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## Use of ICT by the Physical Education Faculty in the Universities: A Study

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#### **Abstract**

*Today we live in a world in which everybody has to use new technologies. ICT is a reality in education systems. The employment of ICT in Education means implementing of ICT equipments and Tools in Teaching-Learning process as media and methodology, and also as a tool to support traditional subjects although it has been a tough job, their use in physical sciences education has also increased in the last few years. This paper aims at analyzing the use of ICT tools by faculty members of Physical Education Department of Annamalai University, Tamil Nadu Physical Education and Sports University and Manonmanium Sundaranar University in Tamilnadu. The study reveals that majority of faculty members effectively use ICT tools such as Internet, E-Mail, CD ROM, and Google search engines.*

#### **Keywords**

ICT Tools, User study, User attitude and User behaviours.

#### **Electronic access**

The journal is available at [www.jalis.in](http://www.jalis.in)



Journal of Advances in Library and Information Science  
ISSN: 2277-2219 Vol. 1. NO. 1. 2012. pp. 44-49

## **Introduction**

Sports activity plays a key role in maintaining one's health and improving one physically and physiologically. This multifaceted growth is useful in higher education too. Physical Education is taught by every branch of all faculties in Annamalai University, but there are some departments in which specific course in sport sciences are taught and practiced. The students receive not only educational support in order that they may survey their own fitness level and development, but in addition they are also given the learning tools to exploit in exploring health developments and athletic maturation possibilities (Bucsy, 2003). The selected physical education topics such as Sport recreation, Leisure time sports theory and practice have been worked up in a digital format, consisting of e-learning materials, in order that the supervision of the education level and effectiveness might be enhanced. It is a mandatory for having physical instructor and librarian to all educational institutions in India. But in this study, the physical education teachers are studied their applications and utilization of the ICT tools. So this study aimed to find out the usages of ICT in teaching and training in physical education. The purpose of this study was to examine whether applying ICT in teaching Physical Education (PE) increases pedagogical effectiveness.

## **Physical Education**

The expression physical education is delivered from two separate words, 'physical' and 'education.' The plain dictionary meaning of word physical is 'relating to body', it may relate to any one or all of the bodily characteristics. It may be physical strength, physical endurance, physical fitness, physical appearance or physical health. The word 'education' means systematic instructions or training, or preparation for life or for some particular task. A combined meaning of these two words would be that systematic instructions or training which relate to physical activities or programme of activities, necessary for development and maintenance of human body, development of physical powers, or cultivation of physical skills.

Education is a "doing" phenomenon that one learns through doing. Education is not confined to class room alone; it may take place on the play ground, in library, or even at home. Such an education is conducive to the enrichment of an individual's life. A well directed programme of physical education leads to healthful living, social efficacy, good physical health, and worthy use of leisure time. In the modern context, the term 'physical education' has

assumed much broader and more meaningful application to our daily life. Physical education is the education of man 'in' and 'by' means of physical activity. It is education of physical through physical. Physical education is that education which starts with physical development and advances towards perfect development of human being, the ultimate result being vigorous and strong body, acquisition of sound health, mental alertness, and social and emotional balance. Such an individual will be able to interpret new situations effectively, in more meaningful and purposeful manner and can be said to be a 'Physically Educated Person.'

Physical sciences have a practical part with an important theoretical basis in different areas of knowledge, and this is the reason why there must be an interdisciplinary nexus between the various parts of the studies.

#### **Information and Communication Technology**

Information and communication technology (ICT) is defined as the combination of informatics technology with other, related technologies, specifically communication technology. ICT refers to technologies that provide access to information through telecommunications. This includes the Internet, wireless networks, cell phones, and other communication mediums.

In this ICT must play an important role, perhaps even more than in other subjects, which assumes that the use of computer or virtual platforms is "natural" and inherent for education?

#### **Statement of The Problem**

The purpose of the study is to find out the scope of usage and application of Information and Communication Technology by the Physical Education and Sports Sciences Faculty in the Universities of Tamilnadu: A Study.

#### **Annamalai University's Profile**

The Annamalai University is a unitary, teaching, and residential university. It was founded by the munificence of the farsighted and noble hearted philanthropist and patron of letters the late Hon'ble Dr. Rajah Sir Annamalai Chettiar of Chettinad, Kt, LL.D., D.Litt. He started several colleges, and ultimately, the University in 1929. Since its inception, it has progressively tried to realize the aims of the noble founder Pro-Chancellor. After him, his illustrious son, Padma Bhushan Dr. Rajah Sir Muthiah Chettiar of Chettinad, was the Pro-Chancellor from 1948 to 1984, and he sedulously nurtured the growth and development of the

University. The present Pro-Chancellor Dr. M.A.M. Ramaswamy, a philanthropist and a patron of sports, is the distinguished son of Dr. Rajah Sir Muthiah Chettiar. The University has had the enviable good fortune of having a succession of eminent Vice-Chancellors to guide its destiny. During the last eighty two years the University has grown rapidly and has consolidated its position as a unitary and residential University with forty-nine Departments of Study and over 3240 members on its teaching staff. Annamalainagar is already a busy and full-fledged University town, east of Chidambaram, the abode of Lord Nataraja. The University campus, including the colleges, hostels, and playgrounds, occupies an area of about a thousand acres.

The Department of Physical Education and Sports Sciences was started in 1974. This department offers following courses.

- 1) D.P.Ed, 2) B.P.Ed, 3) B.P.E 4) M.P.Ed, 5) M.P.E, 5) M. Phil, 6) PhD

#### **Tamilnadu Physical Education and Sports University Profile**

The Tamilnadu Physical Education and Sports University established by an Act of the Government of TamilNadu in 2004, is unique and the first of its kind in India as an affiliate University, exclusively for Physical Education and Sports. After obtaining the accent from his Excellency the president of India on 5th August 2005, the said act came into force with effect from 15th September 2005.

It is a rare coincidence that the University has started functioning from December 2005, declared by the United Nations as International year for Sport and Physical Education. At present the University has four Faculties, eleven Departments and ten affiliated Colleges. Further the University now offers select Physical Education and Allied Courses, through collaborative programme and Distance Education stream also.

The following courses are conducted this university

1. B.P.Ed. 2. M.P.Ed. 3. M.Sc. Yoga 4. M.Sc. Exercise Physiology and Nutrition, 5. M.Sc. Sports Psychology and Sociology 6. M.Sc. Sports Coaching 7. M.Sc. Sports Bio - Mechanics and Kinesiology 8. MBA Sports Management, 9. M.Tech. Sports Technology 10 .G. Diploma in Sports coaching (1 Year), 11. M.Phil (Physical Education, Yoga, Exercise Physiology & Nutrition, Advanced Training

and Coaching, Sports Psychology and - Sociology, Sports Management)12. Ph.D

#### **Manonmaniam Sundararajan University Profile**

The Department of Physical Education & Sports, Manonmaniam Sundararajan University came into existence ever since the inception of the University on September 1990 and it functions under the Headship of Dr. D.Shunmuganathan right from that period. The Department of Physical Education & Sports, MSU, has been able to carve out a name for itself among the high achievers in the field of sports and games, mostly by the impressive support it has enjoyed from several quarters, the most important of them being the University Administration. Periodically the Department comes up with a lot of well meaning suggestions to be considered by the University authorities to foster sports talents, most of which have been well received.

The following courses are conducted this university

1. M.P.Ed
2. M.Phil
3. Ph.D

#### **Objectives of the Study**

1. To know the purpose of use and application of ICT by the Physical Education and Sports Science Faculty in the Universities of Tamilnadu.
2. To find out most usage of E-resources like E-book, E-Journal, E-Resources.
3. To find out usage of computer applications
4. To find out usage of digital device and generation storage.
5. To find out the most used search engines

#### **Literature Review**

Robert Whelan (2008) has written an article entitled "Use of ICT in education in the University of the South Pacific". The study is based on e-learning. Online storage of educational technology has formed the basis of this study.

The University of South Pacific has student strength of nearly twenty two thousand and almost half of them are distance based. An access to ICT as regards to this learning process defines these learning activities. The survey conducted by the writer addressed perceptions of educational ICT, development strategies and initiative and guesstimate of ICT accessibility. The results were as follows: ICT access between 1% and 11% with tertiary level access at 70%. The important development factors are: capacity building; curriculum development, infrastructures; government's policy and support.

The findings have been analyzed through eight libraries to education, and proposals have been made

to help the University of the South Pacific improve access to ICT in the region.

Lohar and Roopashree (2006) have analyzed the collected data to cover the use of electronic resources and how the electronic resources have improved the academic career of the faculty and also the problems that are faced in using the electronic resources. They conclude that the main intention of the use of electronic resources has been the academic interest of the users. Jenny Brakels, Els van Daalen, Wim Dik, et.al., (2002) has evaluated the Faculty wise implementation of ICT in education is discussed in the paper. At the end of 1999 the Faculty of Technology, Policy and Management of Delft University of Technology in the Netherlands decided to implement ICT in education thought out the faculty. As a result from September 2000 an electronic learning environment was created for teaching. This article describes the implementation process of this scheme.

In September 1999 Blackboard Course Info was made available for all teachers and faculties of Delft University of Technology. The faculty of TPM decided to use this platform as a basis for a faculty-wide implementation of ICT in education. The TPM implementation plan consists of three lines of activities. The first line of activities is technology oriented. The aim of this first line is to create smooth connections between the different computer systems and data that are used in the educational processes. The second line of activities is aimed at creating and using a web site in Blackboard for each course taught. These web sites contain at least detailed descriptions of the course and course materials. Furthermore, an introductory course for teachers on how to use the Blackboard system and providing technical support is included in this line of activities. The third line of activities is geared towards developing new learning environments for courses. One of the projects within this line of activities is to support a number of teachers in developing and using new teaching methods, based upon possibilities offered by these new technologies. As of June 2000 five teachers have redesigned their courses, have taught their course in the new format and have evaluated this.

#### **Methodology**

The research has been conducted at the Annamalai University, Chidambaram, Tamilnadu Physical Education and Sports University (TNPESU), Chennai and Manonmaniam Sundararajan University (MSU),

Tirunelveli, Tamilnadu. The questionnaire was given to hundred and two member of the faculty to elicit they require information. The aim of the research was the find to percentage of the faculty who actively used their Computer, and internet and how long had they used the ICT related to subjects of physical education, and the results such a use of ICT in teaching activities. The survey employed was supplemented with questions pertaining to the area of physical education teaching faculty using standard basic using ICT related information questions. The questionnaires were filled out by the faculty at the time of commencement of the university courses. Three universities were selected in this study.

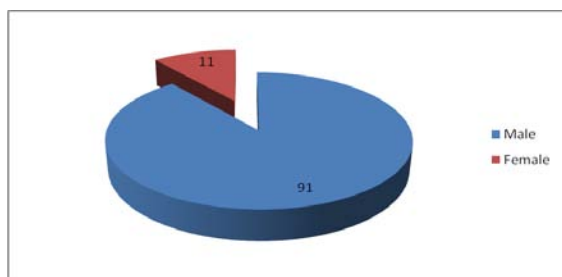
**Data analysis**

As the present study is descriptive in nature the data collected through the questionnaire were subjected to descriptive statistical analysis. The responses to the item of the questionnaire were analyzed through descriptive analysis.

**Table.1 Gender wise use of ICT**

S.No	Gender wise	Respondent	Percentage
1	Male	91	89.21
2	Female	11	10.79
<b>Total</b>		<b>102</b>	<b>100</b>

The participants for the study were seventy five faculties in Annamalai University, twenty two faculties in Tamilnadu Physical Education and Sports University, Chennai and Five faculties in Manonmanium Sundaranar University Physical Education Departments. From the Table 1, faculty-gender wise 89.21% of the respondents are male and 10.79% of the respondents are female.



**Figure 1. Gender wise use of ICT**

Table 2 shows that male respondents are more than the females. Members of the Faculty cadre/category

wise Annamalai University users of the were ICT 39.21% of the user were the Assistant Professors, 17.64% Assistant Professor (SS) 9.80 % Associate Professor and 6.87% of the Professors. Members of the Faculty cadre/category wise Tamilnadu Physical Education and Sports University users of the were ICT 9.80% of the user were the Assistant Professors, 2.95% Assistant Professor (SS) 3.93 % Associate Professor and 4.90% of the Professors. Members of the Faculty cadre/category wise Manonmanium Sundaranar University users of there were ICT 3.92% of the user were the Assistant Professors, and 0.98% of the Professors

Table 3 shows that the most purpose of using ICT Tools like Computer, E-Mail and Internet, for preparation to class room teaching, research work for the sake of knowledge and individual learning. The Assistant Professors are 21.57% using computer and the Professors and Associate Professors 2.94% are using computer lastly by the Assistant Professors (SS), 4.90% use computer. The same way Assistant Professors are using the ICT Tools extensively comparatively with Professors and Assistant Professor (SS). The Utilization of computers is encouraging trends among the faculty members

Table 4 shows that the use of E-Resources like, E-Journal and E-book, for preparation to class room teaching, research work and other purpose. It is observed from the table, Among the Professors 9.80% are using and the Associate Professors 8.72 of them using and Professors (SS), 10.76% and Assistant Professors 31.37% using E-resources. Nearly 40% of Assistant Professors were not using the e-resources.

**Table.2. Faculty wise use of ICT**

S. No	Faculty wise	Annamalai University		TNPESU		MSU	
		No.	%	No.	%	No.	%
1	Professor	7	6.87	5	4.90	1	0.98
2	Associate Professor	10	9.80	4	3.93	0	0
3	Assistant Professor(SS)	18	17.64	3	2.95	0	0
4	Assistant Professor	40	39.21	10	9.80	4	3.92
<b>Total</b>		<b>75</b>	<b>73.52</b>	<b>22</b>	<b>21.58</b>	<b>5</b>	<b>4.9</b>

**Table.3. Usage of ICT Tools in Three University Faculty of Physical Education**

ICT TOOLS	Professor n = 13		Associate Professor n= 14		Assistant Professor(SS) n= 21		Assistant Professor n=54	
	No.	%	No.	%	No.	%	No.	%
<b>Computer</b>	3	2.94	3	2.94	5	4.90	22	21.57
<b>Internet</b>	5	4.90	4	3.92	7	6.87	12	11.76
<b>E-Mail</b>	4	3.92	5	4.91	9	8.82	16	15.69
<b>TOTAL</b>	<b>12</b>	<b>11.76</b>	<b>12</b>	<b>11.77</b>	<b>21</b>	<b>20.59</b>	<b>50</b>	<b>49.02</b>

**Table.4 Usage of E- Resource among the Faculty of Physical Education**

E-Resources	Professor n=13		Associate Professor n=14		Assistant Professor(SS) n=21		Assistant Professor n=54	
	No.	%	No.	%	No.	%	No.	%
<b>E-Journal</b>	8	7.84	7	6.86	10	9.80	27	26.47
<b>E- Book</b>	2	1.96	2	1.96	2	1.96	5	4.90
<b>TOTAL</b>	<b>10</b>	<b>9.80</b>	<b>9</b>	<b>8.72</b>	<b>12</b>	<b>10.76</b>	<b>32</b>	<b>31.37</b>

**Table.5. Usage of Search Engine in Three University Faculty of Physical Education**

Search Engine	Professor n=13		Associate Professor n=14		Assistant Professor(SS) n=21		Assistant Professor n=54	
	No.	%	No.	%	No.	%	No.	%
<b>Google</b>	7	6.85	5	4.90	10	9.80	20	19.70
<b>Yahoo</b>	2	1.96	4	3.92	4	3.92	10	9.80
<b>AltaVista</b>	1	0.98	1	0.98	2	1.96	5	4.90
<b>MSDN and Others</b>	1	0.98	0	0	2	1.96	5	4.90
<b>TOTAL</b>	<b>11</b>	<b>10.77</b>	<b>10</b>	<b>9.80</b>	<b>18</b>	<b>17.64</b>	<b>40</b>	<b>39.30</b>

Table 5 shows that the use of Search Engines among faculty members, Professors 10.77% and Associate Professors: 10(9.80%), Assistant Professors (SS) 18(17.64) Assistant Professors 40(39.30%).

**Table.6.Usage of Digital Devices (Generation and Storage) in Three University Faculty of Physical Education**

Storage Devices	Professor		Associate Professor		Assistant Professor(SS)		Assistant Professor	
	No.	%	No.	%	No.	%	No.	%
CD-ROM	7	6.87	6	5.88	12	11.76	35	34.32
Digital Camera	4	3.92	5	4.90	7	6.87	15	14.70
<b>TOTAL</b>	<b>11</b>	<b>10.79</b>	<b>11</b>	<b>10.78</b>	<b>19</b>	<b>18.53</b>	<b>50</b>	<b>49.02</b>

Table 6 shows that the usage for storage devices among the faculty members of Physical education. It is observed from the table, 90 % of faculty members are using the CD ROM and Digital Camera devices.

### Conclusion

The ICT Tools Computer, Internet, E-mail are mostly used for faculty members. E-Resource, E-Journal and E-Books have been used for teaching and research. Usage of digital devices such as storage devices like CD-ROM/DVD, Digital Camera are mostly used by a few faculty members. Using Search Engine, most of the facilities use Google search engines, followed by yahoo, whereas a less percentage uses other search engine. ICT have become the vital part of human life in 21<sup>st</sup> century. It has rapidly changed the way and the technique of teaching and research by employing computer applications. It is clear from the study that ICT is useful for preparation of class room teaching and research work in the field of Physical education.

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