

# Information Sources & Processing of Anna University-A Study

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## Abstract

*This paper basically aims at finding out the information seeking patterns of the two main groups of users namely, Faculty and Students. Apart from studying the usage pattern of these two broad groups, the study also aimed at finding out whether there are any differences in the usage pattern among the different categories of Students (UGs, PGs, and Researcher) and the different categories of Faculty members (Professors, Associate Professors and Assistant Professors). The total number of students at this University is 9854 and the respondents are 986; Faculty members are 449 and the respondents are 80. The specific objectives are to identify the use pattern of the different types of user. To achieve these objectives, the Researcher has conducted a questionnaire survey. The questionnaire ascertains the status of the user, frequency of library visits, browse pattern, information access and use pattern of information sources, problems and challenges to identify information resources of the Library.*

**Keywords:** Academic Libraries, Higher Education, Pattern, Questionnaire, Users

## 1. Introduction

The facilities at the Anna University Library are used mainly by the faculty members and students of the University. It is also used by students and faculty members from neighbouring colleges and institutes, and some government departments. They form a very small percentage of the total users and hence, the paper focused only on the two major types of users, namely, Students and Faculty of Anna University, Chennai.

### Faculty includes

- ❖ Professors
- ❖ Associate Professors or Readers
- ❖ Assistant Professors or Lecturers

### Student category includes

- ❖ Research Scholars
- ❖ Postgraduates (PG)
- ❖ Undergraduates (UG)

## 2. Objectives

- ❖ Use Pattern of Information Sources – Faculty vs. Students
- ❖ Use Pattern of Information Sources -by Types of Students
- ❖ Use Pattern of Information Sources by Types of Faculty
- ❖ Information Sources vs. Usage Purposes.



## 2.1 Use Pattern of Information Sources

The users of the Library have different purposes for coming to the Library. Apart from academic purpose, they use it for research work, course work, and preparation for competitive examination appearances or to keep themselves up to date. To achieve the

above objectives, they use standards, core journals, general periodicals, textbooks, encyclopedias/dictionaries, theses/reports, internet/web resources, CD-ROM databases, online databases, e-journals or e-books.

**Table-1**

**Table 1 Sources of Information Used vs. User Types and Variables**

		Information Sources										
		Standards	Core Journ-als	General Periodi-cals	Text books	Encyclope-dias/ Dictionaries	Theses/ Reports	Internet/ Web Resources	CD-ROM Databases	Online Data-bases	E-journals	E-books
User Type	Student	629	688	645	889	707	645	791	508	540	698	830
	Faculty	53	68	54	76	64	70	68	46	53	74	72
Faculty	Assistant Professor	18	28	23	30	25	26	26	16	14	29	27
	Associate Professor	19	20	16	23	21	22	21	16	19	22	23
	Professor	16	20	15	23	18	22	21	14	20	23	22
Student	UG	328	355	349	491	402	323	416	263	274	370	457
	PG	177	187	169	235	168	181	214	150	157	182	213
	Research Scholar	124	146	127	163	137	141	161	95	109	146	160
Frequency	Often	405	451	434	582	469	428	514	346	360	445	547
	Not very often	277	305	265	383	302	287	345	208	233	327	355
Time spent	1 hour	416	468	429	622	472	436	551	333	356	484	570
	>1hour	266	288	270	343	299	279	308	221	237	288	332

The graphical presentations given below, Figure 1 shows the usage level of different sources of information and Figure 2 displays the different purposes for which they were used.

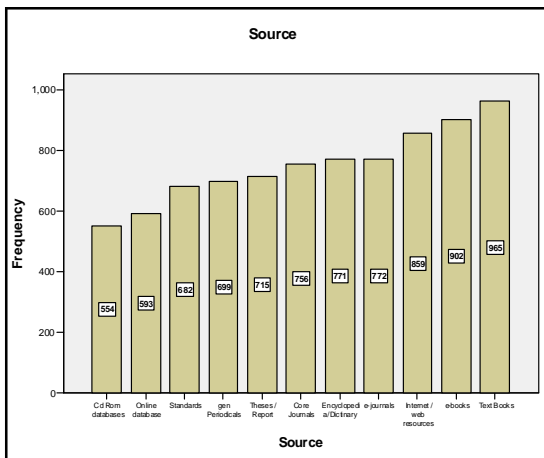


Figure 1: Usage Levels of Different Sources of

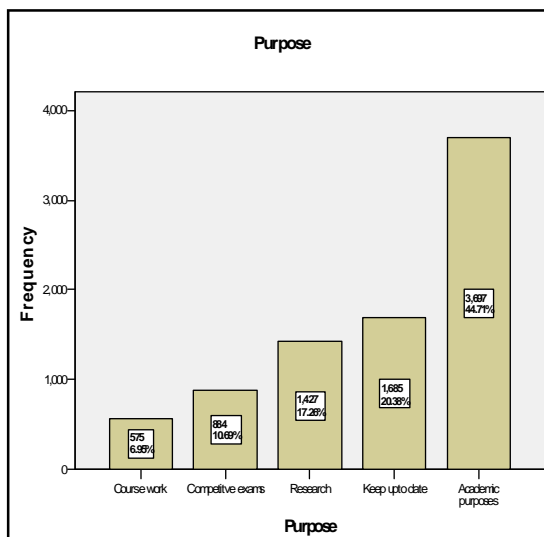
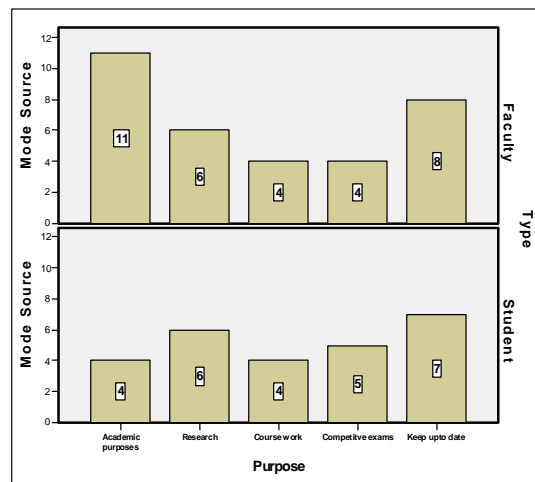


Figure 2: Purposes of Library Use

Textbooks are the maximum used source of information followed by e-books. The least used source is CD–ROMs and online databases. Academic purposes are the main purpose for which the Library is used. A close second is the desire to keep up to date. Course work seems to be the least of the reasons for which the respondents visit the Library.

### 2.1 Use Pattern of Information Sources – Faculty vs. Students



(Mode Source 1 = Standards , 2=Core Journals , 3 = Gen Periodicals , 4 = Textbooks , 5 = Encyclopedias/ Dictionaries , 6 = Thesis/Report , 7 = Internet /web Resources , 8 = CD-ROM databases , 9 = Online databases , 10 = e-journals , 11 = e-books)

Figure 3: Information Sources Used for Different Purposes – Faculty vs. Students

For academic purposes, Students mainly use textbooks (4) while the Faculty prefers e-journals (11). As far as research is concerned, both the Students and Faculty use theses/reports (6) and for course work, both use textbooks. To keep oneself up to date, while the Students rely on internet/web resources (7), the Faculty prefers CD-ROM databases (Figure 3).

### 2.2 Use Pattern of Information Sources by Types of Students

Among the different types of Students, it is seen that all of them use textbooks (4) for academic purposes. While UGs and PGs used theses/reports (6) for research purposes, e-journals (10) were the

main source for Research Scholars. As far as the course work is concerned, UGs prefer theses/reports (6), PGs prefer textbooks (4) and Research Scholars prefer e-journals (11). There is no difference in the usage pattern of information sources between the three different types of Students for use in competitive exams (5-encyclopedias/dictionaries) or for keeping up to date (7- internet/web resources).

(Mode Source 1 = Standards, 2=Core Journals, 3 = Gen Periodicals, 4 = Textbooks, 5 = Encyclopedias/ Dictionaries, 6 = Thesis/Report, 7 = Internet /web Resources, 8 = CD-ROM databases, 9 = Online databases, 10 = e-journals, 11 = e-books)

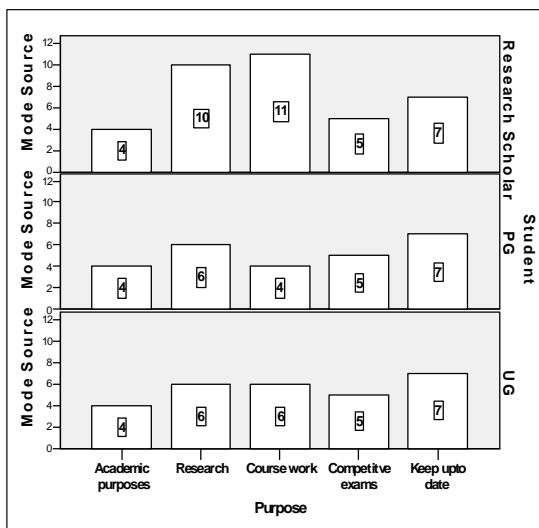


Figure 4: Information Sources Used for Different Purposes by Types of Students

2.3 Use Pattern of Information Sources by Types of Faculty

A difference is found in the information sources used by different types of Faculty for different purposes illustrated in Figure 5 With regard to academic purposes, Assistant professors and Associate Professors use e-journals (11) while Professors use

textbooks (4). As far as research is concerned, while Associate Professors and Professors use theses/ reports (6), Professors use core journals (2). In the course work, both Assistant Professors and Associate Professors use textbooks (4) while Professors use standards. As far as competitive exams are concerned, all the three groups had said that textbooks (4) are used. In order to keep up to date, while Assistant Professors and Professors use theses/ reports (6), Associate professors rely on CD-ROM databases (8). Further, there is an association between the preference for a particular source of information and the type of the respondent, their frequency of visit to the Library and the duration of time they spend in the Library and the purpose for which the source is sought

(Mode Source 1 = Standards, 2 = Core Journals, 3 = Gen Periodicals, 4 = Textbooks, 5 = Encyclopedias/ Dictionaries, 6 = Thesis/Report, 7 = Internet/Web Resources, 8 = CD-ROM databases, 9 = Online databases, 10 = e-journals, 11 = e-books)

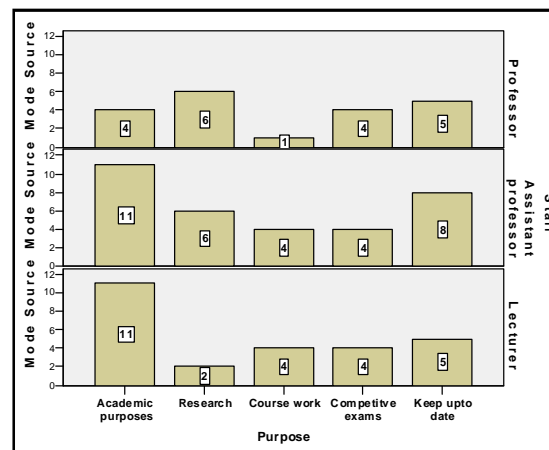


Figure 5: Information Sources Used for Different Purposes by Types of Faculty

Both among the Students and the Faculty, maximum used source is textbooks and the least used source is CD-ROM databases. Among the different types

of Faculty, the source used maximum was again the textbook and the least used being CD-ROM databases. The trend of maximum use of textbooks has not changed among the different types of Students. The only difference seen is, as far as Research Scholars are concerned, there is an equally high usage of internet/web resources too. Among those who visit the Library often, the main sources used by them are textbooks followed by e-books and then internet/web resources. A similar sequence is noticed even among those who spend more than one hour on an average in the Library whenever they visit.

#### 2.4 Information Sources vs. Usage Purposes

It will be a better approach to study the two variables (a) source of information and (b) purpose for seeking the information by using a category analysis. This analysis tries to find out the relationship between

the sources used and the purposes for which used. It starts with a corresponding table.

From Table 2 shown below, it can be seen that the maximum used source for academic purpose was textbooks followed by e-books. For research purposes, it is theses/reports followed by e-journals and core journals. It can be noticed that it is mainly for academic purposes that textbooks were mainly used. In the case of internet/web resources, it is mainly used for the purpose of keeping one up to date followed by academic purposes.

The row profiles (Table 3) show the proportion of the row category to the column variable. 66.6% of the standards is used for academic purposes. 33.8% of the theses/report is use for research work. The mass tells the proportion in each column category over row categories. Thus, while the overall margin for academic purposes is 44.7%, as far as Textbooks are concerned, it is at the level of 80.7%.

**Table 2 Information Sources vs. Usage Purposes – Correspondence Table**

Information Sources	Purposes					
	Academic Purposes	Research	Course Work	Competitive Exams	Keep Up to Date	Active Margin
Standards	454	49	44	66	69	682
Core Journals	310	227	63	75	81	756
General Periodicals	229	95	37	124	214	699
Textbooks	779	51	81	32	22	965
Encyclopedias/Dictionaries	226	76	45	201	223	771
Theses/Reports	169	242	63	70	171	715
Internet/Web Resources	259	156	44	83	317	859
CD-ROM Databases	146	61	45	58	244	554
Online Databases	156	108	51	53	225	593
E-journals	334	229	42	86	81	772
E-books	635	133	60	36	38	902
Active Margin	3697	1427	575	884	1685	8268

**Table 3: Information Sources vs. Usage Purposes – Row Profiles**

Information Sources	Purposes					
	Academic Purposes	Research	Course Work	Competitive Exams	Keep Up to Date	Active Margin
Standards	.666	.072	.065	.097	.101	1.000
Core Journals	.410	.300	.083	.099	.107	1.000
General Periodicals	.328	.136	.053	.177	.306	1.000
Textbooks	.807	.053	.084	.033	.023	1.000
Encyclopedias/ Dictionaries	.293	.099	.058	.261	.289	1.000
Theses/Reports	.236	.338	.088	.098	.239	1.000
Internet/Web Resources	.302	.182	.051	.097	.369	1.000
CD-ROM Databases	.264	.110	.081	.105	.440	1.000
Online Databases	.263	.182	.086	.089	.379	1.000
E-journals	.433	.297	.054	.111	.105	1.000
E-books	.704	.147	.067	.040	.042	1.000
Mass	.447	.173	.070	.107	.204	

The column profiles (Table 4) show the proportion of the column category in each row category and the mass tells the proportion in each row category over all column categories.

**Table 4: Information Sources vs. Usage Purposes – Column Profiles**

Information Sources	Purposes					
	Academic Purposes	Research	Course Work	Competitive Exams	Keep Up to Date	Mass
Standards	.123	.034	.077	.075	.041	.082
Core Journals	.084	.159	.110	.085	.048	.091
General Periodicals	.062	.067	.064	.140	.127	.085
Textbooks	.211	.036	.141	.036	.013	.117
Encyclopedias/Dictionaries	.061	.053	.078	.227	.132	.093
Theses/Reports	.046	.170	.110	.079	.101	.086
Internet/Web Resources	.070	.109	.077	.094	.188	.104
CD-ROM Databases	.039	.043	.078	.066	.145	.067
Online Databases	.042	.076	.089	.060	.134	.072
E-journals	.090	.160	.073	.097	.048	.093
E-books	.172	.093	.104	.041	.023	.109
Active Margin	1.000	1.000	1.000	1.000	1.000	

The summary Table 5 shows whether there is a relationship between the two variables and how many dimensions are required to display this relationship. The singular values are the measures of association. The squares of the singular values give the inertia and are assumable over the

dimensions. The first two dimensions account for 90% of the inertia in the solution. These two dimensions explain (.191 + .059) 25% of the association in the data. The chi square test finds whether there is any statistically significant association between the two variables.

**Table 5 Information Sources vs. Usage Purposes – Summary Table**

Dimension	Singular Value	Inertia	Chi Square	Sig.	Proportion of Inertia		Confidence Singular Value	
					Accounted for	Cumulative	Stddev	Correlation
1	.437	.191			.690	.690	.009	.086
2	.242	.059			.212	.901	.011	
3	.158	.025			.090	.992		
4	.048	.002			.008	1.000		
<b>Total</b>		<b>.277</b>	<b>2291.318</b>	<b>.000</b>	<b>1.000</b>	<b>1.000</b>		

The overview of row points (Table 6) provides the information about the contribution of the row variable to the overall solution. The mass is taken from the column profile table.

**Table 6: Information Sources vs. Usage Purposes – Overview of Row Points**

Information Sources	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		
					1	2	1	2	Total
Standards	.082	-.637	.399	.018	.076	.054	.811	.176	.987
Core Journals	.091	-.091	-.751	.013	.002	.213	.024	.931	.956
General Periodicals	.085	.478	.338	.012	.044	.040	.705	.195	.900
Textbooks	.117	-1.121	.363	.069	.335	.063	.935	.054	.989
Encyclopedias/Dictionaries	.093	.574	.542	.032	.070	.113	.419	.207	.626
Theses/Reports	.086	.490	-.814	.023	.047	.237	.388	.593	.981
Internet/Web resources	.104	.585	.135	.020	.081	.008	.797	.024	.820
CD-ROM Databases	.067	.764	.535	.025	.090	.079	.681	.185	.866
Online Databases	.072	.654	.103	.017	.070	.003	.798	.011	.809

E-journals	.093	-.114	-.698	.013	.003	.188	.040	.837	.878
E-books	.109	-.851	-.067	.035	.181	.002	.985	.003	.989
Active Total	1.000			.277	1.000	1.000			

The scores in dimension are the coordinates of the points in the row point plots. The inertia shows the explanatory power of the category in the solution. The contribution of each point to the inertia of dimensions tells which categories are more dominant in each dimension. Textbooks are the dominant category of dimension 1 while theses/reports form a dominant category in dimension 2. The contribution of dimension to the inertia of the point tells how well each category is explained by the solution. Only encyclopedias/dictionaries are the least explained category (0.626) while textbooks and e-books have the value of 0.989.

The overview of column points provides summary of the roles of the category variables in the overall solution as tabulated in Table 6. While academic work and keep up to date is explained well by dimension 1, research category is explained well by the second dimension. Also course work is the least explained category (.079) in the solution.

### 3. Conclusion

Textbooks are the major source used by all the users of the Library. The fact that the Research Scholars use internet/web resources as much as the textbooks goes to show that Research Scholars have a greater urge to get more detailed and up to date knowledge about things. The fact that resources like e-books, e-journals and internet/web resources also form a major source of information for the users of the Library goes to show that the capacity, knowledge and exposure level of the Students and Faculty to online sources have tremendously improved. Nevertheless, whatever is the advent of modern technology or modes of training, textbooks seem to retain its position as the major referred source.

**Table 7: Information Sources vs. Usage Purposes – Overview of Column Points**

Usage Purposes	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		Total
		1	2		1	2	1	2	
Academic Purposes	.447	-.669	.164	.091	.458	.049	.965	.032	.997
Research	.173	.269	-1.042	.051	.029	.774	.107	.892	.999
Course Work	.070	-.050	-.092	.003	.000	.002	.027	.052	.079
Competitive Exams	.107	.547	.283	.036	.073	.035	.392	.058	.451
Keep Up to Date	.204	.971	.407	.097	.440	.139	.866	.084	.950
Active Total	1.000			.277	1.000	1.000			



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