



**Dr. S. Sundararajan**

Deputy Director of Physical Education, Anna University Sports Board, Anna University, CEG Campus, Chennai - 600 025.

**ABSTRACT** The main objective of the study is to find out the extent of use of computers for imparting Physical Education and Sports in Colleges. The purposes, academic and administrative, for which computers are used at present in various colleges are ascertained and views of the Directors/Directresses of Physical Education regarding the possible uses of computer for teaching and various other activities relating to Physical Education and Sports were gathered and reported. The data was collected using a Scale for Use of Computers in Physical Education and Sports (SUCPES) developed by the investigator from different types of colleges stratified on the bases of types of management, sex, courses offered and location.

### KEYWORDS :

#### 1.1 INTRODUCTION

In recent years, there has been an explosion of interest in computing in Physical Education, particularly in Teaching and Coaching of Sports activities. In India, hardware and software applied to Physical Education and Sports, and its availability is poor and the languages available for writing appropriate programmes are few in number and not always user-friendly. Despite these difficult beginnings, a number of people recognized the potential use of computers in the world of sports and Physical Education.

An early publication by Brodie and Themhill (1988) which referred the micro computer as a "new piece of sports equipment" described further ways in which the computer could assist physical education and sports personnel. They suggested that computers could be used to prepare advance information e.g. programmes, listings of competitors for sports competitions and to process and display resulting data. In addition computer could be used to record real time information such as how players move in court and what strokes are played. This data could be processed to indicate the physical demands of players or particular weaknesses/ strengths in technical performance. In this way computers can serve as a teaching aid to the physical education teachers.

#### 1.2 THE PRESENT STUDY

The present study is a normative study on computing in physical education - and sports in colleges Deputy Director of Physical Education, Anna University Sports Board, MIT Campus, Chennai 600 044 affiliated to University of Madras. The main objective is to study how far the physical education personnel are using computers in physical education and sports in various colleges. Even if they are not using the computers at present, the study aimed at getting the responses regarding the specific areas in which computers can be used and the extent of its use in various areas of physical education and sports.

#### 1.3 OBJECTIVES

The objectives of the present study are:-

1. To study the percentage of physical education personnel using the computers for various purposes in physical education and sports.
2. To study the responses/views expressed by the physical education personnel regarding the extent to which computers could be used for the various purposes/ areas in physical education and sports.

#### 1.4 THE FOLLOWING HYPOTHESES ARE FORMULATED ON THE BASIS OF THE OBJECTIVES OF THE STUDY

1. Male and Female Physical education personnel differ in the use of computers in physical education sports.
2. The physical education personnel working in urban and rural colleges differ in the use of computers in physical education and sports.

The physical education personnel working in Men, Women and co-education colleges differ in the use of computers in physical education and sports.

The physical education personnel with less than 10 years, 10 to 19 years and more than 20 years of experience differ in their use of

computers in physical education and sports.

The physical education personnel working in Arts and Professional Colleges differ in the use of computers in physical education and sports.

The physical education personnel working in Government, private-aided and self-finance colleges differ in their use of computers in physical education and sports.

#### 1.5. METHODOLOGY

The present study is a normative study. The data were collected from physical education personnel working in colleges affiliated to university of Madras.

##### 1.5.1 Sample

The study was carried out in colleges affiliated to University of Madras, representing different managements and compositions.

##### 1.5.2 Tool

To collect the required information for the present study, a scale for use of computers in physical education and sports, (SUCPES) was used.

##### 1.5.3 Description of the Tool

Scale for use of Computers in physical Education and Sports (SUCPES). To study the percentage of physical education personnel using computers and to estimate responses regarding the extent in which computers can be used in various areas of physical education and sports, an elaborate questionnaire consisting of 30 items was developed on a two point scale and its extent of use on a four point scale.

This questionnaire was subjected to Test - re-test method for testing reliability coefficient worked out to 0.89. The reliability and validity coefficient 0.94.

##### 1.5.4 Scheme and Data Analysis

For data analysis the item responses were quantified and the obtained scores for each area were converted into percentages for meaningful comparison. The various analysis were done using these scores.

##### 1.5.5 Analysis and Interpretation

The data collected were analysed for describing the whole sample (115 colleges studied) with reference to computing in physical education and sports. The details are furnished here below. The whole sample is first described and sub-samples are then described and compared.

#### 1.6 COMPUTING IN PHYSICAL EDUCATION AND SPORTS

The number of physical education personnel working in colleges who are using computers for various purposes in physical education and sports is found out. The views of the teachers regarding the extent to which computers would be useful in various areas of physical education and sports for better performance were also studied through the responses obtained from physical education personnel.

The relevant statistical data are shown in the Table 1.1.

The data revealed that the percentage of physical education personnel using computers is very low (9.57%), with respect to the total sample, and in the sub-samples, the range varies from 1.55% to 6.20% for the obtained sample of 115 colleges studied.

The percentage of physical education personnel not using computers are so high with respect to whole sample (90.43%) and in the sub-samples, it ranges from 16.92% to 65.13%.

The responses for the extent of usefulness of computers in various areas of physical education and sports were ranked separately i.e. very useful, useful some what useful and not useful. On the basis of these ranks, the utility values of computers for the various areas are calculated.

**1.7 COMPUTING AREAS**

Areas in which computing will be useful to physical education and sports as expressed by physical education personnel are ranked by quantifying their responses. The responses for an area as given by the physical education personnel are weighted by assigning a score of 3 for very useful, 2 for useful, 1 for somewhat useful and 0 for not useful. The total scores so arrived at for each area are ranked. The first ten areas in which (purposes for which) computing will be very useful as conceived by the physical education personnel are:

	Sub-Samples	Using Computers Yes % No %	
		Yes %	No %
Sex	Men Women	5.07 4.57	64.87 25.56
	Total	9.57	90.43
Location	Urban Rural	5.00 4.57	47.18 43.25
	Total	9.57	90.43
Experience	Less than 10 years	3.79 4.23	1.55 20.55
	10-20 years		39.24
	More than 20 years		30.64
	Total	9.57	90.43
Management	Government Private-Aided Self-Finance	2.32 3.33 3.72	38.33 24.34 27.76
	Total	9.57	90.43
Type	Men	2.23	16.92
	Women	4.49	22.75
	Co-education	2.85	50.76
	Total	9.57	90.43
Arts & Science and Professional Colleges	Arts & Science Professional	6.20 3.36	65.13 25.30
	Total	9.57	90.43

1. For individual learning,
2. For preparing of bills, vouchers and other statements in 5. Connection with sports,
3. For maintaining the record of achievement,
4. For storage and quick retrieval of sports information (national/international)
5. For making correspondence regarding to sports and Games,
6. For maintaining data base (information) for all the students,
7. For individualized instruction,
8. For maintaining records/stock inventory,
9. For getting things done in time, and
10. For conducting of sports quiz.

Computing will be useful for 24 purposes mentioned, as the total score for these items are above 230. For the other six purposes namely, testing, minimizing expenditures, simulation, decision making, selection of students computing is somewhat useful.

**1.8 DIFFERENTIAL ANALYSIS**

The differences in the views of physical education personnel regarding computing in physical education and sports are studied dividing the sample into sub-samples on different bases.

**1.8.1 Sex**

Men and women physical education personnel differ in their views about the use of computing in physical education and sports. The mean score for using computing for men is 83.91 and for women 73.89 and T is significant at 0.01 level.

**1.8.2 Experience**

Physical education personnel with less than 10 years and 10-20 years experience differ in their views about the use of computing in physical education and sports. The mean score for the use of computing for less than 10 years group is 71.25 and for 10-20 years experience group 83.74, the obtained T is significant at 0.01 level.

Physical education personnel with less than 10 years and more than 20 years of experience also differ in their views about the use of computing in physical education and sports. The mean score for the use of computing for teachers with less than 10 years of experience is 71.25 and for more than 20 years experience group 84.62 and T is significant at 0.01 level.

**1.8.3 Arts and Professional Colleges**

Physical education personnel working in Arts and Professional colleges differ in their views about the use of computing in physical education and sports.

The mean score for the use of computing for Arts colleges personnel is 78.71 and for professional personnel 86.21, and T is significant at 0.01 level.

**1.8.4 Types of Colleges**

Physical education personnel working in women and co-education colleges differ in their views about the use of computers in physical education and sports. The mean scores for the use of computing for women colleges is 73.55 and for co-education colleges 85.45, and is significant at 0.01 level.

**1.8.5 Management of Colleges**

Physical education personnel working in Government and self-finance colleges differ in their views about the use of computing in physical education and sports. The mean score for use of computing for Government colleges is 85.72 and for self-finance colleges 76.97, and T is significant at 0.05 level.

**1.9 SUMMARY OF MAIN FINDINGS**

The following are the main findings of the study on computing in physical education and sports in colleges.

1. In general, very low percentage (9.57%) of physical education personnel are using computers in physical education and sports.
2. Physical education personnel with more than 20 years of experience account for only 1.55% of computer users.
3. 6.20% of the physical education personnel working in Arts Colleges are using computers as against the total of 9.57% of the users.
4. On the basis of the ranking (responses about the use of computers) the first ten areas in which computing will be very useful as conceived by the physical education personnel are identified.
5. The differential analysis reveal that

- i) Men teachers view computing will be more useful than women teachers,
- ii) Teachers with, experience between 10 and 20 years report that computing will be more useful than teachers with, less than 10 years of experience,
- iii) Teachers with more than 20 years of service see more use of computing than teachers with less than 10 years of experience,
- iv) Professional College teachers state that computing will have more use' in physical education and sports than Arts College teachers.
- v) Teachers in co-education colleges see more use of computers than teachers in women colleges, and
- vi) Government college teachers report that computers could be use for more uses than self-financing college teachers.

**1.10 IMPLICATIONS OF THE STUDY**

The results of the study reveal that computing in physical education and sports in colleges could be done in as many as 30 areas (purposes). Only 9.57% of the teachers are using computer. There is need for educating physical education personnel in the use of computers for different purposes in physical education and sports. Physical Education Departments in colleges may be supplied with

computers and the teachers trained in the use of computers.

Women, teachers with less than 10 years of service and teachers in Arts Colleges may be given preference in the selection of teachers for giving training in the use of computers.

#### REFERENCES

1. Alderson, J., (et.al.), 1990, Match Analysis in Sport: A State of the Art Review, Leeds: National Coaching Foundation.
2. Bob Sharp., 1996, "The Use of Computers in Sports Science", British Journal of Educational Technology, Vol.27, No.1.
3. Brodie, D.S., and Thomhill, J.J., 1988, Micro Computing in Sport and Physical Education, West Yorkshire: Lepus Books.
4. Donnelly, J.E., 1990, Using Micro Computers in Physical Education and Sports Science, Illinois: Human Kinetics Campaign.
5. Sharp, R.H., 1988, "Computing in Physical Education", Il-Scottish Journal of Physical Education, Vol.16, No.1.