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Impact of ICT on Information Seeking Behaviour of Users in Pharmacy Colleges in Vidarbha Region

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ABSTRACT

This study examines the impact of Information and Communication Technology (ICT) on the information-seeking behavior of users in pharmacy colleges in the Vidarbha region. The three state universities in Vidarbha division include Nagpur University, Amravati University and Gondwana University Gadchiroli. A total of 1150 questionnaires were distributed across 32 colleges, with 1033 respondents, yielding a response rate of 89.83%. Data for the study were collected through a questionnaire addressing the information demands and needs of both students and teachers in the pharmacy department. The analysis underscores that despite the current advancements in ICT, many users are drawn to utilizing library resources and services regularly for their academic study. Although there is agreement among students and faculty regarding the positive impact of ICT facilities on their studies, the currently available ICT facilities are not sufficient to meet users' needs. The recommendation is to upgrade internet and computer facilities.

Keywords: Information seeking behavior; User; ICT; Pharmacy library and vidarbha

INTRODUCTION

The rapid information technology growth has globalized access to diverse information, notably impacting libraries. Information and Communication Technologies (ICTs) in education significantly influence teaching, learning and research, posing challenges for academic librarians worldwide. E-library services experience tremendous growth, emphasizing the need for modern technology in accelerating library services. In this era of evolving technology, academic librarians must acquire and enhance competencies to adapt to swiftly changing equipment and client needs.

In the current scenario, considering the importance of pharmacy education in India, thousands of students are attracted towards pharmacy education. At this juncture, it becomes important to enhance the quality of these students and ensure that they emerge as quality technical manpower, outstanding academic achievers and distinguished innovators. This paper allows students to study of impact of ICT on information seeking behavior of users while searching for information in the libraries of the pharmacy colleges they attend [1].

Definition

Information seeking behavior: Wilson considers Information behaviors as “those activities a person may engage in when identifying his or her own needs for information, searching for such information in any way and using or transferring that information.”

ICT facilities: Information is processed data with meaning, while data is unprocessed information. Communication is the transmission of information and technology consciously transforms inputs into outputs. ICT, an extension of information technology, emphasizes unified communications and integrates telecommunications and computers.

Patade, N. S. investigates the information needs and seeking behavior of research scholars at Swami Ramanand Teerth Marathwada University. The study reveals that scholars primarily utilize various resources, with the library being a prominent source for acquiring information. Their focus is often on job-related and research-specific information, emphasizing a reliance on formal, informal, electronic and non-book sources.

Obioha investigates the impact of ICT on information seeking among research officers in Nigerian Research Institutes. The study, involving 172 research officers, reveals that ICT significantly contributes to information sourcing, generation, processing, storage/retrieval, dissemination and entertainment. Optimal ICT utilization requires steady power supply, stable infrastructure and increased availability of ICT tools and centers.

Recommendations include addressing power supply issues and adapting technology to local conditions.

Kumar and Boria conducted a study on ICT facilities at Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur. Findings indicate that 54.0% of students consider computers vital for daily information searches, with 92.8% using Google search engine. The study explores resources used, purposes and challenges faced during information seeking. Some respondents (27.3%) were unaware of OPAC, 22.3% faced issues with slow internet speed and 18.7% cited challenges with untrained library staff.

Kumar explores the impact of information and communication technology tools on the Information Seeking Behavior of users at Tirunelveli district central library. The study investigates ICT usage patterns, user needs and future expectations of various categories of users. The analysis indicates that the existing ICT facility falls short of meeting user needs, emphasizing the need for development to empower citizens and foster a knowledge-based society.

Hanchate and Sawant gives an outline of ICT used in the library services in AICTE approved institutes of rural areas of Pune. The results showed that the majority of libraries possess the basic ICT equipment's. The ICT facilities like computers, Internet connectivity, sources and resources. The librarian services like reprographic, OPAC and CAS/SDI services were provided [2-5].

MATERIALS AND METHODS

For this study, the researcher utilized a survey method along with literature search to gather primary data. A questionnaire, distributed among the users (referred to as respondents), served as the survey tool. These users are identified as the 'samples' for the study. The data were analyzed based on user opinions, with mean, standard deviation, *chi-square* calculated and ranked accordingly [6].

Data analysis and interpretation

Sample size: Questionnaires were distributed among the students and teachers of pharmacy colleges in the Vidarbha region, with the distribution and responses detailed in Table 1. A total of 986 questionnaires were distributed to students, yielding 886 responses, while 164 questionnaires were distributed to teachers, resulting in 147 responses. Both categories demonstrate a response rate of approximately 89.83%. This suggests that a significant portion of the population has responded to the questionnaire.

Table 1: Sample size.

| Category | RTMNU | | SGBAU | | GUG | | Total | |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| | S | T | S | T | S | T | S | T |
| No. of Q. distributed | 496 | 80 | 420 | 70 | 70 | 14 | 986 | 164 |
| No. of Q. received | 450 | 70 | 372 | 65 | 64 | 12 | 886 | 147 |
| Response rate (%) | 90.70% | 87.50% | 88.60% | 92.90% | 91.40% | 85.70% | 89.90% | 89.60% |

Opinion of positive impact of ICT facilities on student and faculty user's studies: As depicted in Table 2, the results show that a majority of faculty users, 42.86%, agree that ICT facilities have a positive impact on their studies, while a majority of student users, 39.50%, strongly agree with the positive impact of ICT facilities on their studies. The least chosen opinion option, selected by 4.40% of student users, is strongly disagreeing with the positive impact of ICT facilities on their studies, compared to 2.72% of faculty users. The calculated value of 7.74 is significantly lower than the table value of 9.49. This indicates that the variables vary insignificantly in the opinions of student and faculty users [7,8].

Table 2: Opinion of positive impact of ICT facilities on users' studies.

| Sr. no. | Opinion | Users category | |
|------------------------------|-------------------|-------------------------|--------------|
| | | Students | Faculty |
| 1 | Strongly agree | 350 (39.50) | 46 (31.29) |
| 2 | Agree | 285 (32.17) | 63 (42.86) |
| 3 | Uncertain | 154 (17.38) | 23 (15.65) |
| 4 | Disagree | 58 (6.55) | 11 (7.48) |
| 5 | Strongly disagree | 39 (4.40) | 4 (2.72) |
| | Total | 886 (100.00) | 147 (100.00) |
| <i>Chi-Square</i> Test (CST) | | Calculated Value (CV) | 7.74 |
| | | Degrees of Freedom (df) | 4 |

Student and faculty user's feelings while utilizing electronic resources: Table 2 indicates that the results show a majority of both students, at 59.71% and faculty users, at 46.26%, agree that they find it easier when utilizing electronic sources. The least percentage of faculty users, at 9.52%, feels it is difficult when utilizing electronic sources, while students, at 9.03%, feel it is similar to print versions when utilizing electronic sources. The calculated value of 20.12 is significantly higher than the table value of 7.82. This indicates that the variables vary significantly in the opinions of student and faculty users (Table 3) [9].

Table 3: Users Feelings while utilizing electronic resources.

| Sr. no. | Opinion | Users category | |
|-----------------------|-----------------------|-------------------------|--------------|
| | | Students | Faculty |
| 1 | Easier | 529 (59.71) | 68 (46.26) |
| 2 | Difficult | 121 (13.66) | 14 (9.52) |
| 3 | Uncertain | 156 (17.61) | 39 (26.53) |
| 4 | Same as print version | 80 (9.03) | 26 (17.69) |
| | Total | 886 (100.00) | 147 (100.00) |
| Chi-Square Test (CST) | | Calculated Value (CV) | 20.12 |
| | | Degrees of Freedom (df) | 3 |

RESULTS AND DISCUSSION

Usages of social media platforms for obtaining information

An analysis of which social media tools users prefer to access to seek information is shown in Table 4. The analyses are carried out based on user opinions. Mean, standard deviation and *chi-square* values have been calculated and ranked accordingly. Table 4 explain how users utilize various social media tools for seeking information. Search engines are the most frequently used service among the social media tools, with 51.02% of users employing this option most frequently. Based on the above table, means were calculated and ranked. Users rank first the search engines as the most frequently utilized social media platform (4.10). This is followed by YouTube (3.96), Google Classroom (3.86), Wikipedia (3.67) and Messenger (3.57) [10].

Table 4: Usages of social media platforms for obtaining information.

| S. No | Social media platforms | MF-5 | F-4 | O-3 | R-2 | NU-1 | Total | M | R | SD |
|-------|------------------------|-------------|-------------|-------------|-------------|------------|------------|------|---|------|
| 1 | Search engine | 527 (51.02) | 246 (23.81) | 135 (13.07) | 88 (8.52) | 37 (3.58) | 1033 (100) | 4.1 | 1 | 1.14 |
| 2 | YouTube | 394 (38.14) | 370 (35.82) | 148 (14.33) | 78 (7.55) | 43 (4.16) | 1033 (100) | 3.96 | 2 | 1.1 |
| 3 | Google Classroom | 401 (38.82) | 283 (27.40) | 216 (20.91) | 74 (7.16) | 59 (5.71) | 1033 (100) | 3.86 | 3 | 1.18 |
| 4 | Wikipedia | 370 (35.82) | 257 (24.88) | 193 (18.68) | 116 (11.23) | 97 (9.39) | 1033 (100) | 3.67 | 4 | 1.32 |
| 5 | Messenger | 322 (31.17) | 269 (26.04) | 217 (21.01) | 123 (11.91) | 102 (9.87) | 1033 (100) | 3.57 | 5 | 1.3 |

Student and faculty user's usages of social media platforms

An analysis of which social media tools users use to access seeking information is shown in Table 5. The analyses are based on the opinions of both students and faculty users.

Table 4 shows that more faculty users utilize the search engine service for seeking information (4.16) compared to student users (4.09). The least preferred service among student users (3.52) is Messenger, while among faculty users (3.48), it is Wikipedia.

The calculated values for YouTube (16.41), Google Classroom (19.71), Wikipedia (21.94) and Messenger (13.28) are higher than the table value 9.49. This indicates a significant variation in the opinions of students and faculty users regarding the variable.

For the remaining variables such as search engine (1.04) is lower than the table value 9.49. This indicates an insignificant variation in the opinions of students and faculty users regarding the variable.

Table 5: Student and faculty users-usages of social media platforms.

| S.N. | Social media platforms | Student | | | Faculty | | | CST | |
|------|------------------------|---------|---|------|---------|---|------|-------|----|
| | | Mean | R | SD | Mean | R | SD | CV | df |
| 1 | Search engine | 4.09 | 1 | 1.15 | 4.16 | 1 | 1.1 | 1.04 | 4 |
| 2 | YouTube | 3.97 | 2 | 1.12 | 3.9 | 2 | 0.97 | 16.41 | 4 |
| 3 | Google classroom | 3.86 | 3 | 1.2 | 3.87 | 3 | 1 | 19.71 | 4 |
| 4 | Wikipedia | 3.7 | 4 | 1.33 | 3.48 | 5 | 1.2 | 21.94 | 4 |
| 5 | Messenger | 3.52 | 5 | 1.33 | 3.86 | 4 | 1.13 | 13.28 | 4 |

Student and faculty user's opinion on usage of ICT facilities

Table 6 shows the opinions of students and faculty regarding the use of ICT facilities in libraries. A majority of faculty users, 73.47%, feel comfortable obtaining information within the right time using the e-facilities compared to student users at 56.77%. The least common opinion among student users is that 8.13% do not know how to use ICT facilities, whereas only 1.36% of faculty users share this opinion. The calculated value 19.87 is higher than the table value 7.82. It shows that the variables vary significantly in the opinions of students and faculty users.

Table 6: Student and faculty user's opinion on usage of ICT facilities

| Sr. no. | Opinion | Users Category | |
|-----------------------|---|----------------|-------------|
| | | Students | Faculty |
| 1 | I feel comfortable in getting my information within the right time using the e-facilities | 503 (56.77) | 108 (73.47) |
| 2 | The retrieval of e-sources consumes much time in getting the right information I need | 220 (24.83) | 31 (21.09) |
| 3 | I am not interested in using the ICT technology. | 91 (10.27) | 6 (4.08) |
| 4 | Do not know how to use e-resources/ ICT Facilities | 72 (8.13) | 2 (1.36) |
| Total | | 886 (100) | 147 (100) |
| Chi-Square Test (CST) | | CV | 19.87 |
| | | (DF) 7.82 | 3 |

Comparing E-resources with print resources

An analysis comparing e-resources with traditional print resources has been conducted and is provided in Table 7. The analysis is based on users' opinions.

Table 7: Comparing e-resources with print resources

| S. No | Opinion | SA- 5 | Agree (A-4) | U- 3 | D- 2 | SD- 1 | Total | M | R | SD |
|-------|--|-------------|-------------|-------------|-------------|-----------|------------|------|---|------|
| 1 | It is easy and convenient to search for information | 483 (46.76) | 264 (25.56) | 158 (15.30) | 73 (7.07) | 55 (5.32) | 1033 (100) | 4.01 | 1 | 1.18 |
| 2 | Search time taken is far lesser | 394 (38.14) | 270 (26.14) | 199 (19.26) | 106 (10.26) | 64 (6.20) | 1033 (100) | 3.8 | 3 | 1.23 |
| 3 | Can be accessed at any place | 431 (41.72) | 277 (26.82) | 181 (17.52) | 83 (8.03) | 61 (5.91) | 1033 (100) | 3.9 | 2 | 1.2 |
| 4 | Provides links to other sources | 390 (37.75) | 283 (27.40) | 187 (18.10) | 96 (9.29) | 77 (7.45) | 1033 (100) | 3.79 | 4 | 1.25 |
| 5 | Users require assistance when utilizing e-resources. | 367 (35.53) | 237 (22.94) | 223 (21.59) | 115 (11.13) | 91 (8.81) | 1033 (100) | 3.65 | 5 | 1.3 |

Table 7 shows that the majority of users, at 46.76%, strongly agree that e-resources are easier and more convenient for finding information compared to traditional print resources. The least users, average Percentages 5.50 of users strongly disagree with both opinions that e-resources can be accessed at any place and that they are easier and more convenient for finding information.

Based on the above table, means were calculated and ranked. Users rank first the opinion that e-resources are easier and more convenient for finding information compared to traditional print resources (4.01). This is followed by the opinion that e-resources can be accessed at any place (3.90), e-resources require minimum time for search (3.80), e-resources provide links to other sources (3.79) and users require assistance when utilizing e-resources (3.65).

Student and faculty users-comparing E-resources with print resources

An analysis comparing e-resources with traditional print resources is shown in Table 8. The analysis is based on the opinions of both student and faculty users. Table 8 shows that the majority of student users rank e-resources as their first choice for being easier and more convenient for finding information compared to traditional print resources (4.07). The lowest ranking for student users is that they require assistance when utilizing e-resources (3.74), compared to faculty users (3.12). The calculated values for "It is easy and convenient to search for information" (21.18), "Search time taken is far lesser" (45.63), "provides links to other sources" (12.56) and "Users require assistance when utilizing e-resources" (36.35) are higher than the table value of 9.49. This indicates a significant variation in the opinions of students and faculty users regarding these variables. For the remaining variables, such as "Can be accessed at any place" (8.15), the value is lower than the table value of 9.49. This indicates an insignificant variation in the opinions of students and faculty users regarding this variable [11].

Table 8: Student and faculty users-comparing e-resources with print resources.

| S.N. | Opinion | Student | | | Faculty | | | CST | |
|------|---|---------|---|------|---------|---|------|-------|----|
| | | Mean | R | SD | Mean | R | SD | CV | df |
| 1 | It is easy and convenient to search for information | 4.07 | 1 | 1.17 | 3.68 | 3 | 1.19 | 21.18 | 4 |
| 2 | Search time taken is far lesser | 3.9 | 2 | 1.19 | 3.2 | 4 | 1.25 | 45.63 | 4 |
| 3 | Can be accessed at any place | 3.88 | 3 | 1.21 | 4.03 | 1 | 1.12 | 8.15 | 4 |

| | | | | | | | | | |
|---|--|------|---|------|------|---|------|-------|---|
| 4 | Provides links to other sources | 3.77 | 4 | 1.27 | 3.91 | 2 | 1.09 | 12.56 | 4 |
| 5 | Users require assistance when utilizing e-resources. | 3.74 | 5 | 1.29 | 3.12 | 5 | 1.25 | 36.35 | 4 |

CONCLUSION

This study delves into the influence of ICT on information-seeking behavior in pharmacy colleges in the Vidarbha region. It finds agreement among students and faculty regarding the positive impact of ICT facilities on their studies. Moreover, it underscores the profound influence of emerging information technology on shaping the information-seeking habits of both students and faculty. The study observes satisfaction among students regarding their ICT facilities. To optimize the utilization of ICT facilities, the study advocates for the implementation of information literacy programs. These programs aim to boost users' skills in utilizing ICT facilities more proficiently.

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