# Use of ICT Based Resources and Services Among PG Students, Research Scholars and Teachers of Arts and Science Colleges in Puducherry: A Study

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*Abstract* - **The study indicates use of ICT based resources and services in Arts and Science College Libraries by the PG students, Research scholars and Teachers in Puducherry. A survey was carried out among the users, along with observation at the Arts and Science colleges in Puducherry. The study reveals that the awareness, purpose, frequency, adequacy and time spent and extent of user's satisfaction with ICT based resources and services.**

*Keywords:* **Information and Communication Technology, E-Resources, E-Services, Usage Pattern, Arts and Science Colleges**

## I. INTRODUCTION

Every time the advent of information and communication technology, many universities and institutes of higher education are upgrading their library ICT infrastructure. In order to benefit from the prolific growth of literature being made available on internet, libraries are upgrading their internet bandwidth, workstations and are acquiring online databases and e-journals through consortia.

The electronic information resources have acquired a major portion of library collections. The value and use of information resources, particularly e-resources have increased with the time. Therefore, there is necessity to make study on the different aspects of ICT based resources and services and the issues relating to the use of ICT based resources and services by users, more particularly by the PG students, Research scholars and Teachers of Arts and Science colleges in Puducherry.

## II. OBJECTIVES OF THE STUDY

The following are the important objectives of the study:

1. To study the awareness of ICT based resources and services among  the users of Arts and Science colleges in Puducherry;

2. To determine the purpose and use of ICT based resources and services;

3. To study the frequency and time spent of using ICT based resources and services;

4. To study the adequacy of using ICT based resources and services;

5. To identify the level of users satisfaction with ICT based resources among the users of Arts and Science colleges in Puducherry.

## III. METHODOLOGY

This study has been undertaken with the help of structured questionnaire. The respondents were the PG students, Research scholars and Teachers. A structured questionnaire was prepared and distributed to respondents for getting correct responses. Out of 1500 questionnaire distributed, about 1332 users responded to this survey, thus resulting into a response rate of 88.80%. The author has adopted stratified random sampling method for collection of data.

## IV. ANALYSIS AND INTERPRETATION

Table I reveals the awareness of ICT based resources among the users of Arts and Science College libraries. There were eight kinds of ICT based resources were specified in the questionnaire. The analysis shows that the majority of ICT based resources, of which teachers were aware, of e-journals (97.28%), Library website (95.38%) and e-books (92.93%). The majority of ICT based resources of which research scholars were aware of e-journals (69.27%), e-books (65.92%), Databases (62.57%) online reference sources (60.89%), e-mail (59.78%) and Library website (58.66%). On the other hand, the majority of ICT based resources, of which PG students were aware of  e-journals (87.64%), Library website (86.11%) and e-books (84.33%).

TABLE I STATUS WISE DISTRIBUTION OF RESPONDENT'S AWARENESS OF ICT BASED RESOURCES

| SI. No | ICT based Resources | Teachers=368 | | Research scholars=179 | | PG students=785 | | Total=1332 | |
|---|---|---|---|---|---|---|---|---|---|
| | | Yes | No | Yes | No | Yes | No | Yes | No |
| 1 | Library website | 351 (95.38) | 17 (4.62) | 105 (58.66) | 74 (41.34) | 676 (86.11) | 109 (13.89) | 1132 (84.98) | 200 (15.02) |
| 2 | Data bases | 311 (84.51) | 57 (15.49) | 112 (62.57) | 67 (37.43) | 654 (83.31) | 131 (16.69) | 1077 (80.86) | 255 (19.14) |
| 3 | E-books | 342 (92.93) | 26 (7.07) | 118 (65.92) | 61 (34.08) | 662 (84.33) | 123 (15.67) | 1122 (84.23) | 210 (15.77) |
| 4 | E-Journals | 358 (97.28) | 10 (2.72) | 124 (69.27) | 55 (30.73) | 688 (87.64) | 97 (12.36) | 1170 (87.84) | 162 (12.16) |
| 5 | Online Reference Sources | 318 (86.41) | 50 (13.59) | 109 (60.89) | 70 (39.11) | 651 (82.93) | 134 (17.07) | 1078 (80.93) | 254 (19.07) |
| 6 | Online Catalogue | 298 (80.98) | 70 (19.02) | 102 (56.98) | 77 (43.02) | 612 (77.96) | 173 (22.04) | 1012 (75.98) | 320 (24.02) |
| 7 | Full text articles | 301 (81.79) | 67 (18.21) | 96 (53.63) | 83 (46.37) | 637 (81.15) | 148 (18.85) | 1034 (77.63) | 298 (22.37) |
| 8 | E-mail, discussion groups | 284 (77.17) | 84 (22.83) | 107 (59.78) | 72 (40.22) | 615 (78.34) | 170 (21.66) | 1006 (75.53) | 326 (24.47) |

As a result, it is clear that the predominant sources like e-journals, e-books, online databases, Library website etc. are very familiar among the respondents of Arts and Science colleges.

TABLE II STATUS WISE DISTRIBUTION OF RESPONDENT'S FREQUENCY OF USING ICT BASED RESOURCES

| Status | Every Day | Once in two days | Twice in a week | Once in a week | Occasionally | Total |
|---|---|---|---|---|---|---|
| Faculty | 121 (32.88) | 152 (41.30) | 52 (14.13) | 31 (8.42) | 12 (3.26) | 368 (27.63) |
| Research | 77 (43.02) | 37 (20.67) | 26 (14.13) | 21 (11.73) | 18 (10.06) | 179 (13.44) |
| PG Students | 102 (12.99) | 307 (39.11) | 288 (3.69) | 61 (7.77) | 27 (3.44) | 785 (58.93) |
| Total | 300 (22.52) | 496 (37.24) | 366 (27.48) | 113 (8.48) | 57 (4.28) | 1332 (100.00) |

Data presented in Table II indicates the academic status-wise distribution of respondent's frequency of using ICT based resources. Out of the total 1332 respondents, 300 (22.52%) respondents using ICT based resources everyday; 496 (37.24%) respondents using ICT based resources once in two days; 366 (27.48%) respondents using ICT based resources twice in a week; 113 (8.48%) respondents using ICT based resources once in a week and 57 (4.28%) respondents using ICT based resources occasionally.

Among 785 PG students, 39.11% of respondents using ICT based resources once in two days and 3.44 % of respondents using ICT based resources occasionally. With regard to 179 Research scholars, 43.02% of respondents using ICT based resources everyday and 10% of respondents using ICT based resources occasionally. Out of 368 Teachers, 41.30 % of respondents using ICT based resources once in two days and 3.26 % of respondents using ICT based resources occasionally.

TABLE III STATUS WISE DISTRIBUTION OF RESPONDENTS TIME SPENT ON USING ICT BASED RESOURCES AND SERVICES

| Status | <0.30hrs | 1hrs | 2hrs | >2hrs | Total |
|---|---|---|---|---|---|
| Teachers | 174 (47.28) | 112 (30.43) | 62 (16.85) | 20 (5.43) | 368 |
| Research Scholars | 85 (47.49) | 61 (34.08) | 22 (12.29) | 11 (6.15) | 179 |
| PG Students | 532 (67.77) | 161 (20.51) | 61 (7.77) | 31 (3.95) | 785 |
| Total | 791 (59.38) | 334 (25.08) | 145 (10.89) | 62 (4.65) | 1332 |

Table III indicates the academic status-wise distributions of respondents' time spent for using ICT based resources and services. It could be noted that out of the total 1332 respondents, 791(59.38%) respondents spend less than half an hour per day; 334(25.08%) respondents spend one hour per day; 145(10.89%) respondents spend two hours per day and 62(4.65%) respondents spend more than two hours per day for accessing ICT based resources and services.

Among 785 PG students, 67.77% of the respondents spend less than half an hour per day and 3.95 % of the respondents spend more than two hours per day. With regard to 179 research scholars, 47.49% of the respondents spend less than half an hour per day and 6.15% respondents spend more than two hours per day. Out of 368 teachers, 47.28 % respondents spend less than half an hour per day and 5.43% of the respondents spend more than two hours per day.

TABLE IV STATUS WISE DISTRIBUTION FF RESPONDENT'S PURPOSE OF USING ICT BASED RESOURCES

| Status | Research | Study | Accessing Online Data bases | Publishing | Down loading e-resources | Professional development | Placements | Entertainment | Chatting | Others | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Teachers | 167 (45.38) | 32 (8.70) | 28 (7.61) | 48 (13.04) | 31 (8.42) | 23 (6.25) | 8 (2.17) | 16 (4.35) | 3 (0.82) | 12 (3.26) | 368 |
| Research Scholars | 71 (39.66) | 16 (8.94) | 10 (5.59) | 18 (10.06) | 30 (16.76) | 3 (1.68) | 11 (6.15) | 9 (5.03) | 8 (4.47) | 3 (1.68) | 179 |
| PG Students | 0 (0.00) | 397 (50.57) | 31 (3.95) | 2 (0.25) | 59 (7.52) | 0 (0.00) | 48 (6.11) | 142 (18.09) | 95 (12.10) | 11 (1.40) | 785 |
| Total | 238 (17.87) | 445 (33.41) | 69 (5.18) | 68 (5.11) | 12 (9.01) | 26 (1.95) | 67 (5.03) | 167 (12.54) | 106 (7.96) | 26 (1.95) | 1332 |

Table IV indicates the academic status wise distribution of respondents' purpose of using ICT based resources and services. It is clearly observed from the table that, 445 (33.41%) respondents have used ICT based resources and services for their study purpose; 238 (17.87%) respondents have used ICT based resources and services for their research purpose; 69 (5.18%) respondents have used ICT based resources and services for accessing online databases, 120 (9.01%) respondents have used ICT based resources and services for their downloading e-resource, 68(5.11%) respondents have used ICT based resources and services for their publishing articles and books; 26(1.95%) respondents have used for their professional Development; 67(5.03%) respondents have used ICT based resources and services for their placements; 167(12.57%) respondents have used for entertainment; 106(7.96%) respondents have used ICT based resources for chatting purpose and 26(1.95%) respondents have used ICT based resources other purpose.

Among 785 PG students, 33.68 % of the respondents have used ICT based resources and services for their study purpose and 0.25% of the respondents have used for publishing articles and books. With regard to 179 Research scholars, 39.66% of the percent of the respondents have used ICT based resources and services for their research purpose and 1.68 % of the respondents have used for other purposes. Out of 368 Teachers, 45.38 % of the respondents have used ICT based resources and services for their research purpose and 0.82 % of the respondents have used for chatting purpose.

Table V shows the academic status-wise distribution of respondent's adequacy of using ICT based resources and services. Out of 1332 respondents, 712 (53.45) respondents are using ICT based resources always; 577 (43.32%) respondents are using sometime and 43 (3.23%) respondents are never using ICT based resources and services.

With respect to 785 PG students, 53.50 % of them some time using and 2.93 % of them never using ICT based resources and services. With regard to 179 research scholars, 60.34 % of them always using and 6.70 % of them never use ICT based resources. Out of 368 Teachers, 71.20 % of them always using and 2.17 % of them never using ICT based resources and services.

Hence it can be concluded that most of the respondents have reported that always using ICT based resources and services.

Table VI shows the academic status wise distribution of respondents satisfaction level of ICT based resources and services. It could be noted that out of 1332 respondents, 224 (16.82%) respondents are highly satisfied; 896 (67.27%) respondents are satisfied; 137(10.29%) respondents are some what satisfied and 75(5.63%) respondents dissatisfied.

Among the total number of 785 PG students, 70.70% of them are satisfied and 5.35% of them are dissatisfied. Out of 179 Research Scholars, 51.96% of them satisfied and 3.26% of them are dissatisfied. With regard to 368 teachers, 67.39% of them satisfied and 5.71% of them are dissatisfied. Hence it can be concluded that of most of the respondents are satisfied.

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TABLE V Status Wise Distribution of Respondents Adequacy of Using ICT Based Resources

| Status | Always | Sometimes | Never | Total |
|---|---|---|---|---|
| Teachers | 262 (71.20) | 98 (26.63) | 8 (2.17) | 368 |
| Research Scholars | 108 (60.34) | 59 (32.96) | 12 (6.70) | 179 |
| PG Students | 342 (43.57) | 420 (53.50) | 23 (2.93) | 785 |
| Total | 712 (53.45) | 577 (43.32) | 43 (3.23) | 1332 |

TABLE VI Status Wise Distribution of Respondents Satisfaction Level of Ict Based Resources and Services

| Status | Highly Satisfied | Satisfied | Some What Satisfied | Dissatisfied | Total |
|---|---|---|---|---|---|
| Teachers | 61 (16.85) | 248 (67.39) | 38 (10.33) | 21 (5.71) | 368 |
| Research Scholars | 43 (24.02) | 93 (51.96) | 31 (17.32) | 12 (3.26) | 179 |
| PG Students | 120 (15.29) | 555 (70.70) | 68 (8.66) | 42 (5.35) | 785 |
| Total | 224 (16.82) | 896 (67.27) | 137 (10.29) | 75 (5.63) | 1332 |

## V. Conclusion

The study has brought out the valid findings that the PG Students, Research Scholars and Teachers of Arts and Science college libraries in Puducherry highly use ICT based resources and services for their study and research purposes and in result it has made high impact on the use pattern and information seeking approaches.

## References

[1] J.A. Adams, and S.C. Bonk, ''Electronic information technologies and resources: use by university faculty and faculty preference for related library services'', *College and Research Libraries,* Vol. 56, No.1 pp. 119-131, 1995.

[2] Anjali Gulati, "Use of Information Communication Technology in Libraries and Information Centres: An Indian Scenario", *The Electronic library,* Vol. 22No. 4, pp.335-350, 2004

[3] B. S.Biradar, G. R. Rajashekar and B. T. Sampath Kumar, "A study of internet usage by students and faculties in Kuvempu University". *Library Herald.* Vol. 44, No. 4, pp. 283-294, December 2006.

[4] F.J Devadason, and Lingam, "A Methodology for the Identification of Information Needs of Users". *IFLA Journal,* Vol. 23, No.1, pp. 41-51, 1997

[5] M. Ghosh, and I. Ghosh, "ICT and information strategies for a knowledge economy: the India experience", *Program: Electronic library and information systems,* Vol. 43, No.2, pp. 187-201, 2009.

[6] M.J. Igben and Akobo, "State of information and communication technology (ICT) in libraries in Rivers State, *Nigeria," African Journal of Library, Archives &amp; Information Science,* Vol. 17, No.92, pp. 135-142, 2007.