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10-8-2020

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G S, Gana and T, Saravanan, "Exploring the Awareness of Information Search Techniques Gained from Various Sources: A Study Among the Research Scholars of University of Kerala" (2020). *Library Philosophy and Practice (e-journal)*. 4394.

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EXPLORING THE AWARENESS OF INFORMATION SEARCH TECHNIQUES GAINED FROM VARIOUS SOURCES: A STUDY AMONG THE RESEARCH SCHOLARS OF UNIVERSITY OF KERALA

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Abstract

An exploratory approach of study is made to understand the extent and level of awareness of search techniques which is carried out among the research scholars of departments in University of Kerala. The preferred source of developing awareness in information search and access by the researchers need to identified for the quickly approach of the right documents for their research works. It is found to be very essential to conduct a study that is relevant in the present digital environment which results in the benefit of the researchers for suitably selecting the search techniques required for their topic. The study is conducted among the research scholars including both M.Phil. and Ph.D. of the ten faculties. The paper explores the level and extent of various sources where they gained awareness of search techniques. The stratified random sampling method is adopted here to collect the required data through questionnaire. The paper evidently collected data from the population of 830, where a sample of 656 Research Scholars of the ten faculties was selected for the study. The Mann-Whitney U test is applied to analyse the data set and the calculated statistical evidences did not support the formulated null hypothesis. The observed Mann-Whitney U test values are; Help Menu (U=44258.500), Online Tutorials (U=45249.000), Guidelines (U=46079.000), Class Room Trainings (U=46484.000), and Library User Programs (U=43946.000). Study enabled the authors to find an answer for the research question- Is there any significant differences between the Mean value of Gender and usage levels of sources?

Keywords: Library, Information, Search, Access, Retrieval, Research Scholar, Awareness, Search Techniques, University, Kerala

Introduction:

Research Scholars need to be conscious and aware about how quickly they can access their required information. To meet the expectation of the researchers' libraries should come in forefront to direct the young researchers to bring out their intellectual ideas by providing essential helps and services, resources valuable to their research. To bring out their intellectual research output they have to carry out the existing search techniques more efficiently. The required items to conduct a research work must be searched from various sources using these search techniques helps to improve the precision rate. Here comes the need for different techniques and options that can be used for accessing information even at a glance. The information search process sometimes may not that much an easy one. But if one have adequate knowledge level in the available sources and thereby familiarising with each and every

techniques claims that the search and access for information becomes an interesting task. The study conducted by Saravanan,T, 2020 reveals the effectiveness of various searches performed with operators for bibliographic data access and retrieval. In order to identify the researchers' awareness on various aspects Library professionals are the one who are able to conduct in this field. A study was conducted by Saravanan,T, 2018 on the awareness of e-resources among the postgraduate agriculture students and the result of the study helped librarians to narrow down their vision while designing their acquisition policies. Another study conducted by Saravanan,T. et.al. in the year 2012 was dealing with the users' internet awareness highlighting the user's behaviour on library visit and internet awareness. In the year 2011 a survey was conducted by Saravanan,T. and Gopalakrishnan about the user's awareness of E-Books and presented the results of whether internet experience influence them in gaining awareness of e-books. A study concerned with the awareness among the research scholars for obtaining their required information is highly essential to develop the intellectual knowledge and progress of the research.

Research Question: *Is there any significant differences between the Mean value of Gender and usage levels of sources?*

Research objectives: The formulated objectives for the study are as follows.

1. To identify the level and extent of various sources preferred by faculty wise respondents to gain awareness of search techniques.
2. To explore whether there are gender differences in gaining awareness of search techniques using the sources.
3. To make a few suggestions for the benefit of research scholars.

Hypothesis: Study includes the given null hypothesis.

1. [H_0] There will be no significant differences between the gender and usage levels of sources.

Methodology

The intended study is concentrated on a population of 830 research scholars from M.Phil. and Ph.D. in the departments of University of Kerala by collecting the data through a well-structured questionnaire. Stratified Random sampling was the method adopted to obtain the required data, where a sample of 656 research scholars (79%) from the ten Faculties namely Applied Science and Technology, Arts, Commerce, Education, Fine Arts, Law, Management Studies, Oriental Studies, Science and Social Sciences were selected for the study. The cross tabulation includes percent calculations as explained by Rojer Stern (2002). The observed data is analysed using IBM Statistics 26 to perform the Mann-Whitney U Test in order to test the formulated null hypothesis. A few charts related to the cross tabulations have been generated using MS Excel for better understanding of the percent distributions.

The study enhances their extent of using various sources for gaining awareness about search techniques for performing efficient search and access from various digital sources that are available to the research community. The present study doesn't cover the discussions related to any specific search operators. Five such identified sources were used in the study namely Help Menu, Online Tutorials, Guidelines, Classroom Trainings and Library User Programs. Three response categories were used to identify their level and extent of use of these sources: Seldom, Sometimes and Often. Althouse et.al. (2016) submitted a report in The Statistician's Page with suitable examples for the choice of presenting row percentage in the descriptive statistics of the pivot table.

Table 1: Search Techniques Awareness Gained from Help Menu

<i>Faculty*Gender* Usage Levels</i>	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
<i>Applied Science & Technology</i>	3	14	4	16	45	7	21	68
<i>Arts</i>	1	6	7	5	14	17	14	36
<i>Commerce</i>	3	8	2	6	11	4	13	21
<i>Education</i>	1	2	6	1	6	3	9	10
<i>Fine Arts</i>	1	2	0	0	2	3	3	5
<i>Law</i>	1	2	0	0	2	0	3	2
<i>Management Studies</i>	3	5	3	3	8	2	11	13
<i>Oriental Studies</i>	5	16	6	11	26	10	27	47
<i>Science</i>	15	41	11	72	84	41	67	197
<i>Social Sciences</i>	14	17	9	14	21	14	40	49
<i>Faculty Total</i>	47	113	48	128	219	101	208	448
<i>Total</i>	47	113	48	128	219	101	208	448

Table 1.1: Search Techniques Awareness Gained from Help Menu - Row%

<i>Faculty*Gender* Usage Levels</i>	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
<i>Applied Science & Technology</i>	14.29%	66.67%	19.05%	23.53%	66.18%	10.29%	100.00%	100.00%
<i>Arts</i>	7.14%	42.86%	50.00%	13.89%	38.89%	47.22%	100.00%	100.00%
<i>Commerce</i>	23.08%	61.54%	15.38%	28.57%	52.38%	19.05%	100.00%	100.00%
<i>Education</i>	11.11%	22.22%	66.67%	10.00%	60.00%	30.00%	100.00%	100.00%
<i>Fine Arts</i>	33.33%	66.67%	0.00%	0.00%	40.00%	60.00%	100.00%	100.00%
<i>Law</i>	33.33%	66.67%	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%
<i>Management Studies</i>	27.27%	45.45%	27.27%	23.08%	61.54%	15.38%	100.00%	100.00%
<i>Oriental Studies</i>	18.52%	59.26%	22.22%	23.40%	55.32%	21.28%	100.00%	100.00%
<i>Science</i>	22.39%	61.19%	16.42%	36.55%	42.64%	20.81%	100.00%	100.00%
<i>Social Sciences</i>	35.00%	42.50%	22.50%	28.57%	42.86%	28.57%	100.00%	100.00%
<i>Faculty Total</i>	22.60%	54.33%	23.08%	28.57%	48.89%	22.54%	100.00%	100.00%
<i>Total</i>	22.60%	54.33%	23.08%	28.57%	48.89%	22.54%	100.00%	100.00%

Table-1.2: Mann-Whitney Test

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Awareness Gained From Help Menu	Male	208	339.72	70661.50
	Female	448	323.29	144834.50
	Total	656		
Test Statistics ^a				
		Awareness Gained From Help Menu		
Mann-Whitney U		44258.500		
Wilcoxon W		144834.500		
Z		-1.127		
Asymp. Sig. (2-tailed)		.260		
a. Grouping Variable: Gender				

Table-1 & 1.1 depict the frequency distributions and percent calculations for the faculty wise research scholars' responses across the gender. Further the cross tabulation shows the Help menu usage levels, which are behind the respondents' awareness of search techniques. In Arts faculty, highest scores (50% & 47.22%) are found for the option *Often*, which falls in both the gender group. The Faculties Applied Science & Technology (66.67% & 66.18%), Commerce (61.54% & 52.38%), Law (66.67% & 100%), Management Studies (45.45% & 61.54%), Oriental Studies (59.26% & 55.32%), Science (61.19% & 42.64%) and Social Sciences (42.50% & 42.86%) show the highest score for *Sometimes* in both the gender group. In Education faculty, highest score (66.67%) is found for the option *Often* in the Male group while the highest score (60%) is identified for the option *Sometimes* in the Female group. In Fine Arts faculty, highest score (66.67%) is found for the option *Sometimes* in the Male group while the highest score (60%) is identified for the option *Often* in the Female group. Figure-1 shows the percent distributions of faculty wise respondents across the gender and Help Menu usage levels. Table-1.2 shows the Mann-Whitney Test and Test Statistics results. The mean rank for the gender male is found higher (339.72) than the gender female (323.29). The traced significance value is 0.260. Hence, we therefore have no significant evidence to reject the null hypothesis at 5% Significance level. The results indicate that the gender has not reflected any differences for the source help menu.

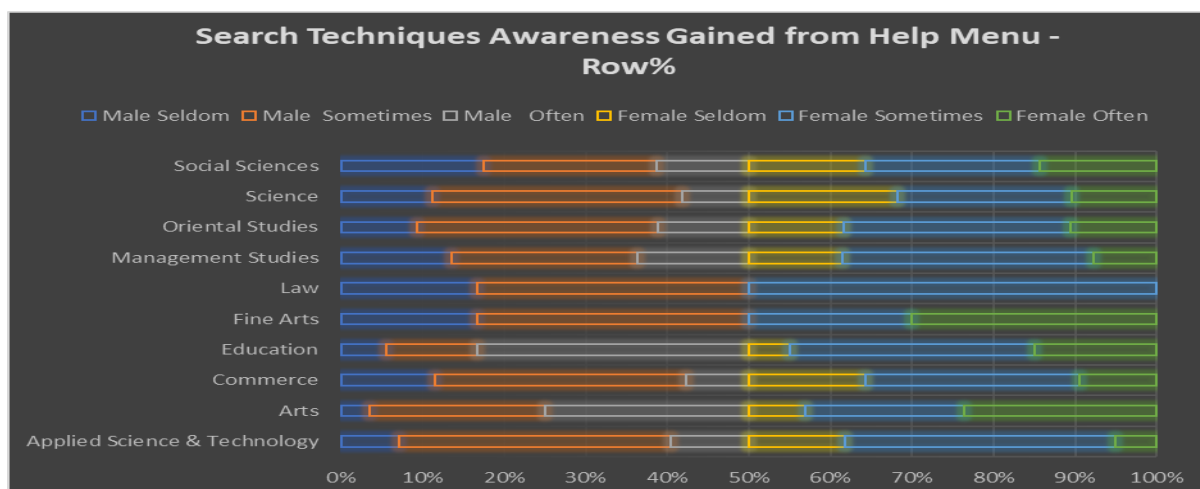


Figure-1: Search Techniques Awareness Gained from Help Menu-Row%

Table 2: Search Techniques Awareness Gained from Online Tutorials

Faculty*Gender* Usage Levels	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
Applied Science & Technology	5	9	7	17	29	22	21	68
Arts	1	3	10	3	17	16	14	36
Commerce	3	10	0	2	11	8	13	21
Education	2	4	3	5	4	1	9	10
Fine Arts	1	1	1	4	0	1	3	5
Law	0	2	1	1	0	1	3	2
Management Studies	3	4	4	1	8	4	11	13
Oriental Studies	7	9	11	10	22	15	27	47
Science	12	35	20	36	98	63	67	197
Social Sciences	4	21	15	10	25	14	40	49
Faculty Total	38	98	72	89	214	145	208	448
Total	38	98	72	89	214	145	208	448

Table 2.1: Search Techniques Awareness Gained from Online Tutorials - Row%

<i>Faculty*Gender* Usage Levels</i>	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
<i>Applied Science & Technology</i>	23.81%	42.86%	33.33%	25.00%	42.65%	32.35%	100.00%	100.00%
<i>Arts</i>	7.14%	21.43%	71.43%	8.33%	47.22%	44.44%	100.00%	100.00%
<i>Commerce</i>	23.08%	76.92%	0.00%	9.52%	52.38%	38.10%	100.00%	100.00%
<i>Education</i>	22.22%	44.44%	33.33%	50.00%	40.00%	10.00%	100.00%	100.00%
<i>Fine Arts</i>	33.33%	33.33%	33.33%	80.00%	0.00%	20.00%	100.00%	100.00%
<i>Law</i>	0.00%	66.67%	33.33%	50.00%	0.00%	50.00%	100.00%	100.00%
<i>Management Studies</i>	27.27%	36.36%	36.36%	7.69%	61.54%	30.77%	100.00%	100.00%
<i>Oriental Studies</i>	25.93%	33.33%	40.74%	21.28%	46.81%	31.91%	100.00%	100.00%
<i>Science</i>	17.91%	52.24%	29.85%	18.27%	49.75%	31.98%	100.00%	100.00%
<i>Social Sciences</i>	10.00%	52.50%	37.50%	20.41%	51.02%	28.57%	100.00%	100.00%
<i>Faculty Total</i>	18.27%	47.12%	34.62%	19.87%	47.77%	32.37%	100.00%	100.00%
<i>Total</i>	18.27%	47.12%	34.62%	19.87%	47.77%	32.37%	100.00%	100.00%

Tables-2 & 2.1 expounds the frequency distributions and percent calculations for the faculty wise research scholars' responses across the gender. Further the cross tabulation shows the Online Tutorials usage levels, which are behind the respondents' awareness of search techniques. The Faculties Applied Science & Technology (42.86% & 42.65%), Commerce (76.92% & 52.38%), Management Studies (36.36% & 61.54%), Science (52.24% & 49.75%) and Social Sciences (52.50% & 51.02%) show the highest score for *Sometimes* in both the gender group. In Arts faculty, highest score (71.43%) is found for the option *Often* in the Male group while the highest score (47.22%) is identified for the option *Sometimes* in the Female group. In Education faculty, highest score (44.44%) is found for the option *Sometimes* in the Male group while the highest score (50%) is identified for the option *Seldom* in the Female group. In Fine Arts faculty, highest equal score (33.33%) is found for all the options in the Male group while the highest score (80%) is identified for the option *Seldom* in the Female group. In Law faculty, highest score (66.67%) is found for the option *Sometimes* in the Male group while the highest equal score (50%) is identified for the options *Seldom* and *Often* in the Female group. In Oriental Studies faculty, highest score (40.74%) is found for the option *Often* in the Male group while the highest score (46.81%) is identified for the option *Sometimes* in the Female group. Figure-2 shows the percent distributions of faculty wise respondents across the gender and Online Tutorials usage levels. Table-2.2 shows the Mann-Whitney Test and Test Statistics results. The mean rank for the gender male is found higher (334.96) than the gender female (325.50). The traced significance value is 0.519. Hence, we therefore have no significant evidence to reject the null hypothesis at 5% Significance level. The results indicate that the gender has not reflected any differences for the source online tutorials.

Table-2.2: Mann-Whitney Test

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Awareness Gained From Online Tutorials	Male	208	334.96	69671.00
	Female	448	325.50	145825.00
	Total	656		

Test Statistics ^a	
	Awareness Gained From Online Tutorials
Mann-Whitney U	45249.000
Wilcoxon W	145825.000
Z	-.645
Asymp. Sig. (2-tailed)	.519
a. Grouping Variable: Gender	

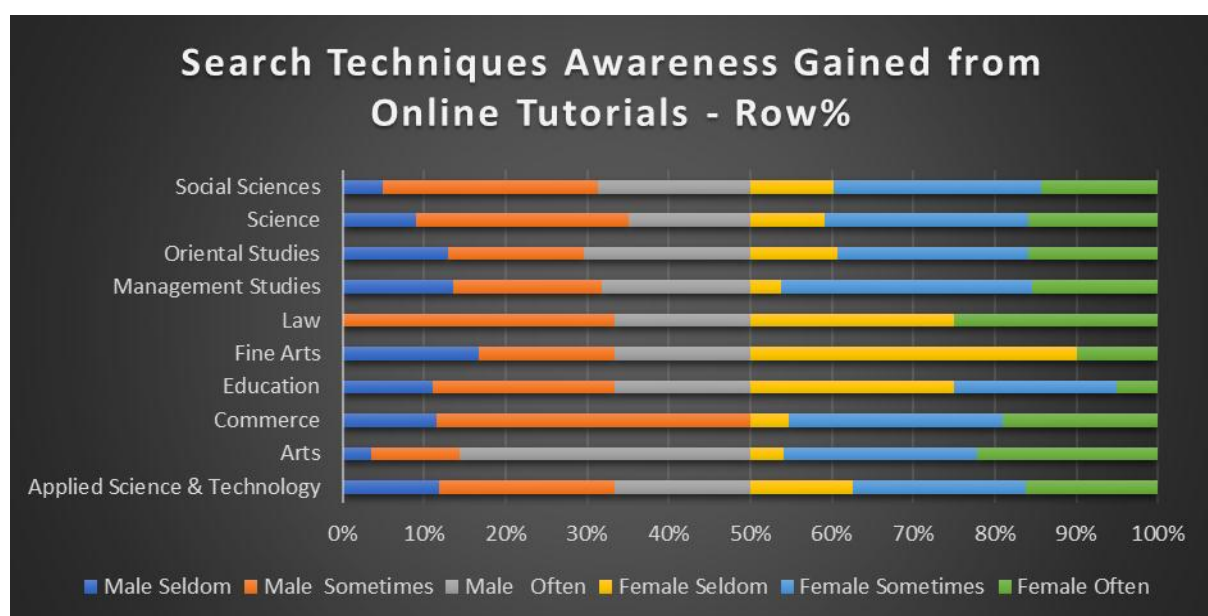


Figure-2: Search Techniques Awareness Gained from Online Tutorials - Row%

Table 3: Search Techniques Awareness Gained from Guidelines

Faculty*Gender* Usage Levels	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
<i>Applied Science & Technology</i>	6	11	4	12	44	12	21	68
<i>Arts</i>	1	5	8	1	12	23	14	36
<i>Commerce</i>	4	6	3	7	10	4	13	21
<i>Education</i>	2	2	5	5	4	1	9	10
<i>Fine Arts</i>	0	3	0	3	2	0	3	5
<i>Law</i>	0	2	1	1	1	0	3	2
<i>Management Studies</i>	2	5	4	2	6	5	11	13
<i>Oriental Studies</i>	5	15	7	10	25	12	27	47
<i>Science</i>	14	31	22	42	86	69	67	197
<i>Social Sciences</i>	8	20	12	11	25	13	40	49
<i>Faculty Total</i>	42	100	66	94	215	139	208	448
<i>Total</i>	42	100	66	94	215	139	208	448

Table 3.1: Search Techniques Awareness Gained from Guidelines - Row%

<i>Faculty*Gender* Usage Levels</i>	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
<i>Applied Science & Technology</i>	28.57%	52.38%	19.05%	17.65%	64.71%	17.65%	100.00%	100.00%
<i>Arts</i>	7.14%	35.71%	57.14%	2.78%	33.33%	63.89%	100.00%	100.00%
<i>Commerce</i>	30.77%	46.15%	23.08%	33.33%	47.62%	19.05%	100.00%	100.00%
<i>Education</i>	22.22%	22.22%	55.56%	50.00%	40.00%	10.00%	100.00%	100.00%
<i>Fine Arts</i>	0.00%	100.00%	0.00%	60.00%	40.00%	0.00%	100.00%	100.00%
<i>Law</i>	0.00%	66.67%	33.33%	50.00%	50.00%	0.00%	100.00%	100.00%
<i>Management Studies</i>	18.18%	45.45%	36.36%	15.38%	46.15%	38.46%	100.00%	100.00%
<i>Oriental Studies</i>	18.52%	55.56%	25.93%	21.28%	53.19%	25.53%	100.00%	100.00%
<i>Science</i>	20.90%	46.27%	32.84%	21.32%	43.65%	35.03%	100.00%	100.00%
<i>Social Sciences</i>	20.00%	50.00%	30.00%	22.45%	51.02%	26.53%	100.00%	100.00%
<i>Faculty Total</i>	20.19%	48.08%	31.73%	20.98%	47.99%	31.03%	100.00%	100.00%
<i>Total</i>	20.19%	48.08%	31.73%	20.98%	47.99%	31.03%	100.00%	100.00%

Tables-3 & 3.1 presents the frequency distributions and percent calculations for the faculty wise research scholars' responses across the gender. Further the cross tabulation shows the Guidelines usage levels, which are behind the respondents' awareness of search techniques. The Faculties Applied Science & Technology (52.38% & 64.71%), Commerce (46.15% & 47.62%), Law (66.67% & 50% (*Seldom too*)), Management Studies(45.45% & 46.15%), Oriental Studies (55.56% & 53.19%), Science (46.27% & 43.65%) and Social Sciences (50% & 51.02%) show the highest score for *Sometimes* in both the gender group. In Arts faculty, highest score (57.14%) is found for the option *Often* in both the gender group. In Education faculty, highest score is found for the option *Often* in the Male group while the highest score (63.89%) is identified for the option *Seldom* in the Female group. In Fine Arts faculty, highest score (100%) is found for the option *Sometimes* in the Male group while the highest score (60%) is identified for the option *Seldom* in the Female group. Figure-3 shows the percent distributions of faculty wise respondents across the gender and Guidelines usage levels. Table-3.2 shows the Mann-Whitney Test and Test Statistics results. The mean rank for the gender male is found higher (330.97) than the gender female (327.35). The traced significance value is 0.805. Hence, we therefore have no significant evidence to reject the null hypothesis at 5% Significance level. The results indicate that the gender has not reflected any differences for the source Guidelines.

Table-3.2: Mann-Whitney Test

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Awareness Gained From Guidelines	Male	208	330.97	68841.00
	Female	448	327.35	146655.00
	Total	656		
Test Statistics ^a				
	Awareness Gained From Guidelines			
Mann-Whitney U	46079.000			
Wilcoxon W	146655.000			
Z	-.246			
Asymp. Sig. (2-tailed)	.805			
a. Grouping Variable: Gender				

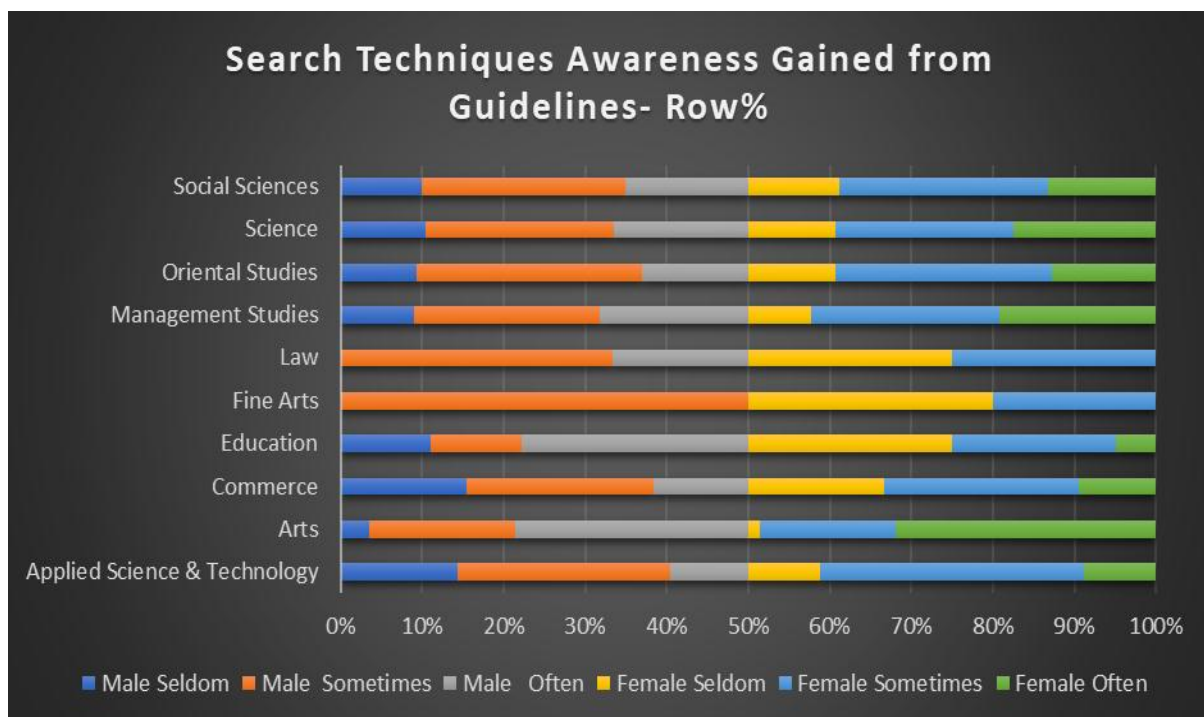


Figure-3: Search Techniques Awareness Gained from Guidelines - Row%

Table 4: Search Techniques Awareness Gained from Classroom Trainings

<i>Faculty*Gender* Usage Levels</i>	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
<i>Applied Science & Technology</i>	5	12	4	16	33	19	21	68
<i>Arts</i>	0	9	5	4	15	17	14	36
<i>Commerce</i>	4	7	2	1	15	5	13	21
<i>Education</i>	1	6	2	3	6	1	9	10
<i>Fine Arts</i>	0	2	1	1	0	4	3	5
<i>Law</i>	0	2	1	1	1	0	3	2
<i>Management Studies</i>	2	5	4	2	7	4	11	13
<i>Oriental Studies</i>	8	11	8	12	19	16	27	47
<i>Science</i>	15	32	20	47	101	49	67	197
<i>Social Sciences</i>	10	20	10	17	19	13	40	49
<i>Faculty Total</i>	45	106	57	104	216	128	208	448
<i>Total</i>	45	106	57	104	216	128	208	448

Table 4.1: Search Techniques Awareness Gained from Classroom Trainings - Row%

<i>Faculty*Gender* Usage Levels</i>	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
<i>Applied Science & Technology</i>	23.81%	57.14%	19.05%	23.53%	48.53%	27.94%	100.00%	100.00%
<i>Arts</i>	0.00%	64.29%	35.71%	11.11%	41.67%	47.22%	100.00%	100.00%
<i>Commerce</i>	30.77%	53.85%	15.38%	4.76%	71.43%	23.81%	100.00%	100.00%
<i>Education</i>	11.11%	66.67%	22.22%	30.00%	60.00%	10.00%	100.00%	100.00%
<i>Fine Arts</i>	0.00%	66.67%	33.33%	20.00%	0.00%	80.00%	100.00%	100.00%
<i>Law</i>	0.00%	66.67%	33.33%	50.00%	50.00%	0.00%	100.00%	100.00%
<i>Management Studies</i>	18.18%	45.45%	36.36%	15.38%	53.85%	30.77%	100.00%	100.00%
<i>Oriental Studies</i>	29.63%	40.74%	29.63%	25.53%	40.43%	34.04%	100.00%	100.00%
<i>Science</i>	22.39%	47.76%	29.85%	23.86%	51.27%	24.87%	100.00%	100.00%
<i>Social Sciences</i>	25.00%	50.00%	25.00%	34.69%	38.78%	26.53%	100.00%	100.00%
<i>Faculty Total</i>	21.63%	50.96%	27.40%	23.21%	48.21%	28.57%	100.00%	100.00%
<i>Total</i>	21.63%	50.96%	27.40%	23.21%	48.21%	28.57%	100.00%	100.00%

Tables-4 & 4.1 depicts the frequency distributions and percent calculations for the faculty wise research scholars' responses across the gender. Further the cross tabulation shows the Classroom Trainings usage levels, which are behind the respondents' awareness of search techniques. The Faculties Applied Science & Technology (57.14% & 48.53%), Commerce (53.85% & 71.43%), Education (66.67% & 60%), Law (66.67% & 50%), Management Studies (45.45% & 53.85%), Oriental Studies (40.74% & 40.43%), Science (47.76% & 51.27%) and Social Sciences (50% & 38.78%) show the highest score for *Sometimes* in both the gender group. In Arts faculty, highest score (64.29%) is found for the option *Sometimes* in the Male group while the highest score (47.22%) is identified for the option *Often* in the Female group. In Fine Arts faculty, highest score (64.29%) is found for the option *Sometimes* in the Male group while the highest score (80%) is identified for the option *Often* in the Female group. Figure-4 shows the percent distributions of faculty wise respondents across the gender and Classroom Trainings usage levels. Table-4.2 shows the Mann-Whitney Test and Test Statistics results. The mean rank for the gender male is found higher (329.02) than the gender female (328.26). The traced significance value is 0.959. Hence, we therefore have no significant evidence to reject the null hypothesis at 5% Significance level. The results indicate that the gender has not reflected any differences for the source classroom trainings.

Table-4.2: Mann-Whitney Test

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Awareness Gained From Classroom Trainings	Male	208	329.02	68436.00
	Female	448	328.26	147060.00
	Total	656		

Test Statistics ^a	
	Awareness Gained From Classroom Trainings
Mann-Whitney U	46484.000
Wilcoxon W	147060.000
Z	-.052
Asymp. Sig. (2-tailed)	.959
a. Grouping Variable: Gender	

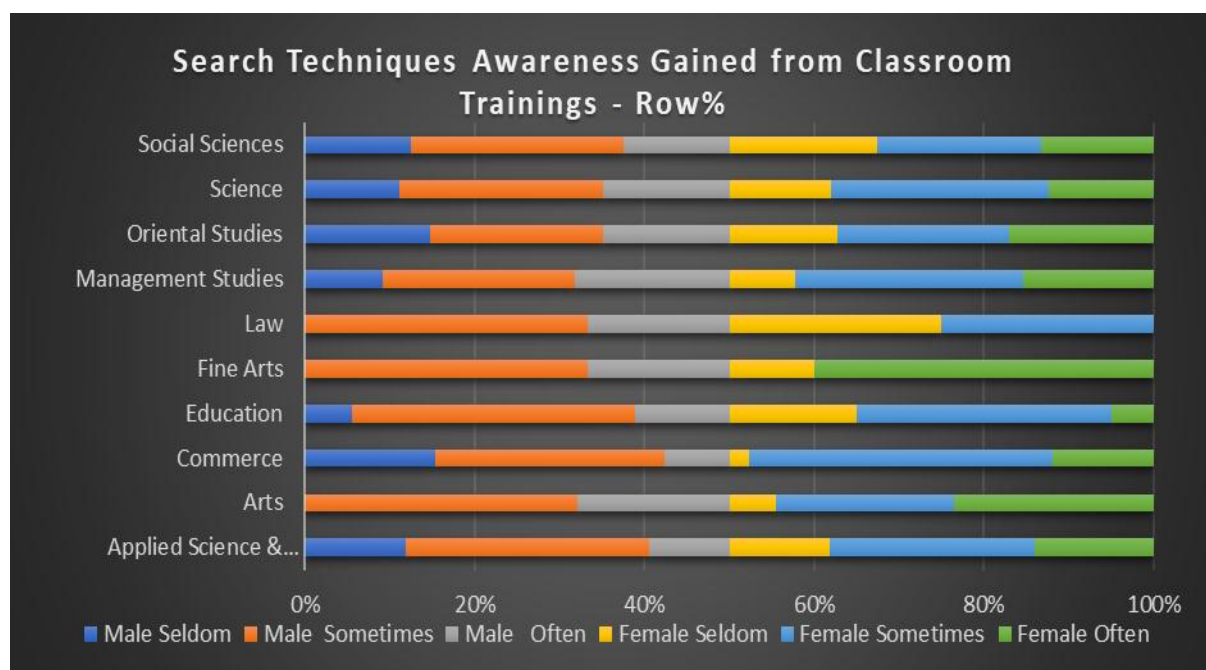


Figure-4: Search Techniques Awareness Gained from Classroom Trainings - Row%

Table 5: Search Techniques Awareness Gained from Library User Programs

Faculty*Gender* Usage Levels	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
Applied Science & Technology	5	13	3	24	37	7	21	68
Arts	1	7	6	4	13	19	14	36
Commerce	5	7	1	3	12	6	13	21
Education	1	5	3	4	5	1	9	10
Fine Arts	1	2	0	3	2	0	3	5
Law	1	1	1	0	2	0	3	2
Management Studies	2	4	5	1	8	4	11	13
Oriental Studies	8	12	7	12	26	9	27	47
Science	18	33	16	77	75	45	67	197
Social Sciences	15	17	8	19	23	7	40	49
Faculty Total	57	101	50	147	203	98	208	448
Total	57	101	50	147	203	98	208	448

Table 5.1: Search Techniques Awareness Gained from Library User Programs - Row%

<i>Faculty*Gender* Usage Levels</i>	Male			Female			Total	
	Seldom	Sometimes	Often	Seldom	Sometimes	Often	Male	Female
<i>Applied Science & Technology</i>	23.81%	61.90%	14.29%	35.29%	54.41%	10.29%	100.00%	100.00%
<i>Arts</i>	7.14%	50.00%	42.86%	11.11%	36.11%	52.78%	100.00%	100.00%
<i>Commerce</i>	38.46%	53.85%	7.69%	14.29%	57.14%	28.57%	100.00%	100.00%
<i>Education</i>	11.11%	55.56%	33.33%	40.00%	50.00%	10.00%	100.00%	100.00%
<i>Fine Arts</i>	33.33%	66.67%	0.00%	60.00%	40.00%	0.00%	100.00%	100.00%
<i>Law</i>	33.33%	33.33%	33.33%	0.00%	100.00%	0.00%	100.00%	100.00%
<i>Management Studies</i>	18.18%	36.36%	45.45%	7.69%	61.54%	30.77%	100.00%	100.00%
<i>Oriental Studies</i>	29.63%	44.44%	25.93%	25.53%	55.32%	19.15%	100.00%	100.00%
<i>Science</i>	26.87%	49.25%	23.88%	39.09%	38.07%	22.84%	100.00%	100.00%
<i>Social Sciences</i>	37.50%	42.50%	20.00%	38.78%	46.94%	14.29%	100.00%	100.00%
<i>Faculty Total</i>	27.40%	48.56%	24.04%	32.81%	45.31%	21.88%	100.00%	100.00%
<i>Total</i>	27.40%	48.56%	24.04%	32.81%	45.31%	21.88%	100.00%	100.00%

Tables-5 & 5.1 explores the frequency distributions and percent calculations for the faculty wise research scholars' responses across the gender. Further the cross tabulation shows the Library User Programs, which are behind the respondents' awareness of search techniques. The Faculties Applied Science & Technology (61.90% & 54.41%), Commerce (53.85% & 57.14%), Education (55.56% & 50%), Law (33.33% & 100%), Oriental Studies (44.44% & 55.32%), and Social Sciences (42.50% & 46.94%) show the highest score for *Sometimes* in both the gender group. In Arts faculty, highest score (50%) is found for the option *Sometimes* in the Male group while the highest score (52.78%) is identified for the option *Often* in the Female group. In Fine Arts faculty, highest score (66.67%) is found for the option *Sometimes* in the Male group while the highest score (60%) is identified for the option *Seldom* in the Female group. In Management Studies faculty, highest score (45.45%) is found for the option *Often* in the Male group while the highest score (61.54%) is identified for the option *Sometimes* in the Female group. In Science faculty, highest score (49.25%) is found for the option *Sometimes* in the Male group while the highest score (39.09%) is identified for the option *Seldom* in the Female group. Figure-5 shows the percent distributions of faculty wise respondents across the gender and Library User Programs usage levels. Table-5.2 shows the Mann-Whitney Test and Test Statistics results. The mean rank for the gender male is found higher (341.22) than the gender female (322.59). The traced significance value is 0.206. Hence, we therefore have no significant evidence to reject the null hypothesis at 5% Significance level. The results indicate that the gender has not reflected any differences for the source Library user programs.

Table-5.2: Mann-Whitney Test

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Awareness Gained From Library User Programs	Male	208	341.22	70974.00
	Female	448	322.59	144522.00
	Total	656		

Test Statistics ^a	
	Awareness Gained From Library User Programs
Mann-Whitney U	43946.000
Wilcoxon W	144522.000
Z	-1.264
Asymp. Sig. (2-tailed)	.206
a. Grouping Variable: Gender	

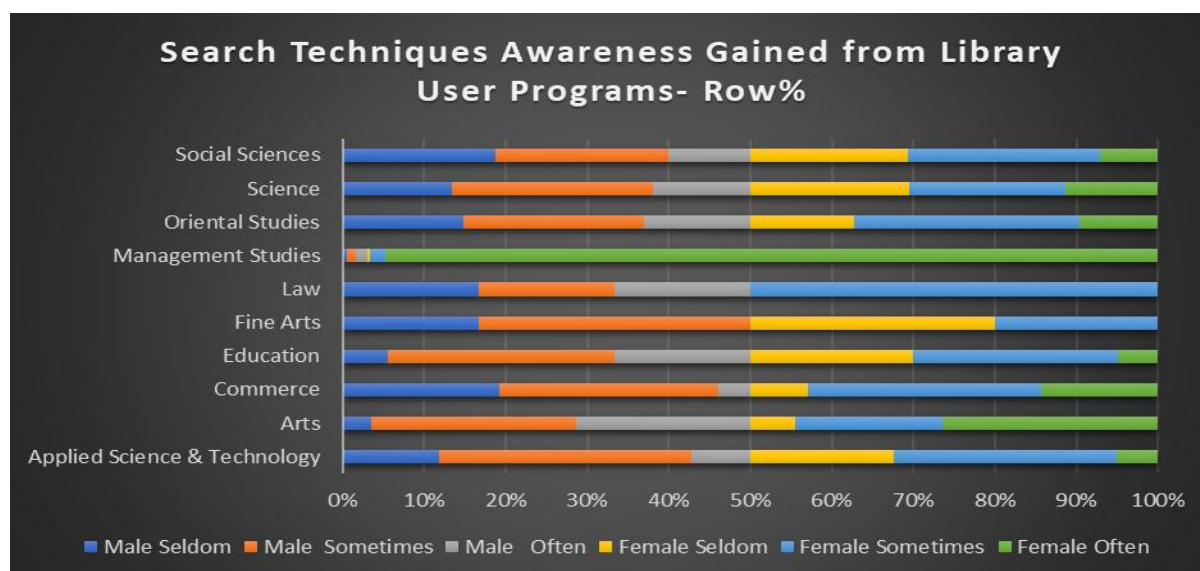


Figure 5: Search Techniques Awareness Gained from Library User Programs- Row%

Table-6: Hypothesis Status

Table No.	Null Hypothesis	Sig.	Status
1	Awareness Gained from Help Menu: Gender has equal probabilities.	.260	Accepted
2	Awareness Gained from Online Tutorials: Gender has equal probabilities.	.519	Accepted
3	Awareness Gained from Guidelines: Gender has equal probabilities.	.805	Accepted
4	Awareness Gained from Classroom Trainings: Gender has equal probabilities.	.959	Accepted
5	Awareness Gained from Library User Programs: Gender has equal probabilities.	.206	Accepted

Findings and Conclusions:

The present study has captured enough details from the respondents and the outcomes have been discussed as shown here.

Search Techniques Awareness Gained from Help Menu:

It could be noted that the mean rank for the gender male is found higher (339.72) than the gender female (323.29). The Mann-Whitney U test statistics results do not reflect the evidences to confirm the significance (Sig. = .260), which let us to accept the formulated *null hypothesis*. It is concluded that there would be no differences traced among the gender and usage levels of the source.

Search Techniques Awareness Gained from Online Tutorials:

It is observed that the mean rank for the gender male is found higher (334.96) than the gender female (325.50). The Mann-Whitney U test statistics results do not reflect the evidences to confirm the significance (Sig. = .519), which let us to accept the formulated *null hypothesis*. It is concluded that there would be no differences traced among the gender and usage levels of this source.

Search Techniques Awareness Gained from Guidelines:

Study reveals that the mean rank for the gender male is found higher (330.97) than the gender female (327.35). The Mann-Whitney U test statistics results do not reflect the evidences to confirm the significance (Sig. = .805), which let us to accept the formulated *null hypothesis*. It is concluded that there would be no differences traced among the gender and usage levels of this source.

Search Techniques Awareness Gained from Classroom Trainings:

The mean rank for the gender male is found higher (329.02) than the gender female (328.26). The Mann-Whitney U test statistics results do not reflect the evidences to confirm the significance (Sig. = .959), which let us to accept the formulated *null hypothesis*. It is concluded that there would be no differences traced among the gender and usage levels of this source.

Search Techniques Awareness Gained from Library User Programs:

The observed mean rank for the gender male is found higher (341.22) than the gender female (322.59). The Mann-Whitney U test statistics results do not reflect the evidences to confirm the significance (Sig. = .206), which let us to accept the formulated *null hypothesis*. It is concluded that there would be no differences traced among the gender and usage levels of this source. Table-6 explains the framed null hypothesis status. Further, study didn't let the authors to give the positive answer 'Yes' for the formulated research question as the obtained statistical evidences were not favoured them.

Suggestions:

Study let the authors to make a few suggestions as discussed here. Majority of the respondents expressed that they have accessed the said sources '*Sometimes*' to gain enough awareness of search techniques. A reasonable number of respondents preferred '*Often*'. The choice '*seldom*' is indicated by notable number of respondents. The results don't show a good sign that won't help the research scholars to retrieve the required data from the sources. Mann-Whitney U test results not reflected the significance among the gender. Frequent access of the said resources is essential to gain awareness of search techniques so as the techniques can be applied while searching the data (Saravanan,T, 2020). The present status of the response rate needs to be inclined for the choice '*Often*'.

Further Research:

The respondents' access choices of the various sources can be correlated with their data retrieval skills to trace the linear relationship between the awareness of search

techniques and data retrieval skills. A good research design may help the LIS Researchers to take the research into the next level.

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