Use of Internet Resources and Services by the Physical Education and Sports Science Faculty Members: A Study of Universities in Tamil Nadu

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Abstract

The statistical method has been taken to examine the use of Internet services and resources and its impact among faculty members of Physical Education and Sports Science in nine university of Tamilnadu. In this study, 207 questionnaires were distributed to all faculty members of nine universities for the studies of different Internet resources. Among them, 146 questionnaires were taken for the present study and analysis. The various Internet services and resources used by sports faculty members are e-mail, discussion groups, SMS/chatting, search engines, e-journals and e-books. The gender wise distribution of the respondents exposes the wide disparity between males and females -- 87% and 13% respectively. The pattern of usage of Internet reveals that most of the sports faculty members are habitual users, prominent users being Assistant Professors. The ranking of chi square values suggest that most of sports faculty members are making best use of available Internet resources and other services.

Keywords: ICT; Internet Resources; Faculty members; Physical Education and Sports Science; Internet; Tamil Nadu.

1. Introduction

With changing technologies, the concept of Internet resources and services has become vital to people in all walks of life. There is a consensus that the use of Internet resources will certainly enhance the quality of teaching and the learning process. Universities are categorized as centers of higher learning which promote creative and innovative knowledge for the improvement and economic development of mankind. It is a truism that all these activities are possible through learning and research. In the changing technological scenario, the library has also become knowledge resource centre of any university or organization. It has become the hub center of gathering knowledge for teaching, learning and research activities.

Universities all over the world have started using the Internet resources and services. Most of the Universities have been provided with all the modern technologies which could provide effective teaching and research experience. The use of Internet resources have become vital in all academic and processional arenas to enhance the learning skills of the stakeholders to a very great. Internet resources have not only opened new avenues to academia including faculty members but also make them habituated to self-learning, interacting and updating the vast global knowledge.

The present study is confined to the use of Internet resources and services which include e-mail, search engines, different communication methods, various digital resources like electronic books, e-journals among faculty members in

Physical Education and Sports Sciences of nine Universities of Tamil Nadu. The required information was collected from sports faculty members of all universities in Physical Education and Sports Sciences.

2. Review of Literature

Various studies are available dealing with the use of internet resources by different categories of users including those in the field of Physical Education and Sports Sciences. Abdoulaye (2000) investigated the effect of the Internet for reference service in Malaysian academic libraries. He investigated respondents' perception on the importance of the internet in reference work and found that Internet has contributed positively to reference work and has enhanced their effectiveness and efficiency. Saeed et al. (2000) studied the use of Internet in university libraries of Pakistan and concluded that Internet is used extensively for reference work, classification, and cataloguing. Rodriguez and Monroy-Anton (2001) also discussed about the use of ICT Tools in Physical Sciences Education. Dong (2003) carried out a user survey in a Chinese Academy on extent of use of Internet. The study revealed that the users learned to use the internet mainly through self-instruction (46.1%) and from colleagues or friends (35.7%). Mamtora (2003) examined the efficacy of academic use of the Internet at University of South Pacific (USP) and pointed out that a large majority of the respondents used e-mail to communicate and WWW to seek information. It concluded that the academics required specific training in the use of the Internet. Lohar and Roopashree (2004) examined the use of electronic resources by faculty members in BIET, Davanagere. Kirkup and Kirkwood (2005) also studied the role of ICT in higher education teaching.

Al-Ansari (2006) concentrated his evaluative study of the Internet use by the faculty members of Kuwait University. The study by Thomas and Stratton (2006) was particularly focused on the use of ICT in the field of Physical Education. Walmiki and Ramakrishnegowda (2009) conducted elaborative study on ICT Infrastructure of University Libraries in Karnataka. Walmiki, Ramakrishnegowda, and Prithviraj (2010) studied the libraries' response to changing information environment with reference to Karnataka state university libraries. They found that though the university libraries under the study have responded positively to adopt themselves to changes brought in by the developments in Information and Communication Technologies (ICTs), they have failed to equip and place themselves in the place where they could face the challenges and sustain the changes effectively and efficiently. Shakeel Ahmad Khan (2011) investigated the attitudes of students at the Islamia University of Bahawalpur, Pakistan towards learning through the Internet. Sampath Kumar and Manjunath (2013) have indicated that internet has made an impact on the academic performance (i.e. in writing more research papers, in doing better research, better learning experience, etc.) of the university teachers.

Archana Singh, Krishna, & Shikha Jaiswal (2014) explored the use of Internet in Allahabad University and concluded that users usually read while surfing on Internet. 38% of users were reading online news, 38% read online magazines, 35% read e-books, 29% read e-journals and job information, 22% read movie review, 20% read e-mail and 19% read stories and novel. The users mostly read online e-journals and read e-mail more often than any other online information. They rarely read job information, e-books and online magazine. Krishna and Archana Singh (2015) who investigated library e-resource services and its impacts on research scholars of University of Allahabad suggested that they effectively make use of the search engines for their information retrieval and found significant high chi square value for Google Search Engine. The investigation by Osamende and Frederick (2016) was on physical education teachers' attitudes and practice towards technology integration into teaching physical education at the senior high schools level in Ghana. The study recommended that

educational strategies should be redirected, and new educational models adopt to teach integrating technology that links the main components in the educational process. An analysis of the perception of physical education teachers regarding obstacles to integrating ICT and its relation with their age was made by Villalba, González-Rivera, & Díaz-Pulido (2017). The study came out with a suggestion that improvement actions should be established so as to better integrate ICT, mainly to deal with those obstacles that are more greatly perceived by teachers, in order to use ICT in an educational way in the classroom.

3. Methods of Study

Survey method was used for collection of data. A well-structured questionnaire was distributed to 207 faculty members in nine universities of Tamil Nadu, out of which 146 questionnaires were received. Therefore, sample for the present study consists of 146 faculty members of the discipline of Physical Education and Sports Sciences. The collected data were analyzed and the results are organized using tables, charts along with interpretations. Chi square test has been applied for the study of different attributes and to find out the significant differences and association on various constraints.

4. Objectives

The present study has been made to know the usage of various Internet resources and services which include e-mail, e-group, SMS/chatting, search engines communication types, electronic journals and e-books by the faculty members Physical Education and Sports Sciences in nine universities of Tamil Nadu. The main objective of the study is to explore the pattern of usage of Internet sources and services by the sports faculty members of Tamil Nadu. The specific objectives are the following:

To ascertain the gender wise usage of Internet resources and services by the sports faculty members.

- To find out age wise usage of Internet resources and services by the faculty members
- To determine the place of using Internet by the sports faculty members

Table 1
Observation of respondents of sports faculty members in Tamil Nadu universities

Sl. No.	Tamil Nadu Universities	Questionnaire Respondents (Observed)	Questionnaire Respondent (Expected)	|O -E|	(O-E)2	(O-E)2/ E
1	Annamalai University	75	53	22	484	9.1
2	Alagappa University	10	7	3	9	1.2
3	Bharathidasan University	2	1.4	0.6	0.36	0.25
4	Bharathiyar University	7	4.9	2.1	4.41	0.9
5	Madurai Kamaraj University	5	3.5	1.5	2.25	0.6
6	Manonmanium Sundaranar University	5	3.5	1.5	2.25	0.6
7	Ramakrishna Mission Vivekananda University	13	9.1	3.9	15.21	1.6
8	Tamil Nadu Physical Education and Sports university	22	15.5	6.5	42.25	2.7
9	Vinayaka Mission University	7	4.9	2.1	4.41	0.9
	Total	**146**	**102.8**			**2.58**

- To know the usage of various types of sources and services by the sports faculty members
- To find out the extent of use of electronic journals and e-books by sports faculty members
- To study the various types of communication facilities by the faculty members
- To find out the usage of Internet search engines by the sports faculty members

5. Study and Analysis

The present study has been carried out with the help of data collected by survey method and all data pertaining to various attributes have been collected and analyzed and chi square test analysis has also been applied on various attributes for final interpretations. The details of various studies are summarized into tables along with interpretations.

5.1 Distribution of Questionnaires in Different Universities

The distribution of questionnaires in different universities is presented in Table 1.

The calculated value of Chi square is 2.58 which is lesser than table value, 15.51 (df =8) at 5% level of significance is proved to be non-significant. Hence there is no significant difference between the response rates in all nine universities of Tamil Nadu.

5.2 Gender wise Distribution of the Respondents

Gender- wise distribution of the sports faculty members is presented in Table 2.

Table 2
Gender wise distribution of the sports faculty members

Faulty Members	Male	Male (O — E)2/ E	Female	Female (O — E)2/ E
Professor	18	0.3	1	0.87
Associate Professor	17	0.69	7	4.8
Assistant Professor	92	0.06	11	0.42
Total (Percentage)	**127(87)**	**0.88**	**19(13)**	**6.09**

The calculated value of Chi- square is 6.97, which is lower than table value, 11.070 at 5% level of significance is proved to be non-significant. Hence, there is no significant gender difference between different categories of the sports faculty members

5.2 Age wise distribution of the sports faculty members

Age -wise distribution of the sports faculty members is shown in Table 3.

Table 3
Age wise distribution of the sports faculty members

Faculty Members	Below 35	Below 35 (O -- E)2/ E	36-45	36-45 (O -- E)2/ E	Above 45	Above 45 (O -- E)2/ E
Professor	1	5.9	1	7.9	17	15.1
Associate Professor	2	2.9	19	15.1	3	28.7
Assistant Professor	57	567.6	29	88.1	17	3.1
Total (Percentage)	**60(41.1)**	**576.4**	**49(33.6)**	**111.1**	**37(25.3)**	**46.9**

The calculated Chi-square value, 734.4, is greater than table value, 15.519 at 5% level of significance is proved to be significant. It is thus concluded that there is significant difference between the age group and distribution different category of sport faculties. Also it is clear from the Table that 41.1% of respondents are below the age of 35 years and 33.6 % are in the age group 36-45 and only 25.3% are above the age of 45 years..

5.3 Usage of Internet sources and services among sports faculty members

The relative use of internet sources and services is presented in Table 4.

Table 4
Use of Internet services among sports faculty members

Faculty members	Internet usage				Total	(O — E)2/ E
	Yes	Yes(O--E)2/ E	No	No (O--E)2/ E		
Professor	18	0.00	1	18.7	19	18.7
Associate Professor	21	57.8	3	2.2	24	60.0
Assistant Professor	97	568.8	6	0.14	103	5688.14
Total (Percentage)	**136 (93.1)**	**5745.8**	**10 (6.9)**	**22.64**	**146**	**5768.4**

The calculated value of Chi-square is 5768 which is greater than table value, 11.070 at 5% level of significance is proved to be significant. It is thus concluded there is a significant difference among the opinion of internet usage by different categories of sports faculty members. Majority (93.1%) of the faculty members use Internet. It implies that most of them are habitual users of Internet resources and services which help them in updating their professional knowledge and skills in Physical Education and Sports Sciences. Fig. 1 represents the results of the analysis.

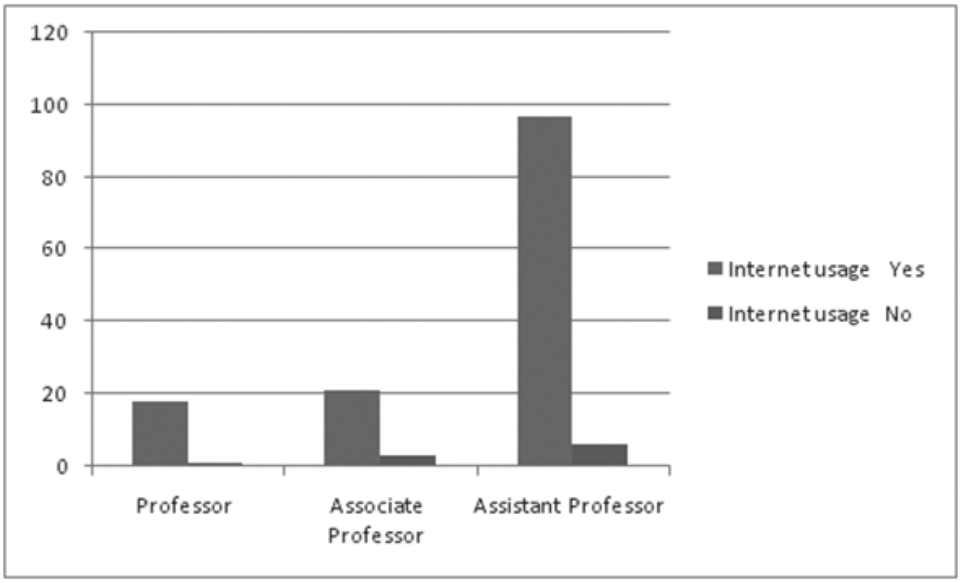

Fig. 1: Interanet usage among sports faculty members

5.4 Place of Using the Internet Sources and Services

Most of the users have their own preferred places of accessing the internet though smart phones with Internet access make the place of access irrelevant. Table 5 shows the place of accessing the Internet by the faculty members.

Table 5
Place of using Internet by sports faculty members

Faculty members	Place of Internet usage					Total
	University	House	Browsing centers	Others	Non-users	
Professor	2	15	0	1	1	19
(O- E)2/ E	43	2.7	42.3	5.2	7.1	61.6
Associate Professor	9	8	3	1	3	24
(O--E)2/ E	22.8	26.5	0.6	6.5	2.8	59.2
Assistant Professor	49	32	9	7	6	103
(O--E)2/ E	153.5	104.8	45.6	18.2	0.14	17.3.74
Total (Percentage)	**60 (41.1)**	**55 (37.7)**	**12 (8.2)**	**9 (6.2)**	**10 (6.8)**	**146 (100.0)**
(O — E)2/ E	**1562.1**	**134**	**88.5**	**29.9**	**10.04**	**1824.5**

The calculated value of Chi-square is 1824.5, which is greater than table value, 23.685 at 5% level of significance is proved to be significant. Therefore, it is concluded that usage of Internet usage is independent of place. Most of the faculty member (41.1%) are dependent on Internet services provided from university, whereas some are using at house (37.7%) and 8.2% at browsing centers.. However, non-users (6.8%) of Internet access (ranks fifth) may be due to lack of facilities or lack of skills to access information.

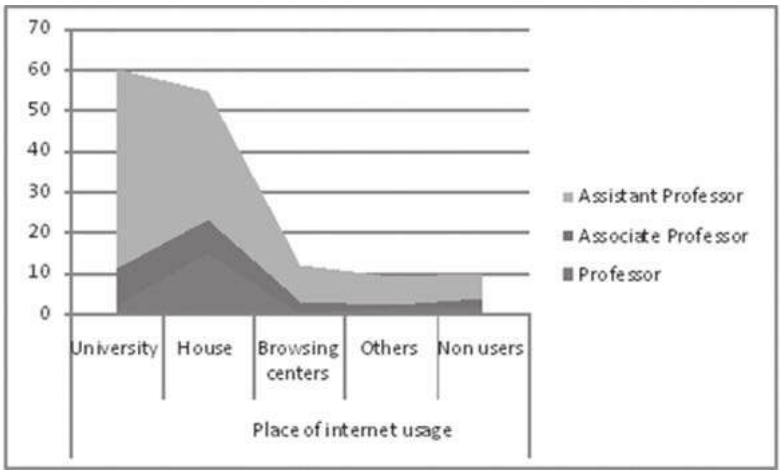

Fig. 2: Place of accessing Internet resources and services by faculty members

5.5 Use of e-mail service

E-mail constitutes one of the most frequently resorts means of communication. Therefore, an attempt was made to study the e-mail service provider used by the faculty members. The findings are presented in Table 6.

Table 6
Use of E-mail providers by the sports faculty members

Faculty Members	E- Mail service providers						Total
	Yahoo	Rediff mail	Gmail	Hotmail	Sancharnet	Non users	
Professor	3	10	2	3	0	1	19
(O — E)2/ E	3.9	4.9	2.1	4.5	5.7	24.6	64.7
Associate Professor	1	10	6	1	0	6	24
(O — E)2/ E	6.2	7.8	33.8	2.2	2.7	11.9	64.6
Assistant Professor	26	15	40	13	3	6	103
(O — E)2/ E	0.3	0.4	2.1	1.6	2.1	9.1	15.6
Total (Percentage)	**30 (20.5)**	**35 (24.0)**	**48 (32.9)**	**17 (11.6)**	**3 (2.1)**	**13 (8.9)**	**146 (100.0)**
(O — E)2/ E	**10.4**	**13.1**	**57**	**8.3**	**10.5**	**45.6**	**144.9**

The calculated Chi-square value of 144.9 is greater than table value 27.587 at 5% level of significance proved to be significant. It is thus concluded that faculty members are independent of the use of email service providers and use of email service is not due to choice but based on the availability of services. It is found that that Gmail (32.9%) is the most widely used compared to Rediffmail (24.0%), Sancharnet, Yahoo and Hotmail which occupy the third, fourth, fifth and sixth positions respectively. It is rather strange to see that non-users rank second indicating either lack of facilities or lack of skills to use email services among professors / associate professors in Physical Education and Sports Sciences.

5.6 Use of e-journals and e-books

The extent of use and the satisfaction level of using e-journals and e-books among sports faculty members is clear from Table 7.

Table 7
Use of e-journals and e-books by the Sports Faculty Members

Faculty members	Distribution of respondents using E-journals and e-books				
	Very good	Good	Satisfied	Poor	Total
Professor	7	11	15	5	38
(O — E)2/ E	1.8	0.9	2.75	4.9	10.35
Associate professor	7	17	18	6	48
(O — E)2/ E	5.8	42	0.6	8.8	57.2
Assistant professor	19	75	83	29	206
(O — E)2/ E	4.8	9.4	900	0.03	914.2
Total (Percentage)	**33 (11.3)**	**103 (35.3)**	**116 (39.7)**	**40 (13.7)**	**292 (100.0)**
(O — E)2/ E	**12.4**	**52.3**	**933.5**	**13.73**	**981.75**

The calculated value of Chi-square, 981.7 is greater than table value 19.675 at 5% level of significance is proved to be significant and hence it is thus concluded that sports faculties are inclined more towards the use of access facilities of e-books and e-journals to update their professional knowledge. The use of online electronic journals/ books is not due to choice but they use them in accordance with the available facilities. It is also found that most of them are satisfied (39.7%) with the use of online facilities for accessing electronic resources.

5.7 Use of Different Types of Communication Facilities

The results of the responses about the use of different types of communication facilities by the faculty members are shown in Table 8.

Table 8
Use of different types of communication facilities

Types of communication	Rank by users				Total
	I	II	III	IV	
Internet	75	22	7	31	125
(O — E)2/ E	80.75	1.6	14.2	0.35	96.9
Email	35	74	5	16	130
(O — E)2/ E	0.37	77.3	19.6	4.09	101.3
E group	23	30	38	28	119
(O — E)2/ E	0.03	1.99	3.8	0.02	5.84
Cell phone	6	15	49	38	108
(O — E)2/ E	15.76	3.31	2.68	0.311	22.06
SMS/ chatting	7	5	47	116	175
(O — E)2/ E	30.4	30.5	3.4	57.1	121.4
Total (Percentage)	**146 (22.2)**	**146 (22.2)**	**146 (22.2)**	**219 (33.4)**	**657 (100.0)**
(O — E)2/ E	**47.3**	**114.6**	**43.2**	**61.87**	**347.5**

The calculated Chi-square value, 347.5 is greater than table value, 30.144 at 5% level of significance is proved to be significant and hence itt is concluded that most of the sports faculties are using different types of communication in their professional activities. Types of communication used by faculties are not due to choice but they are using various methods of communication in accordance with services. The ranking shows that SMS / Chatting and E-Mail which are ranked first and second are the most commonly used communication services by the faculty members.

5.8 Use of search engines

The preference for search engines varies from person to person. Table 9 contains the preference of search engines among Physical Education and Sports Science faculty members.

The calculated Chi- square value of 1092.9 is greater than table value of 24.996 at 5% level of significance is proved to be significant. Hence it is concluded that most of the faculty members are independent of using different search engines. The Table also reveals that Dogpile/MSN/others search engines are the most used and effective

Table 9
Use of Internet Search Engines by the sports faculty members

Types of Search Engines	Ranks by users				Total
	I	II	III	IV	
Yahoo	39	76	24	7	146
(O — E)2/ E	15.9	46.4	7.5	19.2	219.0
Google	79	51	4	12	146
(O — E)2/ E	162.8	42.8	34	40.8	281.4
Lycos/AltaVista	19	12	87	174	292
(O — E)2/ E	15.5	3.7	4.9	198.9	267.1
Dogpile/MSN/ others	9	7	31	391	438
(O — E)2/ E	65.9	69.5	110.5	19.5	325.5
Total (Percentage)	**146 (14.3)**	**146 (14.3)**	**146 (14.3)**	**584 (57.1)**	**1022 (100.0)**
(O — E)2/ E	**260.1**	**263.4**	**201**	**368.4**	**1092.9**

in their professional activities. Google, Lycos/ AltaVista, and Yahoo come to the second, third and fourth positions respectively.

6. Conclusion

The major outcomes of the present study are the following:

- There is not much of a variation among Physical Education and Sports Science faculty members from different universities in Tamil Nadu in responding to the questionnaire.
- Males constitute 87 percent of the respondents. This is quite natural because there is a preponderance of males among physical education faculty members.
- The various Internet resources and services used by sports faculty members are E-Mail, E-groups, SMS/chatting, Search Engines, E-journals and e-books.
- The usage of Internet reveals that most of the sports faculty members are habitual users of Internet. However, the prominent users are Assistant Professors
- Age- wise analysis of the use of Internet shows that those who are 35 years are more suggesting greater participation of this group as compared to other age groups.
- The ranking of the place of accessing the Internet shows that University stands first followed by home. However, there are non-users also. This may be due to lack of access or lack of skills to make use of the services.
- Gmail is the most widely used e-mail facility.
- Most of the faculty members are satisfied with the use of online facilities of electronic resources.
- Among the communication facilities, SMS / Chatting and E-mail are the most commonly used by the faculty members.
- Contrary to other studies about the use of search engines, Google occupies only the second position among the search engines used by the Physical Education faculty.

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