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## PHYSICAL FITNESS TEST OF FRESHMAN STUDENTS OF THE INSTITUTE OF ARTS AND SCIENCES

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**Abstract:** *It is the major purpose of the study to determine the performance level of the college freshman students in physical fitness tests in the Institute of Arts and Sciences at the Kalinga-Apayao State College, Dagupan Campus, Tabuk City.*

*The study concludes that both the male and female students are on the whole below standard in physical fitness level. Their present physical fitness level is the effect of their lack of awareness of the importance of regular physical exercises and not to maintain health care enough proper nutrition in the development of strength and endurance of the body.*

*It is highly recommended that Physical education teachers should be aware of the physical fitness level of their students in order for them to identify the needs of their athletes; evaluate and analyze the performance of their athletes in competitions.*

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## **INTRODUCTION**

Physical fitness is the ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure time activities and meeting emergency demands. It is the ability to endure, to bear up, to withstand stress, to carry in on circumstances where an uplift person could not continue and is a major basis for good health and well-being.

It involves the performance of the heart and lungs and the muscles of the body. When a fitness program is undertaken, it's important to member that fitness is an individual quality that varies from person to person. It is influenced by age, sex, heredity, personality habits, exercise and eating practices.

The Dep-Ed Physical Fitness Test Manual states that one of the objectives of physical education in the school system from grade one to college is to improve the physical fitness level of the students. This manual speaks also of the physical fitness testing which is a necessary activity because it gives information on the status of the over-all physical fitness. It will serve as the basis to evaluate the affectivity of Physical Education program.

The physical fitness test should be administered at least twice a year. The pre-test at the beginning of the school year and the post-test at the last month before the end of the school year will provide information on whether the Physical Education program in general helps the students achieve optimum physical fitness.

Secretary Alunan III on his memorandum states that the President, at the 42<sup>nd</sup> Cabinet Meeting on December 5, 1995, instructed the DILG "to remind the Local Government Units of the national policy that sports and physical fitness development at the grassroots is their responsibility and to direct the LCE's to plan out and implement local sports and physical fitness development programs."

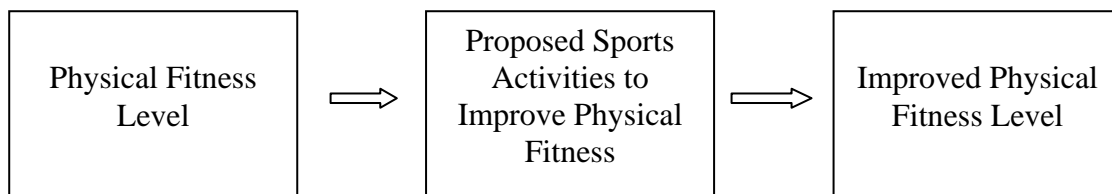
According to the Guidelines and Standards for collegiate service physical education program, Physical Education I emphasizes the integration of physical fitness.

## **CONCEPTUAL FRAMEWORK**

The principle of physical fitness includes specificity, overload and progression. The overload principle can be achieved thorough changes in frequency, intensity and time. Frequency is how often one exercises. How often is the question. Well, most people say anywhere from three (3) to six (6) days a week, depending upon experience and goals. Training the full seven (7) days most of the time is not the answer to improving the body's performance.



Depending upon whether one is looking to stretch a workout over a long period of time and work at a slower pace than normally, or race one hundred (100) meters at 100% decide how hard one will train. One can work at full throttle for five (5) minutes or ease it up for fifteen (15), and still get the benefits. That leads to the third principle of time. For how long does one wish to train? That is a question only oneself can answer. When one is working his way up from five (5) minutes to ten (10), then next couple of weeks up to thirty (3), one is doing something. Time plays a very important role in the three principles of fitness, but like a three-legged stool, if one is missing everything will fall apart.



**Figure 1. Schematic Diagram of the Study**

## STATEMENT OF THE PROBLEM

It is the major purpose of the study to determine the performance level of the college freshmen students in physical fitness tests in the Institute of Arts and Sciences at the Kalinga-Apayao State College, Dagupan Campus, Tabuk City.

Specifically, it seeks to answer the following questions:

1. What is the physical fitness level of the of the male and female students in the following physical fitness tests?
  - a. Standing Long Jump
  - b. St and Reach
  - c. Curl-ups
  - d. Flexed Arm Hang (Male and Female)
  - e. 3 Minutes Step Test
  - f. 50 M Sprint
  - g. 15 Minutes Run and Walk
2. How does the physical fitness level of the males and females compare?
3. What sport events are best for the male and female students who passed the standard scores for the physical fitness test?



4. What sports activities are proposed to improve the physical fitness level of the students?

### **SIGNIFICANCE OF THE STUDY**

This study will serve as a mirror to the supervisor and administrators to design programs for Physical Education in all levels to provide maximum activity that will encourage self-expression and creativity to the students like the integration physical fitness tests and informal games.

Administrators. The school administrators shall understand the need to develop the physical fitness of the students especially those with sports potentials. They shall be encourage to support the Physical Education program by providing the sports facilities required for trainings. In this way, students trained to compete in sports shall have a chance to perform well.

Teachers. The Physical Education teachers shall determine the appropriate sports and programs of activities suited to individual students to improve and maintain their physical fitness. They will pick concepts to be stressed in their teachings and determine the best games or sports that suit the interest and level of the students. They will have a chance to meet their students in conducting particularly the different tasks in the PPFT.

Students. Knowing their physical fitness level, students shall be encouraged to undertake trainings to reach the standard physical fitness level for health reasons. Those inclined to sports shall be motivated to perform above the standard level to have the opportunity to join sports competitions. This activity will provide personal interaction and experiences that improve students' ability to play with others and to develop physical education values like teamwork. Also, students have a greater opportunity to preserve and develop skills appropriate in their ages for recreational playing with old or younger ones.

### **RESEARCH METHODOLOGY**

The research used the descriptive method because it determined the physical fitness level of the college freshman students, whether they are above, below or within the standard level. It also compared the physical fitness level of the male and female students.

There were forty one (41) respondents involved in the study, the male and female college freshman students of the Institute of Arts and Sciences, Kalinga–Apayao State College, Tabuk City.



MALES		FEMALES	
AGE	FREQUENCY	AGE	FREQUENCY
15	1	16	1
16	2	17	16
17	6	18	2
18	3	19	2
19	1	20	2
20	1	21	1
21	1	22	1
24	1		
Total	16		25

## RESEARCH INSTRUMENT

The primary instrument used in gathering the needed data was through the Physical Fitness Test.

This test is intended to measure physical fitness. It is a battery of test items designed to measure the following components: speed, leg power, muscular strength, endurance, agility, flexibility and cardio-vascular endurance. This test was standardized by the International Committee for the Standardization of Physical Fitness Test by the Department of Education and Culture. The item that comprises the PFT are describe thus:

### Test Items

- Standing Long Jump
- Sit and reach
- Curl-ups
- Flexed Arm Hang (Male and Female)
- 3 Minutes step test
- 50 Meters Sprint
- 15 Minutes run and walk

### PF Components Being Tested

- Leg strength and power
- Trunk Flexibility
- Abdominal strength and endurance
- Arm strength and endurance
- Agility
- Speed
- Cardio-respiratory endurance

## LOCALE OF THE STUDY

This study was conducted at the Institute of Arts and Sciences, Kalinga-Apayao State College. Figure 2 is the map of Tabuk indicating the Bulanao and Dagupan Campus while Figure 3 shows the picture of the Institute of Arts and Sciences building.

### Brief History of Kalinga-Apayao State College

The Kalinga-Apayao State College (KASC) was originally established on the strength of DECS Order No. 15 Series of 1971 authorizing the operation of government-supported community colleges in the country in 1974, the Provincial Board of Kalinga-Apayao headed by Gov. Puzon took this opportunity and passed Resolution No. 197 Series of 1974 which established



the Kalinga Community College of Trade and Industry (KCCTI) offering purely vocational courses, with Mr. Augusto S. Alejandrino as the first administrator.

In 1975, the college was authorized to construct its physical plant at the Municipal Plaza Reservation Area under Municipal Resolution No. 008. The first building with cogon roofing was built. Additional courses then were offered, namely: Midwifery, Secretarial, General Education, Liberal Arts and Commerce. In 1979 KCCTI was changed to Kalinga Community College.

In January 26, 1986 the then President Ferdinand E. Marcos signed P.D. No. 2017 merging KCC, Tabuk National High School (TNHS), Dona Eufronia Molina Puzon Memorial Puzon High School (DEMPHS) and the BIBAK National High School (BIBAK-NAS) into one, thus creating the Kalinga-Apayao State College.

In July 7, 1993 President Fidel V. Ramos appointed Dr. Francisco M. Basuel as the first President of KASC who assumed office on August 2. The following year, the secondary program of BIBAK-NAS was integrated as its Laboratory High School.

On November 2, 1997, Dr. Venus I. Lammawin was elected by the Board of Trustees as the second president of the Kalinga-Apayao State College. Under Dr. Lammawin the infrastructure a project which stated by her predecessor were completed. The Academic Laboratory Buildings, Administrative Building and Library Building, road networks were completed in due time.

Dr. Lammawin ended her term as President of Kalinga-Apayao State College when she was appointed as President of Camiguin Polytechnic State College on October 22, 2006.

The KASC Board of Trustees through its Chairman, Commissioner Saturnino M. Ocampo, Jr. appointed Dr. Sefarin L. Ngohayon, ISCAF President as Officer-in-Charge of the Office of the President of KASC commencing November 7, 2006 this designation lasted until March 9, 2006.

Dr. Eduardo T. Bagtang assumed office on March 10, 2006 just after his appointment as the third President of the Kalinga-Apayao State College on March 9, 2006.

## **GATHERING OF DATA**

Following is the procedure used in determining the physical fitness level of students in the different tests.



**Standing Long Jump.** The performer stood with feet several inches apart and toes just back of the take-off line. The take-off was made from both feet, and the performer jumped forward as far as possible, but during the action of arms and legs, the feet did not leave the take-off surface until the jump was made.

Two successive fair trials, not including fouls, were allowed within one testing period. The measurement was made from the take-off line to the heel of the foot closer to the take-off line.

**Sit and Reach.** The performer sat on the floor, astride the tape measure on the floor, with legs extended, and the heels about thirty (30) centimeters apart, securely braced against the toes of a buddy standing astride the tape with toes directly in line with the fifty (50) centimeters mark. The performer hooked his thumbs together and pointed his extended fingers forward as far as possible. His finger-tips touched the tape measure and he held on the position while the distance reached was noted. Only two trials were allowed, unless for some reasons the tester believed that the performer had not had a fair opportunity to perform. The performer was not allowed to add length by bouncing or jerking forward.

**Curl-ups.** The performer lay on his back on a clean floor mat or turf with his knees bent at 90 degrees and feet flat on the floor. He crossed his arms close to the chest with fingertips on level with shoulders. The arms remained in contact with the chest at all times. A partner knelt and held down the feet of the performer. The performer performed the "curl-ups" by raising the trunk towards the knees until the upper part of the crossed arms touched the knees. This action constituted one curl-up. Without any pause, the performer returned to the starting position just long enough for his back to touch the mat or floor and immediately curled-up again. He repeated the exercise as many times as possible.

Only one trial was allowed. No resting between curl-up was permitted. The knees remained bent at right angle for the duration of the exercise. The curl-up was counted only if the performer:

- a. Kept the crossed arms closed to his chest; and
- b. Returned to the starting position with upper back touching the mat or floor before curling up again.

**Flexed-arm Hang (Male and Female).** The performer grasped the bar, hands about shoulder width apart, the back of the hands towards the face and thumbs under the bar. The student



steps off the stools with arms bent, holding chin above the bar, chest close to the arms. The performer held chin above the top edge of the bar as long as possible.

3 Minutes Step Test. The prescribed cadence of stepping up and down should be maintained throughout the duration of the test; the pulse should be counted exactly five seconds after the end of the test, while the performer is standing up; if a performer cannot finish the test, the duration of his actual exercise should be noted. This can be done with the timer shouting out the time that has elapsed; the performer should have both knees fully extended when that are on top of the bench.

Fifty (50) Meters Sprint. The runner behind the line looking towards the finish line (crouch start). As the signal “go” was given, the starter fired the gun or snapped a clapper. The runner sprinted to the finish line. The runner was instructed not to slow down before the finish line. For motivation, two runners at a time were scheduled.

15 Minutes Run Test. Only one trial; walking is permitted but the objectives is cover the greater distance at the designated time.

## ANALYSIS OF DATA

The physical fitness level was determined using the following targets:

Above the Standard Level – AS

Standard Level – S

Below the Standard Level – BS

## RESULTS AND DISCUSSIONS

### The Physical Fitness Level of the Males

Table I shows the following physical fitness level of male students in the different tests.

**Performance Targets for Male**

Age	Standing Long Jump (In cm.)	Curl-ups (No. of Repetition)	50 M (In Sec.)	Flexed Arm Hang (No. of Repetition)	3 Min. Step Test (In Sec.)	Sit and Reach (In Sec.)	15 Minutes run and walk (In min.)
15	208	38	7.5	4	10.9	55	4:14
16	215	42	7.3	5	10.8	59	4:10
17	222	45	7	5	10.7	64	4:00
18	230	47	6.8	6	10.4	69	3:55
19	235	49	6.6	6	10.2	70	3:45
20	240	51	6.5	7	10.0	72	3:35
21	250	55	6.4	8	9.8	72	3:30





**Leg Strength and Power.** The male in all ages lie below standard in the area of leg strength and power as revealed in their performance in standing long jump.

**Trunk Flexibility.** Only two (2) from the males are above standard while the others fall below standard.

**Abdominal Strength and Endurance.** All ages in male are below standard in the area of abdominal strength and endurance.

**Agility.** All ages in male got below standard in the area of agility.

**Speed.** There are two (2) males who got above standard and the rest fall below standard in the area of speed.

**Cardio-Respiratory Endurance.** All males are below standard in the area of cardio-respiratory endurance.

There were two (2) males got above standard in the 3 minutes step test, ten (10) got above standard in flexed arm hang, and two (2) got above standard in 50 m sprint while three (3) females got above standard, one (1) standard in the 3 minutes step and four (4) above standard in the 50 m sprint. Generally, the males and females are similar in physical fitness level, both below standard.

### The Physical Fitness Level of the Females

Table 2 shows the following physical fitness level of female students in the different tests

#### Performance Targets for Females

Age	Standing Long Jump (In cm.)	Curl-ups (No. of Repetition)	50 M (In Sec.)	Flexed Arm Hang (No. of Repetition)	3 Min. Step Test (In Sec.)	Sit and Reach (In Sec.)	15 Minutes run and walk (In min.)
16	172	24	8.5	6	11.8	63	4:24
17	175	25	8.2	6	11.5	68	4:17
18	180	26	8.2	8	11.3	72	4:10
19	184	27	8.2	8	11.0	74	4:05
20	187	30	8	9	10.8	75	3:37
21	190	30	8	10	10.5	75	3:35

**Leg Strength and Power.** Female in all ages lie below standard in the area of leg strength and power as revealed in their performance in standing long jump.

**Trunk Flexibility.** All ages in the females fall below standard in abdominal strength and endurance.



**Abdominal Strength and Endurance.** All females are below standard in the area of abdominal strength and endurance.

**Arm Strength and Endurance.** All females got below standard in the area of arm strength and endurance.

**Agility.** There were three (3) who got above standard, one (1) standard and twenty one (21) got below standard in the area of agility.

**Speed.** There were four (4) females who got above standard while twenty one (21) got below standard in the area of speed.

**Cardio-Respiratory Endurance.** No one scored in females above standard and standard. The fitness level in the area of cardio-respiratory endurance is still below standard.

The male and female students who passed the physical fitness test for sit and reach are best suited for gymnastics, long distance running, sipa and sepaktakraw.

Those who passed the 3 minutes step test are best for gymnastics, basketball, volleyball, soccer, softball, baseball and athletics.

Those who passed the 50-M sprint test are best for individual sports as well as team sports such as softball and baseball in which running between bases requires speed, 100m, 200m, high jump, long jump, pole vault and all athletics events.

#### Sports Events Best for Male and Female Students Who Passed the Standard Scores

**Table 4 – Sports events best for those who passed the standard score**

Physical Fitness test	Sports Events Best
Sit and Reach test	Gymnastics, Long distance running, sipa, sipaktakraw
3 minutes step test	Gymnastics, basketball, volleyball, soccer, softball, baseball and athletics
50-M sprint test	Individual sports (100M, 200M, high jump, long jump, pole vault, and athletics) Team sports (Softball, baseball)

#### Proposed Sports Activities to Improve the Physical Fitness Level of Students

Components of Physical Fitness	Sports Activities	Target Group	Time Schedule
1. Leg Strength and Power	Swimming (Treading and backstroke)	PE 13	One Semester
	Group Games	PE 14	One Semester
	Skipping Rope	PE 11	Ones Semester
	Relays	PE 13	One Semester
	Phil. Folk Dance	PE 12	One Semester
	Foreign Dance	PE 12	One Semester



	Jump the Rope	PE 11	One Semester
2. Trunk Flexibility	Gymnastics Exercise (Trunk forward bending exercise, forward, sideward, leg wings)		One Semester
	Human Rocker (Execute arms at sides separate)	PE 11	One Semester
	Mass Circuit Training exercise	PE 11	One Semester
3. Abdominal Strength and endurance	Gymnastic Exercises Floor Exercises 1. Both leg raising 2. Sit-ups 3. V-cut (leg lifts)	PE 11	One Semester
4. Arm Strength Endurance	Push-ups Practice on horizontal bar Human wheels barrow Arm pull	PE 11	One Semester
5. Agility	Group games Potato Dodge ball	PE 14	One Semester
	One against three	PE 11	One Semester
6. Speed	Group games Relays	PE 14	One Semester
	Phil. Dances Binatbatan (Ilocano) Touch step Stamp, Jump	PE 12	One Semester
	Polka Espaniola (Visayas) Step-gallop Sarzuela	PE 12	One Semester

## SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

The purpose of the study was to determine the performance level of the College Freshmen Students taking Physical Education II at the Institute of Arts and Sciences, Kalinga-Apayao State College in Physical Fitness Test.

The respondents were forty one (41) freshmen college students of the Institute of Arts and Sciences where the researcher was assigned to teach for the school year 2008-2009.



The instrument used in gathering the data for this study was the Physical Fitness Test conducting during the month of June this semester.

## **FINDINGS**

1. For males only few performed above standard in the flexed arm hang test, Sit and reach test and the 50M sprint, the overall performance is below standard.
2. Above standard in the 50M sprint test and a few got a standard performance level in the 3 minutes step test. For females only a few performed the shuttle run and 50M sprint that some of them got above standard level. All of the test items majority of them got below standard. One (1) female in 3-minutes step test got standard level of the physical fitness test. The overall performance is below standard.
3. Males are better in flexed arm hang while females are better in 3-minutes step test and 50M sprint, On the whole, both groups performed below standard.

## **CONCLUSIONS**

Both the male and female students are on the whole below standard in physical fitness level. Their present physical fitness level is the effect of their lack of awareness of the importance of regular physical exercises and not to maintain health care enough proper nutrition in the development of strength and endurance of the body.

Had they gone through a regular regime of exercises through the stages of their growth, the physical fitness level would have been at least on the standard level. Having the training of athletes for competitions. Hence, the importance of proper diet and regular exercise in building a health and strong physique.

## **RECOMMENDATIONS**

Based on the findings and conclusions, the following recommendations are offered:

1. Physical education teachers should be aware of the physical fitness level of their students in order for them to identify the needs of their athletes; evaluate and analyze the performance of their athletes to competitions.
2. To have a well-trained athletes, teachers should identify the training needs of their athletes and recommend to administration like the purchase of needed physical facilities and equipment's; administrators should not allot funds and give incentives to the striving and competitive athletes.



3. Serious and religious implementation of the Pre-test and Post-test to all levels I elementary, secondary and during the start and end of the semester for tertiary.

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