, it will devolve upon the schools to teach these various activities in order that the pupils of the present day, who will be the workers tomorrow, will be able to enjoy personal participation to the fullest degree. Also, if the schools teach the pupils properly, they, in turn, will be able to help materially those whom the schools cannot reach directly.

In the study of physical education activities, the most common procedure has been to approach these from the viewpoints of men engaged in the teaching and administration of them. Such a study is the one made by the Committee on Curriculum Research<sup>1</sup> in which leaders of the profession were asked to estimate values of various activities. In this study the writer wanted to find out from the students, themselves, which activities they had previously taken part in and which, in their opinion, they considered most desirable and least desirable. It was hoped that the data collected would possibly portend certain indications if the group studied was large enough to be representative.

In the present set-up for required physical education for freshmen and sophomores at Kansas State college, five activities are offered: 1. Boxing, 2. Wrestling, 3. Swimming, 4. Floor Work, 5. Corrective. In the sophomore year students may transfer to any sport in varsity athletics and receive credit for physical education by participating in the practices for football, basketball, baseball, track, wrestling, swimming, golf, and tennis. At various times there have been requests for additional activities on the part of students, and in some instances

A study of relative values of thirty important activities in the physical education program for boys. The Research Quarterly, Amer. Phys. Educ. Assn., 2:115-174 March, 1931.

suggestions have been made to have activities of a more specialized and advanced character than are now offered. It was hoped that this study would bring forth data that would be helpful in determining procedure regarding the addition or expansion of activities. 8

## MATERIALS AND METHODS

After considerable study 52 different physical education activities were listed. This is not an exhaustive list but it represents the entire range of activities that might be classified as coming under this category. The 52 activities selected comprised individual sports, gymnastics, rhythms, aquatic sports, combative sports, team games, and winter sports. A copy of the blank used in this study will be found on page 10. The vertical columns from one to twelve corresponded to the question numbers, although in this study only ten questions were asked. These questions were as follows:

- 1. In what activities did you take part before coming to Kansas State college?
- 2. In what activities did you receive instruction or supervision in grammar school?
- 3. In what activities did you receive instruction or supervision in high school?

4. In what activities have you received instruction, coaching, or supervision at Kansas State college?

9

- 5. In what activities would you like to receive more instruction or coaching at Kansas State college?
- 6. In what activities would you like to become expert while here in college?
- 7. What activities do you dislike?
- 8. What activities do you prefer?
- 9. In what activities will you make an effort to take part after graduation?
- 10. In what activities would you like to take part when you are forty years of age?

These blanks were filled in during the last three weeks of the first semester, 1932-33. They were given by the writer to all the required physical education classes in boxing, wrestling, swimming, and floor work.

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## RESULTS

The results of this study will be found in tabular and graphical form on the next ten pages. The Figures 1, 2, 3, etc., correspond to the questions on pages 8 and 9. A total of 591 students made up this study and they were divided in the Divisions as follows: Agriculture, 92; Engineers, 262; General Science, 182; Veterinary Medicine, 55.

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Rhythms	Clogging Folk Dancing Gymnastic Dancing Tap Dancing	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 29 31 30 5 11 5
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Team Games	Baseball Basketball Field Hockey Football Ice Hockey Indoor Baseball Soccer Softball Speedball Touch Football Volleyball	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Winter Sports	Coasting(Bobsled) Figure Skating Skating Skiing Snowshoeing Tobogganing	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11 11 13 79 73 80 11 25 14 4 7 5

Fig. I PREVIOUS BACKGROUND

# GRAPHIC REPRESENTATION OF PERCENTAGES Scale 2"=100%



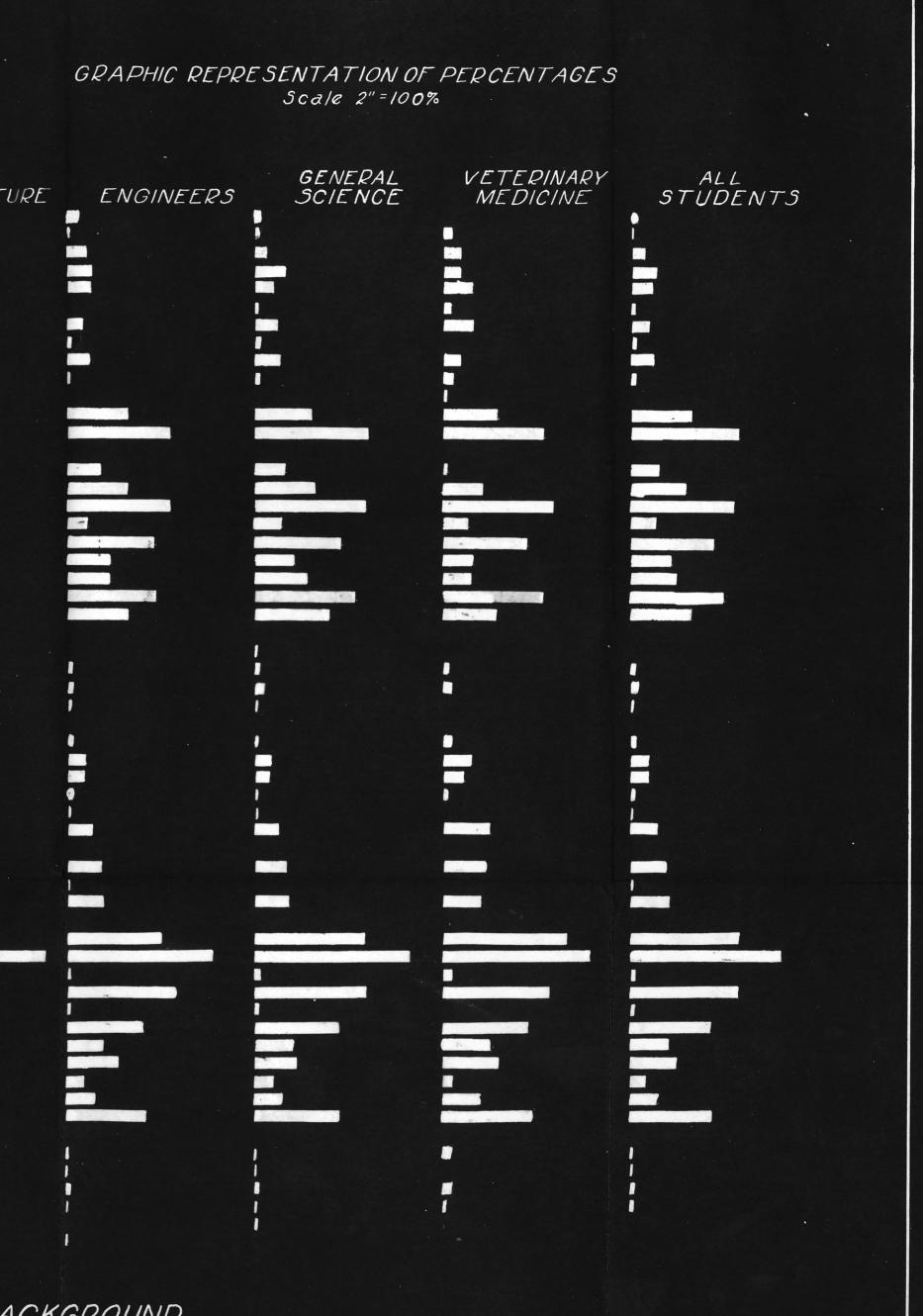
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Team Games	Baseball Basketball Field Hockey Football Ice Hockey Indoor Baseball Soccer SoftBall Speedball Touch Football Volleyball	578421126917 43	138 114 12 62 1 72 36 7 7 61	94 93 831 49 39 33 33 13 25	3412929816206	323 286 26 123 166 84 132 12 54 115	62 52 4 23 1 28 10 18 4 4	533524 27433023 123	521 47 2161 274	6264,164 <b>5</b> 5,994,189	558421 28422299 19	
Winter Sports	Coasting(Bobsled) Figure Skating Skating Skiing Snowshoeing Tobogganing	4 2 6	11 13 2 1 1	6 1 8 1	5 4 1	26 31 32 2	427	4 51	314 11	9 7 2	4 1 5 1	

Fig.2 GRADE SCHOOL BACKGROUND

## GRAPHIC REPRESENTATION OF PERCENTAGES Scale 2"=100% GENERAL SCIE**N**CE VETERINARY MEDICINE ALL STUDENTS URE ENGINEERS 42 F 1 1 .

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Fig. 3 HIGH SCHOOL BACKGROUND



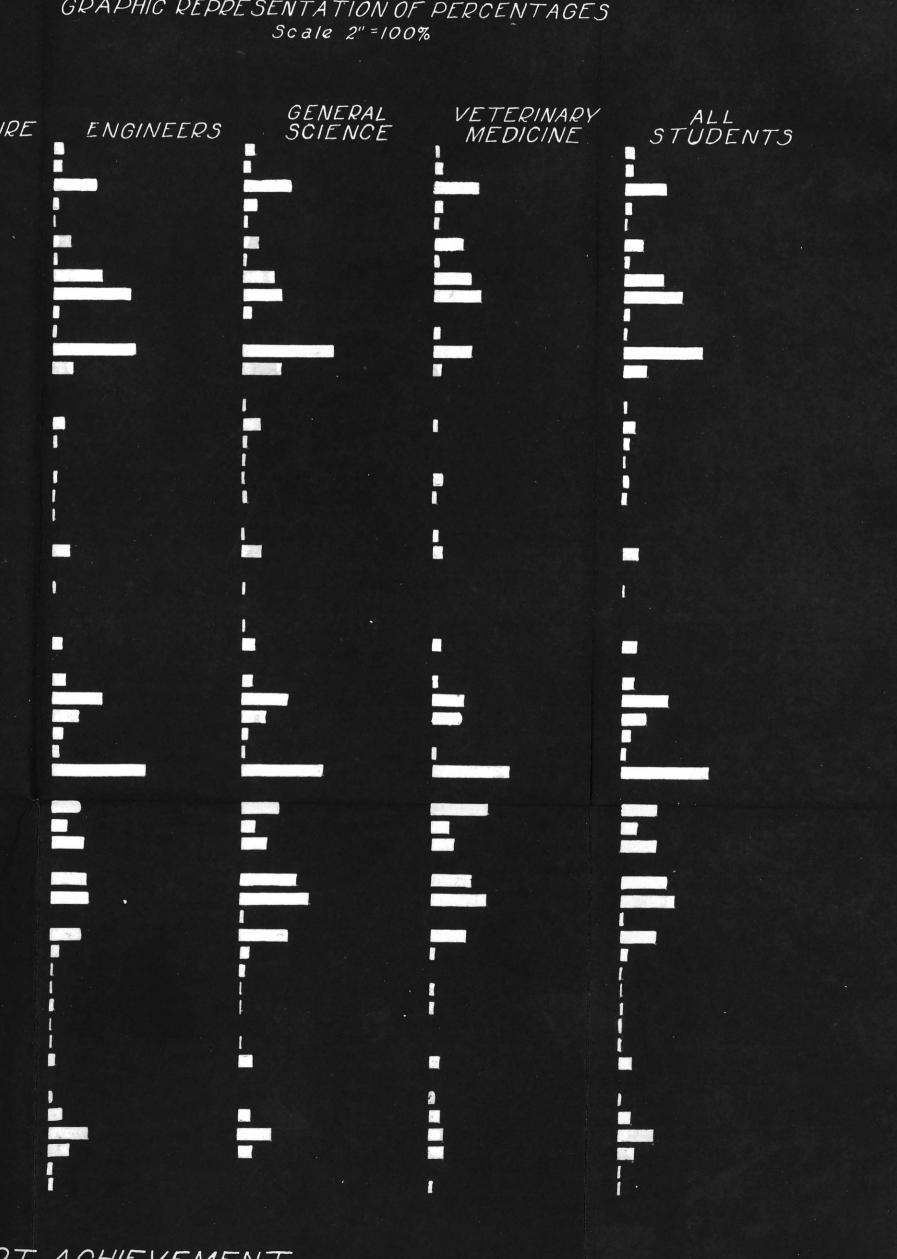
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rigs ADDITIONAL PARTICIPATION WANTED

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Gymnastics	Agility Tests Apparatus Calisthenics Indian Clubs Marching Posture Pyramids Relays & Games Tumbling	3 3   2 2 3	1 17 6 1 3 2 2 2 2 3	263124 16	1 21 12	4723999224 4		133122 3	6211	192112 19	2 42 24	162122 7				
Rhythms	Clogging Folk Dancing Gymnastic Dancing Tap Dancing	2 5	3    4	2 1 12	2	7 1 33		2 5	1 5	1 17	4	1 6	•			
Aquatic Sports	Canoeing Diving Life Saving Rowing Sailing Swimming	7 21 4 1 2 39	19 68 36 12 8 129	10 4 2 2 4 2 7 7	197 122	37 140 69 17 13 267		4 1 2	7 26 14 5 3 9	637212142	2 16 13 20	6 24 12 3 2 5		- And		
Combative Sports	Boxing Fencing Wrestling	21 2 25	35 21 43	35 13 24	1656	107 41 98		327	13 8 16	19 7 13	29 9 11	18 7 17				
Team Games	Baseball Basketball Field Hockey Football Ice Hockey Indoor Baseball Soccer Soft Ball Speedball Touch Football Volleyball	28 28 17 21 11 19	48 53 38 94 34 3 21	526239321 13	11	1333381 16:02877346 36	3 3 !	10	1820 153212114	296145211 17	2029 182 22 5	238 183 11116				
Winter Sports	Coasting(Bobsled) FigureSkating Skating Skiing Snowshoeing Tobogganing	4 16 4 1	3 19 55 25 4 4	 31  2	1344	4 37 106 45 5	1	47 ;;	1721022	6 17 7	2577 2	  8  8   				

Fig. 6 PARTICIPATION FOR EXPERT ACHIEVEMENT



GRAPHIC REPRESENTATION OF PERCENTAGES

					f	PERCE	INTA	GES					
		SPICUL TURE VGINEERS	ENERAL	ETERINARY IEDICINE LL STUDENTS	GRICUL TURE	NGINEERS ENERAL	SCIENCE E TE PINAPY	NLUNCINA LL STUDENTS		GRAPHIC REPRE	Scale 2"=100	PERCENTAGES %	
Individual Sports	TOTAL STUDENTS Archery Bowling Golf Handball Hiking Horseback Riding Horseshoes Pistol Shooting Rifle Shooting Roller Skating Squash Tennis Track& Field	13 6 7 10 10 10 10 10 10 10 10 10 10 10 10 10	1385310131722722	N 55 591 55 591 55 26 5 13 5 10 4 23 1 7 7 8 2 6 3 7 7 8 2 6 3 2 1 3 7 7 8 2 6 3 2 6 3 2 6 3 7 7 8 2 6 3 2 6 3 2 6 3 7 7 7 8 2 6 3 2 6 3 7 7 7 8 2 6 3 2 6 3 7 7 7 8 2 6 3 7 7 7 8 2 6 3 7 7 7 8 2 6 3 7 7 7 8 2 6 3 7 7 7 8 2 6 3 7 7 7 8 8 7 7 7 8 8 7 7 8 7 7 8 8 7 7 7 8 8 7 7 7 8 8 7 7 7 8 8 7 7 8 8 7 7 7 8 8 7 7 7 7 8 8 7 7 7 7 8 8 7 7 7 7 7 8 8 7 7 7 7 7 8 8 7 7 7 7 8 8 8 7 7 7 7 7 7 7 7 7 7 8 8 8 7 7 7 7 8 8 8 7 7 7 7 8 8 7	V 3232517114234	9 21112331122 4	7432679114118	A 232445113215	AGRICULTURE	ENGINEERS	GENERAL SCIENCE	VETERINARY MEDICINE	STUDENTS
Gymnastics	Agility Tests Apparatus Calisthenics Indian Clubs Marching Posture Pyramids Relays & Games Tumbling	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	3 40 6 11 3 18 4 12	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	16 15 25 7 18 3 7 4 13	31 13 24 10 9 9	24 2 20 4 25 1 22 3 6 1 7 7	8 16 24 2 <b>3</b> 0 28 1 12 6 24 1 9 7 8 10					
Rhythms	Clogging Folk Dancing Gymnastic Dancing Tap Dancing	9 2 14 4 12 3 6 20	3 38 3 32	8 68 8 103 8 85 5 53	10 15 13 7	16 2	21 1. 8 1.	5 12 55 17 59 9					
Aquatic Sports	Canoeing Diving Life Saving Rowing Sailing Swimming	4 8   2 3    2    2	3 2 3	3 1 22 8 1 8 1 8 1 20	4   2 3  2	///	3 1 2 2	13113 2113					
Combative Sports	Boxing Fencing Wrestling	40     6  2 32	5 14	3 85 2 43 5 80	2  2  3	15 ) 6 12	8 4	5 14 7 7 14					
Team Games	Baseball Basketball Field Hockey Football Ice Hockey Indoor Baseball Soccer SoftBall Speedball Touch Football Volleyball	51242141153	23 159662	13121222998 1312121998	51242141153	222 23211	12 135	522212322231					
Winter Sports	Coasting(Bobsled) Figure Skating Skating Skiing Snowshoeing Tobogganing	3 2 1 2 2 1 2 1 2 1		524343 13	3 1 2 2 2 2	/		,             				•	
						Fic	7	PEP	SONAL DISLI	KES			

FIGT PERSONAL DISLIKES

			PERCENTAGES	
	TOTAL STUDENTS Archer y Bowling Golf Handball Hiking	0 9 7 1 6 8 9 6 8 9 6 8 1 6 1 7 U 8 6 8 9 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8	1.4     2.5     FOR ICUL TURE       1.4     2.5     FOR ICUL TURE       1.4     2.5     FOR ICUL TURE       1.5     2.5     FOR ICUL TURE       1.7     2.5     5.5       1.7     2.5     5.5       1.7     2.5     5.5       1.7     2.5     5.5       1.7     2.5     5.5       1.7     2.5     5.5       1.7     2.5     5.5       1.7     2.5     5.5       1.7     2.5     5.5       1.7     3.5     5.5       1.7     3.5     3.7       1.7     3.7     3.7	AGRICUL
Individual Sports	Horseback Riding Horseshoes Pistol Shooting Rifle Shooting Roller Skating Squash Tennis Track & Field	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
Gymnastics	Agility Tests Apparatus Calisthenics Indian Clubs Marching Posture Pyramids Relays & Games Tumbling	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	
Phythms	Cloqging FolkDancing GymnasticDancing TapDancing	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 3 3 4 3 1 1 2 4 1 1 1 5 4 2 7 8 15 16 11	
Aquatic Sports	Canoeing Diving Life Saving Rowing Sailing Swimming	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
Combative Sports	Boxing Fencing Wrestling	29 74 43 20 166 5 28 13 4 50 34 63 34 11 142	31 28 24 36 28 5 11 7 7 8 37 24 19 20 24	
Team Games	Baseball Basketball Field Hockey Football Ice Hockey Indoor Baseball Soccer Soft Ball Speedball Touch Football Volleyball	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
Winter Sports	Coasting(Bobsled) Figure Skating Skating Skiing Snowshoeing Tobogganing	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	

Fig. 8 PERSONAL PREFERENCES



		PICUL TURE	UNERAL CIENCE	TERINARY EDICINE L TUDENTS	GRICUL TURE	ENGINEERS	CIENCE N	AGE JNIOINE	TUDENTS G		G	RAPHIC REPRE	SENTATION O Scale 2"=100	F PERCENTAGES 0%	
Individual Sports	TOTAL STUDENTS Archery Bowling Golf Handball Hiking Horseback Riding Horseshoes Pistol Shooting Rifle Shooting Roller Skating Squash Tennis Track& Field	3   5 14   5 14   5 15   2 15   2	30 8143978522408 30 8143978522408 31 403978522408	<i>TV 59/</i> <i>1W 55 31</i> <i>18 322</i> <i>5 66</i> <i>7 132</i> <i>25 80</i> <i>18 276</i> <i>3 37</i> <i>18 360</i> <i>1 27</i> <i>18 360</i> <i>1 27</i>	OV 35921673215211 51921673215211 519	6 22 59 8 24 32	57 21 26 27 26 27 26 27 20 4 1	W 4359353325232	78 5341254876165	AGRICULTURE		ENGINEERS	GENERAL SCIENCE	VETERINARY MEDICINE	ALL STUDENTS
Gymnastics	Agility Tests Apparatus Calisthenics Indian Clubs Marching Posture Pyramids Relays & Games Tumbling	. 7   1 2 1	2025 1925 1746 184	$\begin{array}{c} 2\\ 15\\ 4\\ 55\\ 3\\ 1\\ 13\\ 1\\ 2\\ 2\\ 12\\ 2\\ 14\\ 2\end{array}$	 8   2 	3 2	164123142	7 22 44	39-22 28						
<i>Phythms</i>	Clogging Folk Dancing Gymnastic Dancing Tap Dancing	2	2 2 3 3 1 <b>1</b> 7 8	4 1 9 3 2 18	2   	   3	 2   4	2 4	1213		1				
Aquatic Sports	Canoeing Diving Life Saving Rowing Sailing Swimming	18 8 31 8 9 3 18 6 6 3 60 20	7 52 6 16 7 39 7 24	6 73	20 34 10 20 7 65	33 14 26 14	23 29 9 21 13 80	22 22 24 24 11 65	26 31 11 23 12 75						
Combative Sports	Boxing Fencing Wrestling	16 3. 1 1. 16 1	5 24 3 11 9 11	11 86 1 26 1 47	17 17 17	.5	13 66	20 2 2	15 4 8						
Team Games	Baseball Basketball Field Hockey Football Ice Hockey Indoor Baseball Soccer Soft Ball Speedball Touch Football Volleyball	2 10 5 1- 1	176112912	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	49 31 11 2 5 1 1 1 1 1	23 66525	36 38 116615115 15115	3127 59729 9	330 86625 14						
Winter Sports	Coasting(Bobsled) Figure Skating Skating Skiing Snowshoeing Tobogganing	8 3 5 2 43 14 9 3 2 1	9 <i>19</i> 5 9 4 86		9 5 47 10 2 2	14			1278267						

Fig. 9 POST-GRADUATION PARTICIPATION

inter .

		AGRICUL TURE	NGINEERS	ENERAL SCIENCE	E TERINARY AEDICINE	4LL STUDENTS	AGRICUL TURE	ENGINEERS	RENERAL SCIENCE	ETERINARY D AEDICINE D	5TUDENTS		GRAPHIC REI		TI <b>O</b> N OF 2" =100%	PERCENTAGES		
Individual Sports	TOTAL STUDENTS Archery Bowling Golf Handball Hiking Horseback Riding Horseshoes Pistol Shooting Rifle Shooting Roller Skating Squash Tennis Track & Field	-	18 83 185 28	0 18 197 874556 18 197 874556 19 12 3355478 2 2 5	N 51925504831	V 591 34 192 397 75 195 160 163 275 10 31 93	4 23 58 4 18 50 40 22 53 3	7271 11291 2082 42	6 38 7 2 0 0 3 0 5 3 7 1 1	N 25899965332 3899365332 4220	V 62739378621		ENGINEER	S GENE SCIE	RAL	VETERINARY MEDICINE	ALL STUDE	NT5
Gymnastics	Agility Tests Apparatus Calisthenics Indian Clubs Marching Posture Pyramids Relays & Games Tumbling	1 5 2 2	24443 2	19 1 3 2	4 1 2 1	 2 52 6 11 8 2	1 5 2 2 2	9 2 2 1 1	10 1 2 1	7242	9121							
<i>Rhythms</i>	Clogging Folk Dancing Gymnastic Dancing Tap Dancing	/	4	1 1 4	2	1 8 4	/	2	   2	4	/	Ŀ	•				1	
Aquatic Sports	Canoeing Diving Life Saving Rowing Sailing Swimming	13 9 1 8 6 41	44 27 10 40 26 144	30 7 3 27 18 107	521463	92 45 15 79 56 315	14 10 1 9 7 44	17 10 4 15 10 5 5	16 4 2 15 10 59	942712	<b>15</b> 8 3 13 9 53							
Combative Sports	Boxing Fencing Wrestling	212	5 8 3	241	22	11 15 6	212	231	 2 	4 4	231		+	1				
Team Games	Baseball Basketball Field Hockey Football Ice Hockey Indoor Baseball Soccer Soft Ball Speedball Touch Football Volleyball	13 1 1 9	12 6 2019 10 20	17 7 12 1 24		46 6 1 29 22 22 3 56	14 1 1 10	5 z 1 A 3 8	9 4 7 1 13	7 2 222 5	8 1 3 4 1 9							
Winter Sports	Coasting(Bobsled) Figure Skating Skating Skiing Snowshoeing Tobogganing	4 3 2 1 3 1 2	13 15 64 10 8 9	5 38 57 6		26 23 28 20 18 19	433312	564433	321343	749444	4423333							

Fig 10 EXPECTED PARTICIPATION AT 40 YEARS OF AGE

## DISCUSSION

1. Previous Background. The most important activities and the percentage of students checking them were as follows:

Baseball	92%	Roller Skating	75%
Basketball	92	Marching	74
Swimming	91	Relays & Games	73
Horseshoes	86	Calisthenics	72
Hiking	83	Rowing	70
Tenn <b>is</b>	82	Coasting	69
Volleyball	82	Diving	62
Skating	80	Touch Football	56
Horseback Riding	78	Boxing SHARE	56
Indoor Baseball	77	Wrestling	55
Rifle Shooting	76	Soft Ball	55
Football	75	Soccer	54
Track & Field	75	Golf	52

These figures show that more than half of the men in college have, at some time or other, participated in these twenty-six activities. It is significant to note that baseball and basketball head the list with 92 per cent each and swimming with 91 per cent, indicating the

universal popularity of these activities in general participation. The participation in the above twenty-six activities seems to have been largely voluntary as shown by comparison with the next two items following. The general results of this study in previous backgrounds of students show that the majority of them took part in a great many activities previous to their enrollment in college.

2. Grade School Background. The activities checked and the percentage of students having had grade school instruction or supervision are as follows:

Baseball	55%	Posture	26%
Basketball	48	Soft Ball	22
Relays & Games	47	Football	21
Marching	45	Volleyball	19
Calisthenics	42	Hiking	17
Track & Field	35	Folk Dancing	17
Indoor Baseball	28	Soccer	14

With baseball heading the list at 55 per cent, this does not compare very readily with the 92 per cent in Figure 1. Accordingly more than half of the students have played baseball in grammar school under school supervision. That is in line with the contention that among boys baseball is still the most popular sport, although this does not infer

that this sport was necessarily chosen by the participant but that the school provided the opportunity for participation. Basketball with 48 per cent seems rather high for coming under school jurisdiction. At the grammar school ages, the value of participation in basketball is questionable and from a physical education standpoint it might be better for grammar schools to substitute some other activity or activities better suited to the growing boy. Relays and games with 47 per cent, marching with 45 per cent, and calisthenics with 42 per cent show these activities to be more often used than would be expected. Since grade school teachers ordinarily have little or no training in physical education except that which they were required to take in college or normal school courses, they must be making a start in the right direction. Track and field with 35 per cent and indoor baseball with 28 per cent, posture with 26 per cent and soft ball with 22 per cent are typical activities for boys of grammar school age with track and field events being modified to suit the strength and endurance of younger boys. Football with 21 per cent in the same way as basketball mentioned above shows a bad selection of an activity that is not suitable for boys of this age. If this were touch football instead or even a modification of

football, it would be educationally justifiable. Volleyball with 19 per cent, hiking and folk dancing with 17 per cent, and soccer with 14 per cent complete the activities which this study has shown to be worth mentioning.

<u>3. High School Background.</u> Students having had instruction, coaching, or supervision in the high school number as follows:

Basketball	80%	Soft Ball	24%
Football	57	Pyramids	23
Track & Field	57	Posture	22
Baseball	56	Soccer	20
Calisthenics	55	Wrestling	20
Relays & Games	50	Boxing	18
Marching	45	Touch Football	15
Volleyball	43	Swimming	14
Indoor Baseball	42	Agility Tests	14
Tumbling	32	Handball	13
Tennis	32.	Hiking	12
Apparatus	29	Indian Clubs	12

These results indicate the rise in popularity of what are usually called the major sports. Basketball with 80 per cent heads the list by an unusually large margin, with football and track coming next with 57 per cent and baseball

with 56 per cent. The large margin that basketball has over the other three activities might seem to indicate that much of high school physical education consists in throwing a basketball on the gymnasium floor and letting the boys go to it with little or no supervision. Most certainly it seems unlikely that 80 per cent of the students checking these questionnaires could have played varsity basketball in high school. Baseball with 56 per cent compares very well with the same sport in grade school where 55 per cent checked this sport. Following these four major sports just mentioned comes a gymnastic group of three activities with calisthenics indicated by 55 per cent, relays and games by 50 per cent, and marching by 45 per cent. These three activities are typical in a well-rounded gymnastic program and their percentages indicate that about half of the students have participated in them. Volleyball comes next with 43 per cent, indoor baseball with 42 per cent, and tumbling with 32 per cent, which activities are becoming more popular right along for physical education programs where gymnasiums are available. Tennis was checked by 32 per cent which means that the high schools made it possible for approximately a third of their boys to enjoy this game. Following this apparatus with 29 per

cent, soft ball with 24 per cent, pyramids with 23 per cent, and posture with 22 per cent are again four activities associated with most gymnasiums. Soccer and wrestling with 20 per cent each have the same number of participants, although the former is a team sport and the latter an individual sport. Boxing with 18 per cent is participated in to practically the same extent that wrestling is, both of these being combat activities, sometimes also called selfdefense activities. Touch football with 15 per cent is probably incorporated more often than not in the intramural programs. The fact that only 15 per cent have had experience in this activity shows that more schools might offer this sport to their students. It, of course, does not require any of the expensive protective equipment necessary to inter-scholastic football. Only 14 per cent have checked swimming, which indicates that comparatively few high schools have pools as a part of their equipment. In a later part of this study the demand for swimming is very great. Fourteen per cent of the students have had agility tests, 13 per cent handball, 12 per cent hiking, and 12 per cent indian clubs. As in swimming, more students would probably play handball if courts were available for their use.

	4. Kansa	s State	College	Background.	Here the
figu	res are a	s follo	ws:		
	Marching	5	88%	Rifle Shoot	ing 29%
·	Calisthe	nics	66	Diving	23
	Apparatu	IS	53	Basketball	21
i.	Volleyba	11	52	Posture	19
	Relays &	Games	49	Indoor Base	ball 19
	Swimming		44	Boxing	17
	Tumbling		42	Wrestling	17

The high percentage of 88 per cent in marching is due to overlapping between the Military Department and the Department of Physical Education. In this particular study there are some inaccuracies with calisthenics checked by 66 per cent, apparatus by 53 per cent, volleyball by 52 per cent, relays and games by 49 per cent, tumbling by 42 per cent, and indoor baseball by 19 per cent. Since all these activities are used in the floor work program, the figures should be much closer together. Comparing calisthenics with tumbling, we find a variation of 24 per cent which is too high for activities that were given in all floor work classes. Another incongruity seems to exist between swimming and diving with the former checked by 44 per cent and the latter by 23 per cent. These two activities were **S**8

taught together. Rifle shooting was checked by 29 per cent, basketball by 21 per cent, rifle shooting being taught by the Military Department entirely. Regarding basketball, this activity was used only in classes whose small size permitted all members to play simultaneously. Posture was checked by 19 per cent and, as far as the writer knows, this was not a separate activity. Indoor baseball was also checked by 19 per cent and, until a year ago, it was a part of the floor work classes and should have a comparable percentage with calisthenics, apparatus, and volleyball. Boxing and wrestling were each checked by 17 per cent.

5. Additional Participation Wanted. In the writer's opinion, this is the most important study of all because it furnishes material for any changes or expansion that might be desirable for the Department of Physical Education. Percentages of students checked activities as follows:

Tennis	58%	Canoeing	21%
Swimming	54	Horseback Riding	20
Rifle Shooting	46	Handball	18
Basketball	40	Tumbling	18
Diving	39	Tap Dancing	18
Golf	36	Volleyball	18
Pistol Shooting	36	Skiing	17
Baseball	36	Archery	16
Boxing	32	Bowling	16
Wrestling	32	Rowing	16
Skating	31	Fencing	16
Life Saving	30	Figure Skating	16
Football	25	Ice Hockey	15
Track & Field	24	Apparatus	15

Up to the present there has been no attempt made at class instruction in tennis for men students. This study shows that this activity is wanted by 58 per cent which should be significant. Fifty-four per cent want swimming which compares with 44 per cent having checked it with Figure 4. Rifle shooting was requested by 46 per cent while 29 per cent have had instruction here. Forty per cent checked basketball. This activity under our conditions is difficult to offer because there are only two courts available

on the gymnasium floor which means that only twenty men can play at the same time and they would be utilizing practically all space. Diving was checked by 39 per cent which shows a demand for this sport as a separate activity. Golf, pistol shooting, and baseball were checked by 36 per cent. At present golf is not offered at all while pistol shooting is confined to advanced military students. Baseball could probably be added as there are fields available. Next in order come boxing and wrestling, each with 32 per cent, which compares with 17 per cent checking the same activity in Figure 4. This means that 15 per cent more students would like to enroll in these sports than are now taking them. Next comes skating with 31 per cent which is surprising for this locality, as weather conditions for indulging in this activity are rarely favorable. Thirty per cent asked for life saving which means there is more demand than the single class each semester has been able to take care of. Football received the checks of 25 per cent and to take care of this number in class work would present some serious problems especially as to equipment. Twenty-four per cent want more instruction in track and field which demand would not be so hard to meet as for football. Then there follow two activities whose popularity has been underestimated, canoeing with 21 per cent

and horseback riding with 20 per cent. Then follow four activities, handball, tumbling, tap dancing, and volleyball all receiving 18 per cent. All four of these activities could probably be handled without much trouble. Skiing follows with 17 per cent and that sport is really out of the question for Kansas because of lack of snow. Following this come five activities with 16 per cent each, namely, archery, bowling, rowing, fencing, and figure skating, but whether this number demands special classes is open to question. The same thing holds good for ice hockey and apparatus with 15 per cent. Figure skating and ice hockey are too dependent on weather conditions but apparatus and fencing could be offered readily, and archery, bowling, and rowing without too much difficulty.

6. Participation for Expert Achievement. These are the activities and the percentage of students who would like to excel in them, i.e., with above average performance:

Swimming	45%	Golf	22%
Tennis	41	Pistol Shooting	21
Rifle Shooting	31	Boxing	18
Basketball	28	Football	18
Diving	24	Skating	18
Baseball	23	Wrestling	17

The best relationship between this study and the one on Figure 5 is shown by comparison of the graphs which show a marked relationship between results in Figure 6 and Figure 5.

7. Personal Dislikes. At different times students have led the writer to believe that they personally disliked all activities or at least a majority of them. This study has shown that the percentage of students actually disliking activities is not very large. The graphs show on Figure 7 that these dislikes fall into the groups of activities under the heads of gymnastics, rhythms, and combative sports. The percentages follow:

Calisthenics	28%	Gymnastic Dancing	14%	
Marching	24	Boxing	14	
Apparatus	23	Wrestling	14	
Tumbling	18	Indian Clubs	12	
Folk Dancing	17	Clogging	12	

Of these only calisthenics, marching, apparatus, tumbling, boxing, and wrestling are being taught at present. The percentages in this Figure compared to those in Figure 5 are opposed to each other except in boxing and wrestling where there is some expression both ways.

8. Personal Preferences. In this study the percentages are as follows:

Swimming	66%	Football	35%
Tennis	60	Boxing	2,8
Basketball	53	Canoeing	28,
Skating	53	Volleyball	27
Rifle Shooting	52	Wrestling	24
Baseball	45	Track & Field	23
Golf	39	Rowing	22
Pistol Shooting	35	Bowling	20
Horseback Riding	35	Coasting	20
Diving	35	Life Saving	17

This study somewhat overlaps that in Figure 5 with the exception that Figure 8 indicates preferences only while Figure 5 gives expression to the wish for more participation or instruction. Practically two-thirds of the students. 66 per cent, prefer swimming while 60 per cent prefer tennis. These two activities have changed places from their positions in Figure 5 which may be taken to mean that the men prefer swimming but do not need additional instruction or participation in this activity. In other words more students want to just swim while in tennis they want instruction. Basketball and skating follow with 53 per cent each, the latter activity being quite surprising in view of the few opportunities to skate in the state. Rifle shooting is preferred by 52 per cent, more than half of the students comprising this study. Baseball with 45 per cent seems to hold its popularity in this part of the country while in other localities it is dying out, especially as concerns schools. Next comes golf with 39 per cent which compares quite well with 36 per cent in Figure 5 for students desiring opportunity to play. Pistol shooting, horseback riding, diving, and football each are preferred by 35 per cent and, in the case of football, it appears that this might be high. This entire study is to indicate only interests and not a desire to participate. Boxing and

canceing were checked by 28 per cent with volleyball coming next with 27 per cent and wrestling with 24 per cent. The difference here between boxing and wrestling is probably due to the fact that boxing exemplifies the pugnacious instinct more than does wrestling. Track and field follows with 23 per cent which is almost the same as 24 per cent in Figure 5 desiring a chance to improve themselves. Following this come three activities not usually associated with a school program, namely, rowing with 22 per cent, bowling with 20 per cent, and coasting with 20 per cent. Life saving completes this list with 17 per cent with the other activities ranking below that figure.

9. Post Graduation Participation. Here the percentages are as follows:

Swimming	75%	Basketball	30%
Tennis	61	Pistol Shooting	28
Golf	54	Canoeing	26
Skating	48	Bowling	23
Rifle Shooting	47	Rowing	23
Horseback Riding	35	Hiking	22
Baseball	33	Boxing	15
Diving	31		

Post graduation participation cannot be predicted with any degree of certainty by the students because they do not know where they will be located after completing their courses at college. Swimming with 75 per cent expecting to take part shows a decided increase over all the other activities. Next comes tennis with 61 per cent with quite a drop from the swimming. Golf with 54 per cent. skating with 48 per cent. and rifle shooting with 47 per cent will seemingly draw large numbers. Thirty-five per cent expect to ride horseback, with 33 per cent playing baseball. How long they expect to continue in baseball cannot be estimated. Diving was checked by 31 per cent, basketball by 30 per cent, showing that these two activities will be quite popular, but not at all to be compared with the first five activities mentioned. Pistol shooting with 28 per cent, canceing with 26 per cent, bowling with 23 per cent. rowing with 23 per cent, and hiking with 22 per cent seem to indicate that more individuals expect to use these activities than they ordinarily do. Then follows boxing with a noticeable drop to 15 per cent and it is doubtful to the writer if that number of college students actually will take part in this activity. The uncertainty of participation will be governed by opportunities at hand,

but these results seem to be indicative of a trend along fairly certain lines.

10. Expected Participation at 40 Years of Age. The percentage of students checking the activities are as follows:

Golf	67%	Horseshoes	27%	
Swimming	53	Skating	22	
Rifle Shooting	46	Hiking	19	
Horseback Riding	33	Canceing	15	
Tennis	33	Handball	13	
Bowling	32	Rowing	13	
Pistol Shooting	28			

Here golf takes a big jump to lead the list with two-thirds of the students, or 67 per cent, expecting to play this game at the age of forty years. Swimming retains its popularity with 53 per cent, as does rifle shooting with 46 per cent. Horseback riding with 33 per cent retains its approximate rank, but tennis takes a decided drop to 33 per cent compared with Figure 9 and Figure 8. This would be natural as the violently active sports are replaced with others less active at this age. Bowling comes up slightly with 32 per cent, **pistol shooting** with 28 per cent equalling the percentage in Figure 9. Horseshoes with

27 per cent appears in the preferred activities. Skating enlists 22 per cent of the students and this seems somewhat out of line as, ordinarily, men at forty years of age care very little about skating. Hiking at 19 per cent also seems high, as does canceing with 15 per cent. Handball and rowing complete the list of preferred activities with 13 per cent. These figures complete the percentages showing enough interest to warrant inclusion in the list.

### CONCLUSIONS

From 52 per cent to 92 per cent of all students used in this study have had participation in half of the 52 activities listed. The grade schools are deficient in so far as they ought to teach more activities than they do. In high schools the trend of activities is entirely toward major sports, basketball, baseball, football, and track and field. Calisthenics is probably used because of its easy administration and because not enough specially trained physical education teachers are available to organize and direct other activities. The Kansas State college program emphasizes gymnastics which, as a class, is least popular. There is a demand for tennis, swimming.

rifle shooting, diving, golf, pistol shooting, boxing, wrestling, skating, and life saving among individual activities that is not being fully met. Besides, in the team sports basketball and baseball more opportunity to play is desired. Dislikes in these activities can be disregarded except in gymnastics, rhythms, and combative sports. Not enough activities are being taught that are interesting to the students and that can be used after graduation. In the years immediately following graduation, students will participate in the activities they prefer while at forty years of age individual activity will be confined to individual sports and to aquatic sports. The results of this study can be best seen and compared by referring to the graphic representation of percentages of all students on Figures 1 to 10 inclusive. 4

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## RECOMMENDATIONS

Since this study was conducted for collecting information regarding our own situation here at Kansas State college, the author would like to recommend:

1. That an attempt be made to organize the required physical education classes on the basis of activities and that such organization be tried for a period of time sufficient to show its possibilities.

2. That definite standards and tests be devised in all activities taught.

3. That a syllabus be prepared with complete outlines of procedure in the various activities to be used by the physical education majors who will instruct in these activities as practice teachers.

4. That the method of assignment at registration be modified so that the Department of Physical Education assigns all students enrolling in its classes. In this manner, only, can the plan be made operative because the limitations of the number of students in the classes must be made in the department.