

Use and Application of Information and Communication Technology by the Physical Education Faculty of Annamalai University: A Study

K.Murugan¹, S. Ravi² and S. Surianarayanan³

¹Department of Library and Information Science, Annamalai University, Annamalai Nagar - 608 002, Tamil Nadu, India

²Library Science Wing, DDE, Annamalai University, Annamalai Nagar - 608 002, Tamil Nadu, India

³Central Library, Sri Paramakalayani College, Alwarkurichi - 627 412, Tamil Nadu, India
E-mail:skpmurugan@gmail.com

Abstract

Today we live in the World in which everybody has to use new technologies. ICT is nowadays, 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 (i.e., computer-based learning, presentation, research) 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 tool by faculty member of Physical (Education) Department of Annamalai University Tamil Nadu. The study reveals that majority of faculty members use ICT tools like Internet, E-Mail, MS Office, CD ROM, and Google search engines effectively.

Keywords: ICT Tools, User Attitude, User Behaviour, User Study

1. INTRODUCTION

Sports play a key role in maintaining one's health and in 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. These ICT usages comprise teaching and training, The Elek Benedek Faculty Department of Social Pedagogy employs to its advantage fundamental theoretical and applied basic constituents which make up the training instructions. 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 [1]. The present selected physical education topics (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.

The expression physical education is delivered from two separate words, 'physical' and 'education.' The literal 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 component parts of the studies.

2. 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 Annamalai University, Tamil Nadu.

3. THE PROFILE OF ANNAMALAI UNIVERSITY

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 inviable good fortune of having a succession of eminent Vice-Chancellors to guide its destinies. 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 for Study and over 3240 members as 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,
- 6) M. Phil, 7) Ph.D.

4. 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 Annamalai University, Chidambaram, Tamil Nadu;
2. To find out most usage of E-resources like E-books and E-Journals;
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.

5. LITERATURE REVIEW

Robert Whelan has written an article entitled "Use of ICT in Education in the University of the South Pacific". The study is based on e-learning and online storage of educational technology has formed the basis of this study [2]. 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.

Odd Eriksen has presented a case study of ICT implementation with a teacher education programme in the Norwegian background [3]. For a proper understanding of the process the writer describes the context and discusses the characteristics of contemporary family life in Norway and expectations of student as regard to the use of information technology in schools. The article also presents the objectives of teacher educators in modernizing the content of the teacher education programme and developing new teaching methods that emphasize active learning strategies to complement the experiences and interests of the current generation of students. It describes the technologies and systems that were implemented. It also explains organization of the implementation process. The experiences of teachers in the programme from the perspective of teacher educators are discussed, drawing upon descriptive survey data. The article provides an overview of a number of specific issues related to how ICT can be used to support new approaches to teacher education.

Jenny Brakels, Els van Daalen, and Wim Dik discussed the Faculty-wise implementation of ICT in education [4]. 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-wise 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.

6. METHODOLOGY

The research has been conducted at the Annamalai University, Chidambaram, Tamil Nadu. The questionnaire was given to seventy five member of the faculty to elicit their required information. The aim of the research was to find the 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 of ICT in teaching activities. The survey employed was supplemented with questions pertaining to the area of physical education teaching faculty using standard basic ICT related information questions. The questionnaires were filled out by the faculty at the time of commencement of the university courses.

7. DATA ANALYSIS

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

Table 1 Gender-wise Use of ICT

| Sl. No. | Gender | Respondent | % |
|---------|--------|------------|-----|
| 1 | Male | 69 | 92 |
| 2 | Female | 6 | 8 |
| Total | | 75 | 100 |

Table 1 shows the group characteristics of the participant taken for this study. The participants for the study were seventy five faculties in the Physical Education Department of Annamalai University. Out of 75 respondents, 92% of the respondents are male and 8% of the respondents are female.

Table 2 shows that the number of male respondents is more than the females. Members of the Faculty cadre/category-wise users of the ICT of which 53.3% of the users were the Assistant Professors, 24% of the respondents were Assistant Professors (SS), 13.04% of them were Associate Professors and 9.3% of them were Professors.

Table 2 Category-wise Use of ICT

| Sl. No. | Category-wise | Respondents | % |
|---------|-------------------------|-------------|-------|
| 1 | Professor | 7 | 9.30 |
| 2 | Associate Professor | 10 | 13.04 |
| 3 | Assistant Professor(SS) | 18 | 24.0 |
| 4 | Assistant Professor | 40 | 53.3 |
| Total | | 75 | 100 |

Table 3 Use of ICT Tools

| ICT Tools | Category-wise | Administration | Teaching | Research | Self Development | Not Using |
|-----------|--------------------------|----------------|------------|------------|------------------|-----------|
| Computer | Professor | 1 (1.3%) | 2(2.7%) | 3(4%) | 1(1.3%) | - |
| | Associate Professor | 2(2.7%) | 2(2.7%) | 3(4%) | 1(1.3%) | 2 (2.7%) |
| | Assistant Professor (SS) | 3 (4%) | 5 (6.7%) | 4 (5.3%) | 2(2.7%) | 4 (5.3%) |
| | Assistant Professor | 7(9.3%) | 12(16%) | 11(14.6%) | 5(6.7%) | 5(6.7%) |
| Internet | Professor | 2(2.7%) | 2(2.7%) | 2(2.7%) | 1(1.3%) | - |
| | Associate Professor | 1(1.3%) | 3(4%) | 3(4%) | 1(1.3%) | 2(2.7%) |
| | Assistant Professor (SS) | 1(1.3%) | 5(6.7%) | 7 (9.3%) | 3(4%) | 2(2.7%) |
| | Assistant Professor | 3(4%) | 17 (22.6%) | 15 (20%) | 3(4%) | 2(2.7%) |
| E-Mail | Professor | 2(2.7%) | 2(2.7%) | 2(2.7%) | - | 1(1.3%) |
| | Associate Professor | 1(1.3%) | 4(5.3%) | 3(4%) | 1(1.3%) | 1(1.3%) |
| | Assistant Professor (SS) | 3(4%) | 5(6.7%) | 7 (9.3%) | 1(1.3%) | 2(2.7%) |
| | Assistant Professor | 5(6.7%) | 7 (9.3%) | 13 (17.4%) | 9 (12%) | 6 (8%) |

Table 4 Usage of E-Resources

| ICT Tools | Category wise | Teaching | Research | Update the Knowledge | Not Using |
|------------|--------------------------|----------|-----------|----------------------|-----------|
| E-Journals | Professor | 2(2.7%) | 3(4%) | 1(1.3%) | 1(1.3%) |
| | Associate Professor | 3(4%) | 5(6.7%) | 2(2.7%) | - |
| | Assistant Professor (SS) | 5(6.7%) | 7 (9.3%) | 3 (4%) | 3(4%) |
| | Assistant Professor | 12 (16%) | 18(24%) | 6(8%) | 4(5.3%) |
| E-Books | Professor | 1(1.3%) | 3(4%) | 2(2.7%) | 3(4%) |
| | Associate Professor | 2(2.7%) | 5(6.7%) | 1(1.3%) | 2(2.7%) |
| | Assistant Professor (SS) | 4(5.3%) | 7 (9.3%) | 3(4%) | 4(5.3%) |
| | Assistant Professor | 9 (12%) | 14(18.7%) | 10 (13.3) | 5(6.7%) |

Table 3 shows that the first and foremost 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. Among the Professors 1.3% are using computer for administration purpose, 2.70% for teaching, 4% for research and 1.3% among them for self development. Among the Associate Professors 2.7% of them use computer for administration purpose, 2.7% for teaching, 4% for research, 1.3% for self development, and 2.7% are not using any. Among the Assistant Professors (SS), 4% use computer for administration, 6.7% for teaching, 5.3% for research, 2.7 for self development and 5.3% are not using computer. Among the Assistant Professors 9.30% using computer for administration purpose, 16 % for teaching, 14.6 % for research, 6.7% for self-development, and 6.7% are not using any computer. Among the Professors 2.7% are using internet for administration, teaching, research and 1.3% for self development. Among the Associate Professors 1.3 % are using Internet for administration purpose, 4% for both teaching and research, 1.3% for self-development and 2.7% are not using Internet. Among the Assistant Professors (SS) 1.3 % are using Internet for administration, 6.7% for teaching, 9.3% for research, 4% for staff development and 2.7% are not using Internet. Among the Assistant Professors 4% are using internet for administration purpose, 22.6 % for teaching, 20% for research, 4% for self-development, and 2.7% are not using computer. Among the Professors 2.7% are using E-Mail for administration, research, teaching purpose, and 1.3% is not using E-mail. Among the

Associate Professors 1.3% are using E-Mail for administration purpose, 5.3% for teaching and 4% for research, 1.3% for self development and 1.3% are not using Internet. Among the Assistant Professors (SS) 4 % are using Internet for administration purpose, 6.7% for teaching, 9.3% for research, 1.3% for self development and 2.7% are not using Internet. Among the Assistant Professors 6.7% are using internet for administration purpose, 9.3% for teaching, 17.4 % for research, 12 % for self development, and 8% are not using computer.

Table 4 shows that 2.7% of Professors are using E-Journals for teaching, 4% for research, 1.3% for Update the knowledge and 1.3% are not using E-Journals. 4% of Associate Professors are using E-Journals for teaching, 6.7% for research, and 2.70 for update the knowledge. 6.7% of Assistant Professors (SS) are using E-Journals for research, 9.3% for research, 2.7% update the knowledge, 4% are not using E- Journals. 16 % of Assistant Professors are using E-Journals for teaching, 24% for Research, 8% for update the knowledge, 5.3% not using E-Journals. 1.3% of Professors are using E-Books for teaching, 4% for research, 2.7% to update the knowledge, 4% are not using E-Books. 2.70% of Associate Professors are using E-Books for teaching, 6.7% for research, 1.3% to update the knowledge and 2.70% are not using E-Books. 5.3% of Assistant Professors (SS) are using E-Books for research, 9.3% for research, 4% update the knowledge, 5.3% are not using E-Books. 12 % of Assistant Professors are using E-Books for teaching, 18.70% for research, 13.30% for update the knowledge, 6.7% are not using E-Books.

Table 5 Usage of Computer Applications

| ICT Tools | Category wise | Teaching | Research | General | Not Using |
|-----------|--------------------------|----------|----------|---------|-----------|
| MS Office | Professor | 1(1.3%) | 5(6.7%) | 1(1.3%) | - |
| | Associate Professor | 2(2.7%) | 4(5.3%) | 3(4%) | 1(1.3%) |
| | Assistant Professor (SS) | 5(6.7%) | 12(16%) | - | 1(1.3%) |
| | Assistant Professor | 9 (12%) | 21(28%) | 7(9.3%) | 3(4%) |

Table 5 shows that the usages of Computer Applications by Professors. Among them 1.3% use MS Office, Open Office for teaching purpose, 6.7% for research, 1.3% General. Among Associate Professors, 2.7 % use MS Office for teaching purposes, 5.3% for

research, 4% for General, and 1.3% are not using MS Office. Among Assistant Professors (SS) 6.7 % use MS Office for teaching, 16% for research and 1.3% are not using MS Office. Among Assistant Professors 12% are using teaching purpose for MS Office, 28% for research, 9.3 % for general and 4% are not using MS Office.

Table 6 Usage of Digital Devices (Generation and Storage)

| ICT Tools | Category-wise | Yes | No |
|----------------|--------------------------|------------|----------|
| CD-ROM/ | Professor | 5(6.7%) | 2(2.7%) |
| | Associate Professor | 8 (10.7%) | 2(2.7%) |
| | Assistant Professor (SS) | 14(18.6%) | 4(5.3%) |
| | Assistant Professor | 32 (42.7%) | 8(10.7%) |
| Digital Camera | Professor | 3(4%) | 4(5.3%) |
| | Associate Professor | 5(6.7%) | 5(6.7%) |
| | Assistant Professor (SS) | 11(14.6%) | 7 (9.3%) |
| | Assistant Professor | 28(37.7%) | 12(16%) |

Table 6 shows that 6.7% of Professors are using CD-ROM and 2.70% are not using. 10.7% of Associate Professors use CD-ROM and 2.7% are not using. Among Assistant Professors (SS) 18.6% of them use CD-ROM and 5.3% are not using. Among Assistant Professors 2.6%of them use CD-ROM and 10.70% are not used. Among Professors

4% of them use Digital Camera and 5.3% are not using. Among Associate Professors 6.7% of them use Digital Camera and same percentage are not using. Among Assistant Professors (SS), 14.6% of them are use Digital Camera and 9.3% are not using. Among Assistant Professors 37.7% are using digital camera and 16% are not used.

Table 7 Use of Search Engine

| Category-wise | Google | Yahoo | Alta Vista | MSDN and Others |
|---------------------------|-------------|-----------|------------|-----------------|
| Professors | 4(5.3%) | 2(2.7%) | 1(1.3%) | - |
| Associate Professors | 5(6.7%) | 4(5.3%) | 1(1.3%) | - |
| Assistant Professors (SS) | 10 (13.2%) | 4(5.3%) | 2(2.7%) | 2(2.7%) |
| Assistant Professors | 20 (26.66%) | 10(13.2%) | 5(6.7%) | 5(6.7%) |

Table 7 shows that among Professors, 13% are using Google search engines, 2.7% Yahoo search engine, and 1.3% use Alta vista. Among Associate Professors, 6.7% are using Google search engine, 5.3% use Yahoo and 1.3% use Alta vista. Among Assistant Professors (SS), 13.2% of them are using Google, 5.3 % Yahoo, 2.7 % use Alta vista, and MSDN. Among Assistant Professors 26.66% are using Google, 13.2 % use Yahoo, 6.7%% use Alta Vista and MSDN and other search engines.

8. CONCLUSION

The ICT Tools like Computer, Internet, E-mail are mostly used for teaching purposes but used very less for research purposes. E-Resource, E-Journal and E-Books have been used both for teaching and research equally and a few member of faculty have used them to improve their knowledge. Use of Computer applications like word, power point, excel are effectively used for teaching and research purposes and a few percent for general purpose. Usage of digital devices and storage devices like CD-ROM/DVD, digital camera are mostly used by a few faculty members. Most of the faculties use Google search engines, followed by Yahoo, whereas a less percentage of them use other search engines.

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. The study helps the librarians in planning and developing digital information resources in providing modern services to their library user. This study discussed the technological advancements of ICT in using the computer, Internet, e-mail, electronic resources, and teaching aids using some technologies. Not only these advancements have helped to make correct decisions but they have also proved the efficacy of using the Information and Communication Technologies. The Physical Education and Sports Sciences Faculty can now analyze and improve their performance, indeed; these technological advancements have changed the entire face of teaching in 21st century.

REFERENCES

- [1] G-ne Bucsy, "Research on Sociopedagogy Students' Health - Cultural Behaviour, with Special Reference to Physical Activity", Ph.D Dissertation, SE TF, Budapest, 2003.
- [2] Robert Whelan, "Use of ICT in Education in the South Pacific: Findings of the Pacific", eLearning Observatory, 2008, pp.53-70.
- [3] Odd Eriksen, "Experiences from ICT-based Teacher Education: Technology as a Foundation for Active", Journal of Educational Media, Vol. 29, No. 3, 2004, pp. 201-211.
- [4] Jenny Brakels and Els van Daalen, "Implementing ICT in Education Faculty-wise", European Journal of Engineering Education, Vol. 27, No.1, 2002, pp. 63-76.