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Effects of Multimedia Computer Assisted Instructions on Strength and Flexibility among College Students

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Abstract

The purpose of the present study was find out the effects of multimedia computer assisted instructions on strength and flexibility among college student. To achieve the purpose of the study, the investigator selected thirty (men) subjects and divided them in to experimental group and control group each consist of fifteen subjects from Kanchipuram District, Tamil Nadu. Their age ranged between 20 to 25 years. The following variables on namely strength and flexibility were selected for the study. The above variables were tested with Sit-ups and sit & reach test respectively. The experimental training period was twelve weeks. The dependent "t" ratio was used to assess the collected data. From the analysis of data it was proved that there was significant improvement on strength and flexibility by the experimental group namely the multimedia computer assisted instructions among college students.

Keywords: Strength, Flexibility, multimedia computer assisted instructions and college students.

Introduction

Multimedia Computer Assisted Instructions (MCAI) is an automated instructional technique in which a computer is used to present an instructional programme to the learner through an interactive process on computer. It is an instructional technique in which the computer instructs the students and the computer contains a stored instructional programme designed to inform, guide, control and test the students until a prescribed level of proficiency is reached (Pradeep, 2003). "The amount of force which a muscle can exert". In other words, muscular strength may be defined as "the capacity of an individual to exert muscular force". And "strength can be defined as the maximal one effort force that can be exerted against a resistance" (A Yobu, 2010).

Flexibility is the ability of a joint to move 100% of its possible movement range". In other words, "flexibility may be defined as the range of movement in a joint" (Yobu, 2010).

Statement of the Problem

The purpose of the study was to find out the effects of multimedia computer assisted instructions on strength and flexibility among college students.

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Hypothesis

It was hypothesized that there would be a significant improvement on strength and flexibility among college students due to multimedia computer assisted instructions.

Methodology

The purpose of the present study was find out the effects of multimedia computer assisted instructions on strength and flexibility among college student. To achieve the purpose of the study, the investigator selected thirty (men) subjects and divided them in to experimental group and control group each consist of fifteen subjects from Kanchipuram District, Tamilnadu. Their age ranged between 20 to 25 years. The following variables on namely strength and flexibility were selected for the study. The above variables were tested with Sit-ups and sit & reach test respectively. The experimental training period was twelve weeks. The dependent "t" ratio was used to assess the collected data.

Training Schedule
Week 1-6:
Intensity of load were 65%

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Warm Up 600 M slow Jog Rotation and Stretching Exercises **General Workout** 5 x 30 M Sprint **Sprint Drills** High Knee Skips Butt Kicks Ankle Jumps Straight leg run Bounding **Down** 400 M slow walk hing exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 20 –30 - 40 M Sprint **Runway jump Drill** Skip for height Skip for distance Bounding Ankle jumping Side wards jump **Down** 400 M slow walk Stretching exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 2x150, 2x100 sprint **Approach Drill** Wall drill - walk Wall drill - jog Roll over start Short approach Full approach run **Down** 400 M slow walk Stretching exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 20-30-40 M Sprint **Step Drill** 1leg step up Double leg jump Quick feet Double step jump hopping **Down** 400 M slow walk Stretching exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 5 x 30 M Sprint **Mini Hurdle Drill** 1 step jump 2 step jump hopping lateral run lateral 2leg jump **Down** 400 M slow walk Stretching exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 2x150, 2x100 sprint **Strength Training** Back Squat Split squat Leg press Calf press Military press **Down** 400 M slow walk Stretching exercise

Week 7-12:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Warm Up 600 M slow Jog Rotation and Stretching Exercises **General Workout** 2 x20-30-40 Sprint **Approach Drills** A-Skip B-Skip Hop & jump Bound & jump Low Hurdle jump Short run **Down** 400 M slow walk Stretching exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 3x150-75 M Sprint **Technique Drill** 1 hop& jump 3 hop & jump Alter. hop jump Bounding & jump 2 leg skip & jump **Down** 400 M slow walk Stretching exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 2x300,150 sprint **Jump jack Drill** Jump jack&25mrun Split squad&25mrun Split jump&25mrun squad jump&25mrun 25 M angles run **Down** 400 M slow walk Stretching exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 3 x30&40 M Sprint **Low Hurdle Drill** 1step btwn hurdle 2 step btwn hurdle 3 step btwn hurdle 1 hop btwn hurdle Hurdle lateral jump **Down** 400 M slow walk Stretching exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 100 -150-100M Sprint **Step Drills** Quick feet 2 leg step up Side run-step Walk lunges Squat jumps **Down** 400 M slow walk Stretching exercise	**Warm Up** 600 M slow Jog Rotation and Stretching Exercises **General Workout** 2x300,150 sprint **Strength Training** 2x15 leg curl 2x15 leg press 2x15 calf press 2x15 squad jump 2x15 lunges **Down** 400 M slow walk Stretching exercise

Intensity of load were 70%

Mode of Instruction

MCAI: Multimedia Computer Assisted Instruction Group received teaching components through computer programmes such as films, video shows, clippings, and so forth for skill related fitness and Long Jump training for 30 minutes duration followed by 30 minutes self practice in the play ground.

Results and Discussion

Table 1
"t" ratio of mean of strength and flexibility among college students

Variables	Group	M	S.D	r	T
Strength	Experimental Group Pre Test	16.27	3.49	0.99	**9.91***
	Experimental Group Post Test	17.73	3.75		
	Control Group Pre Test	16.87	2.78	0.94	**1.01**
	Control Group Post Test	16.60	3.01		
Flexibility	Experimental Group Pre Test	28.40	4.27		
	Experimental Group Post Test	30.73	3.80	0.97	**8.27***
	Control Group Pre Test	29.40	3.86		
	Control Group Post Test	29.53	3.63	0.99	**0.89**

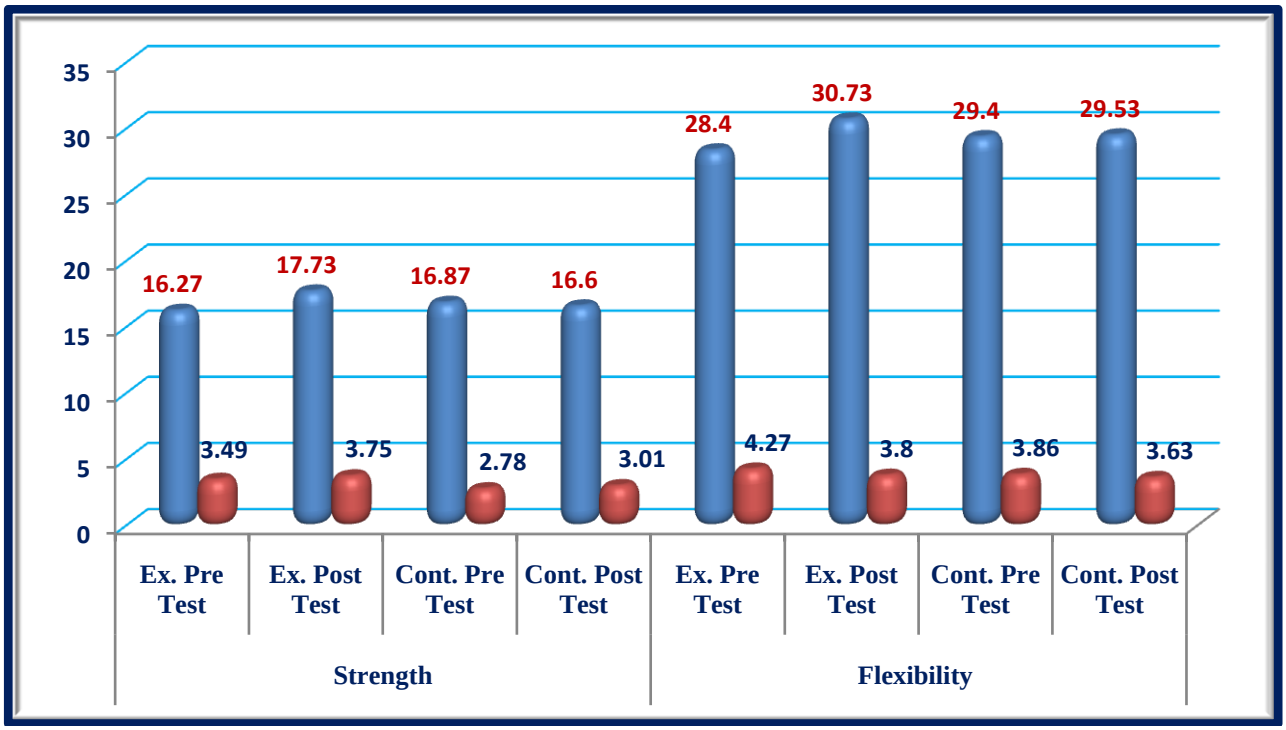
Table t – ratio at 0.05 level confidence for 2 and 28(df) = 2.048 *Significant

The pre test scores of experimental group and control group on strength and flexibility were 16.27, 16.87, 28.40 and 29.40 respectively. The post test scores of experimental group and control group on strength and flexibility were 17.73, 16.60, 30.73 and 29.53 respectively.

The obtained 't' ratio between pre and post of experimental group and control group on strength were 9.91 and 1.01. The obtained t (9.91) of experimental group was greater than the required table value of 2.048. It shows that there was a significant improvement in the strength due to multimedia computer assisted instructions among college students.

The obtained 't' ratio between pre and post of experimental group and control group on flexibility were 8.27 and 0.89. The obtained t (8.27) of experimental group was greater than the required table value of 2.048. It shows that there was a significant improvement in the flexibility due to multimedia computer assisted instructions among college students.

Figure I
Bar diagram between strength and flexibility among college students



CONCLUSIONS

1. The strength was significantly improved by the participation in the multimedia computer assisted instructions among college students.
2. The flexibility was significantly improved by the participation in the multimedia computer assisted instructions among college students.

REFERENCE

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