CHAPTER 5

DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

In this chapter academic scholar response about the awareness, use and deposit to Institutional Repositories have been presented. The sample respondents were teaching faculty, research scholars and post graduate students. The primary data i.e., user responses has been collected primarily through questionnaire. However, at many points the researcher has interviewed the respondents to seek clarifications related to responses received. Observation method was also used wherever felt necessary. All the data collected has been analyses and presented in the form of tables, diagrams and charts.

5.2 DEMOGRAPHIC CHARACTERSTICS

5.2.1 Respondents by Academic Ranking and Gender

The category-wise details of the questionnaires distributed to sample population and the responses received from the academic scholars are detailed below in Table 5.1 there were 2000 questionnaires distributed among the Institutional Repositories users of different university libraries. They include 130 professors, 162 associate professors, 191 assistant professors, 697 research scholars and 820 post graduate students. Out of 2000 questionnaire distributed 1736 representing 86.80% of the totals were received. These include 336 faculty (62 Professors, 108 Associate professors and 166 Assistant professors), 640 research scholars and 760 post-graduate students.

It can be observe from the Table-1 that the post-graduate students have highest response rate of 92.68% (n=760) among all academic scholars and professors have lowest response rate of 47.69% (n=62).

Table 5.1 Category-wise Distribution of questionnaire and responses Received

Category	Questionnaire Sent			Questionnaire Received			% of Response
	Male	Female	Total	Male	Female	Total	
Professor	81	49	130	39	23	62	47.69
Associate Professor	105	57	162	60	48	108	66.67
Assistant professor	123	68	191	114	52	166	86.91
Research scholars	396	301	697	382	258	640	91.82
PG Students	387	433	820	346	414	760	92.68
Total	1092	908	2000	941	795	1736	86.80

Further it can be seen that 54.20% (n=941) were male and 45.80 %(n=795) were female. This result clearly shows that there were more male than female academic scholars. Such differences were confirmed using the cross-tabulation chi-square value (χ^2 =46.78, df=4, p=.001); this suggests that there is a significant difference in the gender composition between academic scholars academic ranking at a .001 level of significance.

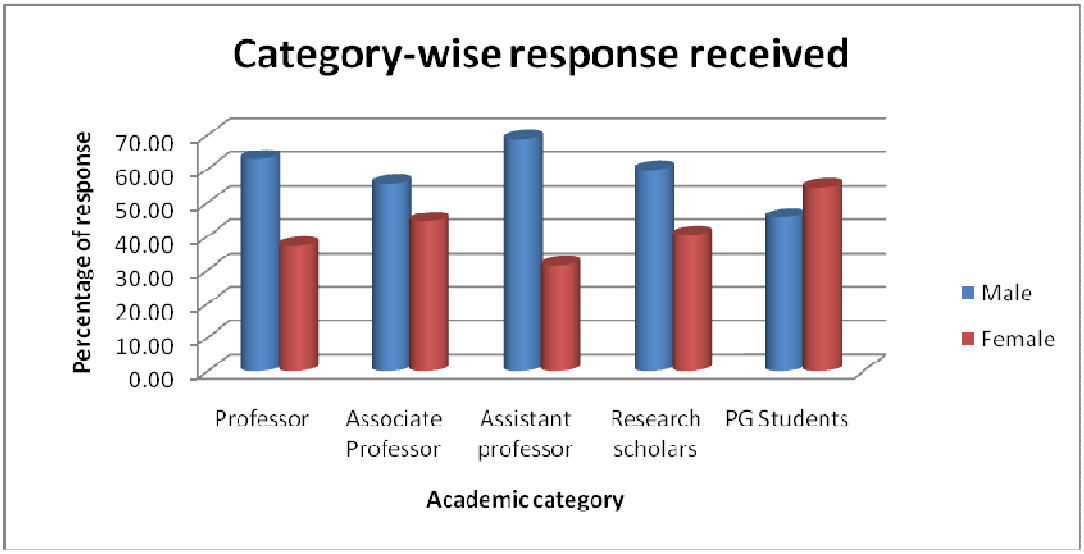

Figure 5.1 Category-wise response received.

5.2.2 Respondents by Discipline

Table 5.2 illustrates the distribution of the responses and response received from the academic scholars of ten different disciplines of Universities of Karnataka state. The distribution of academic scholars showed that 90.83% (n=315) from the Arts and Humanities discipline responded, 83.09 % (n=403) from the social sciences discipline, 88.91% (n=1018) from the science discipline respectively.

Table 5.2 Discipline-wise Distribution of questionnaire and responses received

Discipline	Faculty			Research Scholars			PG Students			Total	%
	Sent	Received	%	Sent	Received	%	Sent	Received	%		
Arts & Humanities	100	67	67.00	150	139	92.67	120	109	90.83	315	85.13
Social Science	110	71	64.55	175	153	87.43	200	179	89.50	403	83.09
Science	273	198	72.53	372	348	93.55	500	472	94.40	1018	88.91
Total	483	336	69.57	697	640	91.82	820	760	92.68	1736	83.16

The overall response rate 83.16% (n=1736) from ten disciplines was encouraging, as the respondents were quite willing to participate in this survey. This was probably due to the fact that the topic of this study appealed to them.

5.2.3 Respondents by University

Table 5.3 illustrates the distribution of responses from the academic scholars in six selected universities of Karnataka state. The distribution of academic scholars respondents showed that 91.70 % (n=337) from the Mysore university responded, 86.88 % (n=319) from the Bangalore university, 81.57% (n=280) from the Mangalore university, 75.99% (n=257) from the Kuvempu university, 83.47 % (n=263) from the Karnataka university and 87.92% (n=280) from Gulbarga university. The response from the all six universities was encouraging, as the respondents were quite willing to participate in this survey.

Table 5.3 University-wise Distribution of questionnaire and responses received

University	Faculty			Research Scholars			PG Students			Total	%
	Sent	Received	%	Sent	Received	%	Sent	Received	%		
Mysore University	88	73	82.95	125	121	96.80	150	143	95.33	337	91.70
Bangalore University	85	63	74.12	125	119	95.20	150	137	91.33	319	86.88
Mangalore University	85	55	64.71	125	106	84.80	125	119	95.20	280	81.57
Kuvempu University	75	38	50.67	122	107	87.70	125	112	89.60	257	75.99
Karnataka University	75	46	61.33	100	96	96.00	130	121	93.08	263	83.47
Gulbarga University	75	61	81.33	100	91	91.00	140	128	91.43	280	87.92
Total	483	336	69.57	697	640	91.82	820	760	92.68	1736	84.69

5.2.4 Designation wise respondents by Academic experience

Regarding length of service (see Table 5.4), more than half (63.65%, n=1105) of the academic scholars had between 1-2 years of experience, about one fourth (23.21%, n=403) had between 2-4 years, 1.96 % (n=34) of the respondents were having more than twenty years and the largest group were post-graduate students. This is understandable because this group consisted of post-graduate students as academic scholars.

Table 5.4 Distribution of academic scholars by experience

Category	1-2 Years	3-4 Years	5-10 Years	11-15 Years	16-20 Years	> 20 Years	Total
Professor	0	0	1	12	19	30	62
Associate Professor	0	0	31	57	16	4	108
Assistant professor	61	69	26	6	4	0	166
Research scholars	395	228	17	0	0	0	640
PG Students	649	106	5	0	0	0	760
Total	1105	403	80	75	39	34	1736
Total (%)	63.65	23.21	4.61	4.32	2.25	1.96	100

The two variables i.e., academic category and experience correlate reasonably well (Table-5.4) (χ^2 =2255.186, df=20, p<.001), indicating that, except in a few cases, respondents were interpreting the questionnaire correctly and listing the length of time they had been in the field as a whole rather than in their current role.

5.3 OPEN ACCESS PUBLISHING

In recent years, the issue of publishing in Open access (OA) publications has become a 'hot topic' amongst university librarians, faculty, and administrators. In particular, Open access publishing has become increasingly popular within the biomedical sciences. The benefits Open access publications provide to the world of scholarly communication in terms of accessibility and information dissemination may

be obvious, barriers such as “significant reservations about quality and preservation” have left many authors unconvinced (Rowland 2004).

The Open access movement is aimed at making scientific information freely available for the whole academic community and the public at large. To this end, it has two main tools: Open access journals and the deposit of research articles in Institutional Repositories. The success of this endeavour largely depends on the knowledge about and attitudes toward this new scientific communication model by researchers themselves, both as consumers of Open access electronic resources and as generators and disseminators of research outcomes through this means. Thus, as the Open access movement becomes more important, several studies have attempted to objectively determine perceptions, motivations and effects involving authors and publishing houses. Regarding authors, these study outcomes have shed light on some main concerns about this movement, and have confirmed that enhancing knowledge of the advantages and potentialities of Open access among researchers is a must.

In an important and extensive survey comparing the experience of approximately 100 OA authors and the same number of non-OA authors, Swan and Brown presented findings on reasons authors choose Open access journals for publication. Free access (92%), speed (87%), and wide-audience (71%) were reported as most important. More recently Rowland, Nicolas, and Huntingdon, found prestige of the publication based on reputation or impact factor, as well as type of research and speed to be essential in the decision making process for all authors .

5.3.1 Academic Status and Researchers' Awareness on Open access publishing

To identify whether their academic ranking influenced their awareness to the Open access publishing the following table tabulates both their academic status and their responses to the question of their awareness. The level of awareness according to their academic status was found to be almost similar at all academic status levels.

However, in the academic status of professor, associate and assistance professor, and research fellow the level of awareness is found to be higher.

Table 5.5 Academic Status and Researchers' awareness to Open access

Category	Knew lot about this	% Of response	Knew little about this	% Of response	Don't Know	% Of response	Total
Professor	48	77.42	14	22.58	0	0	62
Associate Professor	80	74.07	28	25.93	0	0	108
Assistant professor	113	68.07	46	27.71	7	4.22	166
Research scholars	325	50.78	233	36.41	82	12.81	640
PG Students	230	37.84	264	42.43	266	35.00	760
Total	796	45.85	585	33.71	355	20.45	1736

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
254.484	8	26.13

Ho: There is significant association between status of the respondents and their awareness on Open access.

To learn academic scholars awareness to OA, the above questions in table 5.5 were asked to the respondents. Their responses show that more researchers were aware of general concept of OA. The above Table 5.5 shows that out of 1736 respondents 355 respondents were found to be unaware of Open access concept. This indicates that most of the academic scholars are aware about Open access

publishing. The differences were confirmed using the cross-tabulation chi-square value ($\chi^2 = 254.484$, df=8, p<.001); this suggests that there is no significant difference in the awareness about OA between academic ranking at a 0.001 level of significance. Professors and Associate Professor takes first position in terms of awareness about Open access concepts (100%, n=62) and post-graduate students fail to get awareness about the OA concepts (80.27%, n=494).

5.3.2 Discipline-wise awareness to Open access Publishing

The investigator hypothesized that majority of academic scholars are not aware of the concept of Open access publishing in their respective libraries and made an attempt to find out whether the academic scholar's users are aware of the existence of Repositories in their respective libraries or not.

The data given in Table 5.6 shows the extent of awareness among the respondents of different disciplines about the existence of OA in their respective university.

Table 5.6 Discipline-wise awareness to OA

Discipline	Knew lot about this	% Of response	Knew little about this	% Of response	Don't Know	% Of response	Total
Arts & Humanities	49	15.56	89	28.25	177	56.19	315
Social Science	149	36.97	198	49.13	56	13.90	403
Science	502	49.31	392	38.51	124	12.18	1018
Total	700	41.16	679	41.18	357	17.66	1736

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
327.3	4	13.277

Ho: There is significant association between Disciplines and their awareness on Open access.

It may be seen from the table that 43.81 % (n=138) academic scholars from arts and humanities discipline are aware of the Open access publishing. Similarly the 86.10% (n=347) scholars of social sciences discipline are aware about Open access publishing, majority of science scholars are about Open access terms with 87.82%(n=894, which is highest ratio among all other disciplines on awareness about Open access publishing.

The analysis of the overall responses indicate that only 17.66% (n=357) academic scholars are not aware of the Open access publishing.

The chi square test is applied for further discussion. It is evident from the result obtained that the stated null hypothesis is rejected, since the calculated chi-square value is significant at 0.001 levels. So it is concluded that there is no association between discipline and awareness of OA.

5.3.3 University-wise awareness on Open access publishing.

To identify whether university influenced their awareness to the OA the following table tabulates both their academic status and their responses to the question of their awareness. The level of awareness according to their university was found to be almost similar at all university level. However in Kuvempu University academic scholars are having high level of awareness about OA.

Table 5.7 University-wise awareness to OA

University	Knew lot about this	% Of response	Knew little about this	% Of response	Don't Know	% Of response	Total
Mysore University	157	46.59	59	17.51	121	35.91	337
Bangalore University	141	44.20	73	22.88	105	32.92	319
Mangalore University	127	45.36	64	22.86	89	31.79	280
Kuvempu University	118	45.91	85	33.07	54	21.01	257
Karnataka University	128	48.67	55	20.91	80	30.42	263
Gulbarga University	135	48.21	69	24.64	76	27.14	280
Total	806	46.43	405	23.33	525	30.24	1736

The table shows that out of 1736 respondents 1211 are of the stated that scholars are aware about the concept of Open access, and remaining 525 scholars are stated that not aware about OA. The category-wise data exhibits that all academic scholars respondents of Mysore university, Bangalore University, Mangalore University , Kuvempu university, Karnataka university and Gulbarga University have opinioned that aware about Open access publishing. Out of 337 scholars of Mysore university 35.91 %(n=121) are not aware of OA, 67.08 % (n=214) scholars from Bangalore university are aware about OA, similarly 68.22 % (n=191) scholars from Mangalore university are aware about OA concepts. Out of which Kuvempu University takes first position in understand the concepts (78.98, n=203) and Gulbaraga University scholars takes second position with 72.85% (n=204). Mysore Univeristy scholars having least awareness about Open access terms (64.1%, n=216).

5.3.4 Awareness of OA terms

Academic scholars were asked to select which names, services or terms they were aware of from a list of twenty one displayed in a random order

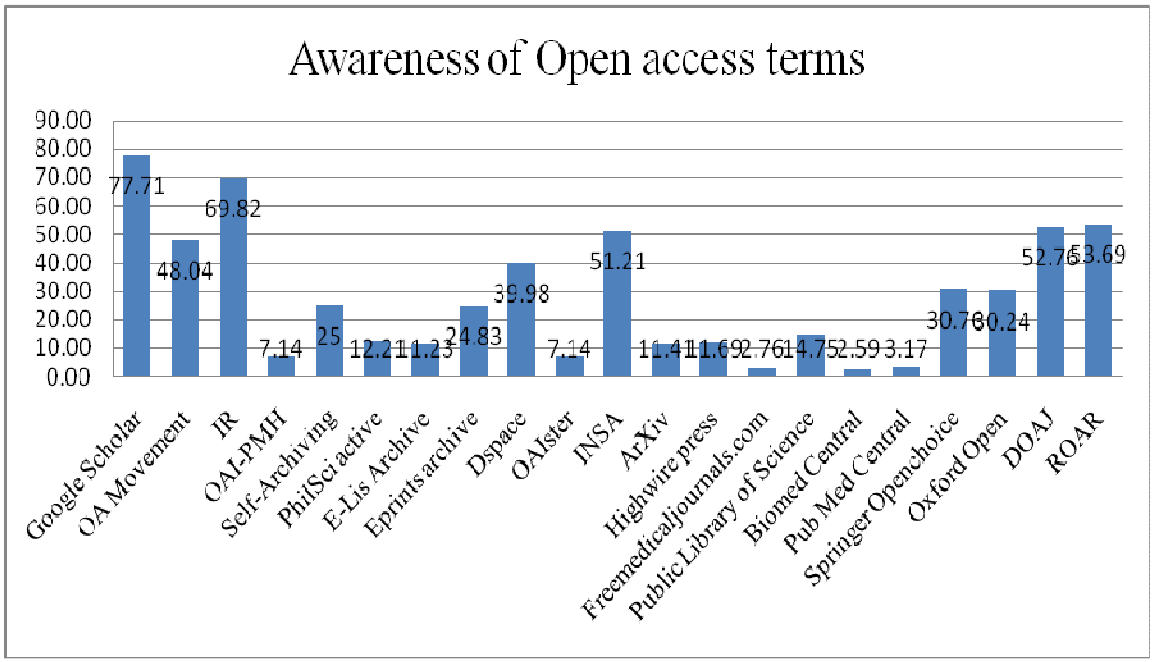

Figure 5.2: Awareness of Open access terms.

The most well known terms (77.71%) were the general terms, 'Google Scholar' 'the Open access movement' 'Indian national science academy' and 'Institutional Repositories.' Also known by more than half of the respondents were familiar with Registry of Open access Repositories (ROAR) and Directory of Open access journals (DOAJ). The least known were Pubmed central (3.17%, n=55), Biomed central(2.59%, n=45), OAI-PMH (4.14%, n=124), freemedicaljournal.com (2.76%, n=48) and OAIster (7.14%, 124) scholar's familiarity with above OA terms found to be very low, whereas Springer Open choice (30.76%), Oxford Open (30.24%), Dspace (39.98%) and eprints archive (24.83%)) scholar's familiarity with above OA terms found to be average.

5.3.5 Source of Open access terms

The most common way that these terms had been discovered was through searching the Internet. Majority of the academic scholars were discovered through internet and through academic journals, similar number found out about OA terms and services through debates or via colleagues in their discipline. Relatively few respondents had first heard of these terms via another discipline or through a debate within their institutions. Those who first heard about OA from their universities or another discipline are better aware. In particular those who heard about the terms from a debate in another discipline are the most aware of OA journals.

Majority of the professors 43.55% (n=27) are heard on OA terms through academic journals and secondly through Internet (22.58%, n=14). Associate professors trusted on journals (37.97%, n=41), conversely Assistant professors have more faith on Internet (48.43%, n=77). Library and other sources are least preferred ways to find out Open access terms by professors. More than 40% academic scholars are heard about Open access terms through their respective faculty, which is higher ratio among all other ways learning about OA terms.

In other it is observed that Journals are the major source for OA terms for the professors and Associate professors (43.55% and 37.97%). Assistant Professors Prefers Internet for OA concepts (48.43%, n=77), but Research scholars and post graduate students believes faculty can help us to learn about open access concepts (40.69% and 33.20%).

Table 5.8 Sources of Open access terms.

Category	Through Internet	Through Journals	Faculty	Friends	Library	Others	Total
Professors	14 (22.58)	27 (43.55)	4 (6.45)	14 (22.58)	2 (3.23)	1 (1.61)	62
Associate Professors	23 (21.30)	41 (37.97)	3 (2.78)	24 (22.22)	14 (12.97)	3 (12.78)	108
Assistant professors	77 (48.43)	31 (19.50)	11 (6.92)	19 (11.94)	18 (11.32)	3 (1.89)	159
Research scholars	91 (16.31)	141 (25.27)	227 (40.69)	27 (4.84)	57 (10.22)	15 (2.69)	558
PG Students	87 (17.61)	83 (16.80)	164 (33.20)	63 (12.75)	76 (15.38)	21 (4.25)	494

Chi Square Summary Results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
242.862	20	31.410

The chi-square test is applied for further discussion. The computed chi-square value is 242.862, which is greater than its tabulated value at 5 percent level of significance. Hence the difference in academic status is identified as significant with respect to respondent's mode of learning on OA terms. It could be seen clearly from the above discussion that research scholar respondents mainly learned OA terms through their faculty. Since the computed chi-square value is more than the tabulated value the hypothesis is rejected. Hence there is no significant association between academic scholars' status and awareness of OA terms.

5.3.6. Open access publishing: Researchers' Perspectives

As published content grew more expensive and restricted, and the Internet made the distribution of ideas relatively cheap and easy, avoiding the publisher as

“middle man” became an obvious option. An early instance of these ideas was distributed by the ARL in 1990’s. The publication reproduces an Internet discussion begun by scientist Harnad in a post titled, “The Subversive Proposal.” Harnad called for authors of “mysterious” work to deposit it on Internet ftp servers. He said, “As soon as all research authors publicly self-archive their refereed and not peer-reviewed papers publicly on-line, the research literature will be free for all (Harnad 1995). Open access literature is “digital, on-line, free of charge, and free of most copyright and licensing restrictions. What make it possible are the internet and the consent of the author or copyright-holder.

In the preceding section, the opinion of users about the source of ways to learn OA terms have been analysed and presented. Similarly, researcher intended to know the opinion of respondents about publishing Open access journals. In this regard following hypothesis was framed;

Hypothesis; “there exists relationship between the academic statuses of respondents and publishing in Open access journals and higher the academic status of the researcher, it is more in publishing Open access journals”.

5.3.6.1Category wise perceptions on OA Publishing

The respondents were thus asked to state whether they published in Open access journals or not. The responses received are analysed and are presented in Table 5.10.

The table reveals that a 66.94% (n=1162) of respondents have expressed that they do not publish their research articles in Open access journals, whereas only 33.06 % (n=574) respondents have agreed that they publish in Open access journals.

Category-wise data also reveals that 69.35% (n=43) professors, 62.04% associate professors, 57.23% assistant professors, 41.09% research scholars and only 13.95% (n=106) post-graduate students states that they publish their research articles in Open access journals.

Table 5.10 publishing in OA journals

Category	Publishing in Open access journals				
	Yes	%	No	%	Total
Professor	43	69.35	19	30.65	62
Associate Professor	67	62.04	41	37.96	108
Assistant professor	95	57.23	71	42.77	166
Research scholars	263	41.09	377	58.91	640
PG Students	106	13.95	654	86.05	760
Total	574	33.06	1162	66.94	1736

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
265.794	4	9.488

The data is tested through chi-square test revealed that there is no relationship between the academic status and publication over Open access journals.

5.3.7 Category-wise perceptions on Open access publishing.

Open access journals often referred to as the “golden road” to Open access (Goodman, 2004) are the publishing outlet that is most similar to the traditional peer-reviewed journals, meaning that they are run by experienced editors and editorial boards and have established quality control procedures.

The respondents were asked about different characteristics of Open access publishing approaches and how they felt about them. The data given in Table-10 shows the different opinion on characteristics of OA among the respondents.

A study of data in Table 5.11 indicates the academic category wise respondent's perception on characteristics of OA.

Table 5.11 Category-wise perceptions on Open access publishing

Characteristics of OA	Professor	Associate Professor	Assistant Professor	Research Scholars	PG Students	Mean
Free to access	4.35	4.16	4.08	3.57	2.86	3.82
Author pays to publish	2.19	2.89	3.19	3.59	4.17	3.21
High quality	3.16	3.08	3.89	3.18	3.58	3.38
Self-publishing	2.18	2.96	3.01	3.14	2.65	2.79
Not archived Properly	1.96	2.56	2.51	3.56	3.96	2.91
Well indexed	4.18	3.94	3.58	2.18	2.01	3.18
Mean	3.00	3.27	3.38	3.20	3.21	3.22

ANOVA					
Source of Variation	**SS**	**df**	**MS**	**F-ratio**	F crit@5%
Rows	3.250907	5	0.110372	02.75112	2.71089
Columns	0.441487	4	0.650181	14.79332	2.86608
Error	11.10099	20	0.043951		
Total	**14.79338**	**29**			

It can be assessed with the help of six factors viz; free to access, author pays to publish, high quality, self-publishing, not archived properly and well indexed. Out of total chosen five factors, the respondents rate first order characteristics of OA in terms of free to access as it secures mean score 3.82 on a five point rating scale. This is the highest level of characteristics of Open access publishing. The researcher's rate second order characteristics of Open access publishing in terms of high quality of Open access journals as it secures mean 3.38 on five point scale. Author pays to publish their research article is rated at third order priority as it secures mean score 3.21 on five point rating scale. The researchers refer to fourth order characteristics of Open access journals towards well indexed factor Open access journals as it secures mean score 3.18 on five point rating scale. The respondents rank the fifth order characteristics of Open access publishing in the form of Open access journals are not archived properly as it secures mean score 2.91 on five point scale.

The academic category wise analysis reveals the following facts. Assistant professor from academic scholars category take the first position with respect to their overall characteristics of Open access publishing as they secured a mean score 3.38 on 5 point scale. Associate professor from the group academic scholars rank the second position with respect to perceptions on characteristics of Open access as they secured mean score 3.27. Post graduate students among academic scholars come in third position with respect to perceptions of characteristics of Open access publication as they secured 3.21 out of 5 point rating scale.

The ANOVA two ways model is applied for further discussion. At one point, the computed ANOVA valued is 2.75112, which is greater than its tabulated value (F crit=2.71089) at 5% level of significance. Hence, there is a significant variation among the chosen academic category with respect to respondents overall perceptions on characteristics of Open access publication. At another point, the computed ANOVA value is 14.79332, which is greater than its tabulated value (F crit=2.866081) at 5% level of significance. Hence, variation among the attributes relating to academic scholars overall perceptions on characteristics of Open access publishing is statistically identified as significant.

5.3.8 Discipline-wise perceptions on Open access publishing.

The discipline-wise perceptions on characteristics of Open access publishing are tabulated as follows. The data given in Table 5.12 shows the different perceptions on characteristics of OA among different disciplines of universities in Karnataka.

Table 5.12 Discipline-wise perceptions on Open access publishing

Characteristics of OA	Arts & Humanities	Social Science	Science	Mean
Free to access	3.16	3.02	4.20	3.46
Author pays to publish	2.98	2.72	2.00	2.57
High quality	1.58	2.72	3.99	2.76
Self-publishing	2.98	3.16	2.29	2.81
Not archived Properly	4.01	3.49	2.26	3.25
Well indexed	3.02	2.49	4.05	3.19
Mean	2.96	2.93	3.13	3.01

ANOVA					
Source of Variation	**SS**	**df**	**MS**	**F-ratio**	**F crit@5%**
Rows	1.77	5	0.35	0.48	3.33
Columns	0.14	2	0.07	0.09	4.1
Error	7.41	10	0.74		
Total	**9.32**	**17**			

A study of data in Table 5.12 indicates the discipline wise respondent's perception on characteristics of OA. It can be assessed with the help of six factors viz; free to access, author pays to publish, high quality, self-publishing, not archived properly and well indexed.

Out of total chosen six factors, the discipline wise respondents rate first order characteristics of OA in terms of free to access as it secures mean score 3.46 on a five point rating scale. This is the highest level of characteristics of Open access publishing. The discipline wise researcher's rate second order characteristics of Open access publishing in terms of not archived properly as it secures mean3.25 on five point scale. Well indexed is rated at third order priority as it secures mean score 3.19 on five point rating scale. The discipline researchers refer to fourth order characteristics of Open access journals towards self publishing factor of Open access journals as it secures mean score 2.81 on five point rating scale. The respondents rank the fifth order characteristics of Open access publishing in the form of high quality of Open access journal, as it secures mean score 2.76 on five point scale.

The discipline wise analysis reveals the following facts. Science discipline take the first position with respect to their overall characteristics of Open access publishing as they secured a mean score 3.13 on 5 point scales. Arts and Humanities rank the second position with respect to perceptions on characteristics of Open access as they secured mean score 2.96. Social Science discipline come in third position with respect to perceptions of characteristics of Open access publication as they secured 2.93 out of 5 point rating scale.

The ANOVA two ways model is applied for further discussion. At one point, the computed ANOVA valued is 0.48, which is less than its tabulated value (F crit=3.33) at 5% level of significance. Hence, there is significant variation among the chosen academic category with respect to respondents overall perceptions on characteristics of Open access publication. At another point, the computed ANOVA value is 0.09, which is less than its tabulated value(F crit=4.10) at 5% level of

significance. Hence, there is definite variation among the attributes relating to disciplines overall perceptions on characteristics of Open access publishing are statistically identified as insignificant.

5.3.9 Gender-wise perceptions on Open access publishing.

A study on data in Table: 5.13 indicates that sex wise respondent' perceptions on characteristics of Open access publishing.

Table 5.13 Gender-wise perceptions on Open access publishing

Characteristics of OA	Male	Female	Mean
Free to access	4.25	3.35	3.8
Author pays to publish	2.56	2.98	2.77
High quality	3.01	2.15	2.58
Self-publishing	3.01	2.27	2.64
Not archived Properly	4.01	3.97	3.99
Well indexed	4.02	2.56	3.29
Mean	3.48	2.88	3.18

t-value = 2.1687, df=5, Standard error of difference=0.275, T critical value=2.015

The male academic scholars take the first position with respect to their overall perceptions on characteristics of OA as they secured mean score 3.48 on five point rating scale. The female academic scholars have the second position with respect to their overall perceptions on characteristics of Open access publishing as they secured mean score 2.88 on 5 point rating scales.

The t-test is applied for further discussion. The computed t-value is 2.1687, which is slightly greater than its tabulated value at 5 percent level of significance. Hence, there is a slight significant variation between male respondents and female

academic scholars with respect to their perceptions on characteristics of Open access publishing.

It could be seen clearly from the above discussion that the male respondents occupy the first position with respect to realization of all characteristics of Open access and female academic scholars lag behind the male academic scholars in this regard.

5.4 INSTITUTIONAL REPOSITORIES

The rise of publication cost, subscription rates of online journals and the bulk production of scholarly research output in a digital format are becoming big problems and challenges to the university libraries in rendering services to its academic community. With this fact, the emerging technologies have on the other hand brought several methods to the libraries and academic institutions for disseminating their research output, one of which is Open access. Hence, libraries have started adopting Open access technologies by taking Institutional Repositories as an alternative solution to introduce free access scholarly research results, as well as for the dissemination and preservation of digital documents as a response to the current digital age.

A few state universities in Karnataka have established, or are partway to establishing Repository services with the aim to enhance the visibility and the impact of the research generated within that university. The development of the IR services is related to the Open access movement in Karnataka, which seeks to make valued research outputs openly available by encouraging academic scholars to place their intellectual materials into Repositories, enhancing their availability and visibility to the global academic community and increase the chances for use and exchange of ideas among scholars within similar disciplines. At the same time, university research increasingly involves the use, generation, manipulation, sharing and analysis of digital resources. However, not every Institutional Repository adopts the principle of Open access and it is possible for the institution to restrict the access to its member.

5.4.1 Awareness on Institutional Repositories

To learn researchers' awareness to IRs, the following questions were asked to the respondents. Their responses show that more researchers were aware of general concept of IRs. To identify whether their academic ranking, disciplines, University and gender influenced their awareness to IRs publishing the following table tabulates their academic ranking disciplines, University and gender and their responses to the question of their awareness.

5.4.1.1 Academic ranking-wise awareness on IRs

To identify whether their academic ranking influenced their awareness to the IRs the following table tabulates both their academic status and their responses to the question of their awareness. The level of awareness according to their academic status was found to be almost similar at all academic status levels. However, in the academic status of professor, associate and assistance professor, and research fellow the level of awareness is found to be higher.

Table 5.14 Academic ranking-wise awareness on IRs

Academic Category	Knew lot about this	Knew little about this	Total Yes	Don't Know	Total
Professors	41 (66.13)	21 (33.87)	62 (100)	0 (0.00)	62
Associate Professors	72 (66.67)	36 (33.33)	108 (100)	0 (0.00)	108
Assistant professors	101 (60.84)	51 (30.72)	152 (91.57)	14 (8.43)	166
Research scholars	264 (41.25)	203 (31.72)	467 (72.97)	173 (27.03)	640
PG Students	328 (43.16)	94 (12.37)	422 (55.53)	338 (44.47)	760
Total	806 (46.43)	405 (23.33)	1211 (69.76)	525 (30.24)	1736

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
228.108	8	15.507

To learn researchers' awareness to IRs, the above questions in table 5.14 were asked to the respondents. Their responses show that more researchers were aware of general concept of IRs. The above table shows that out of 1736 respondents 525 respondents were found to be unaware of IRs concept.

This indicates that most of the academic scholars (69.76%) are aware about Institutional Repositories.

The differences were confirmed using the cross-tabulation chi-square value; this suggests that there is a significant difference in the awareness about IRs between academic rankings at a 0.05 level of significance.

5.4.1.2 Discipline-wise awareness on Institutional Repositories

The investigator hypothesized that majority of academic scholars are not aware of the concept of Institutional Repositories in their respective libraries and made an attempt to find out whether the academic scholar's users are aware of the existence of Repositories in their respective libraries or not. The data given in Table 5.15 shows the extent of awareness among the respondents of different disciplines about the existence of IRs in their respective university.

Table 5.15 Discipline-wise awareness on Institutional Repositories

Discipline	Knew lot about this	Knew little about this	Total Yes	Don't Know	Total
Arts & Humanities	103 (32.70)	49 (15.56)	152 (48.25)	163 (51.75)	315
Social Science	214 (53.10)	72 (17.87)	286 (70.97)	117 (29.03)	403
Science	489 (48.03)	284 (27.90)	773 (75.93)	245 (24.07)	1018
Total	806 (46.43)	405 (23.33)	1211 (69.76)	525 (30.24)	1736

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
100.842	4	9.488

It may be seen from the table that 48.25 %(n=152) academic scholars from arts and humanities discipline are aware of the IRs. Similarly the 70.97% (n=286) scholars of social sciences discipline are aware about IRs. Scholars from various

subjects from science discipline have highest ratio of awareness on Institutional Repositories with 75.93%, n=773.

The chi-square test is applied for further discussion. The computed chi-square value is 100.842, which is greater than its tabulated value (9.488) at 5 percent level of significance. Hence the difference in academic discipline is significantly identified as significant with respect to respondent's awareness on Institutional Repositories. It could be seen clearly from the above discussion that physical sciences discipline have majority of awareness among all other disciplines.

5.4.1.3 University-wise awareness on Institutional Repositories

To identify whether university influenced their awareness to the IRs the following table tabulates both their academic status and their responses to the question of their awareness. The level of awareness according to their university was found to be almost similar at all university level. However in Bangalore University academic scholars are having high level of awareness about Institutional Repositories.

The table shows that out of 1736, 1211 respondents stated that scholars are aware about the concept of Institutional Repositories, and remaining 525 scholars are stated that not aware about IRs. The category-wise data exhibits that all academic scholars respondents of Mysore university, Bangalore University, Mangalore University, Kuvempu university, Karnataka university and Gulbarga University have opinioned that aware about IRs.

Table 5.16 University-wise awareness on IRs

University	Knew lot about this	Knew little about this	Total Knew about IRs	Don't Know	Total
Mysore University	177(52.52)	79(23.44)	256(75.96)	81(24.04)	337
Bangalore University	161(50.48)	83(26.01)	244(76.49)	75(23.51)	319
Mangalore University	127(45.36)	64(22.85)	191(68.21)	89(31.79)	280
Kuvempu University	88(34.24)	65(25.29)	153(59.53)	104(40.47)	257
Karnataka University	128(48.67)	55(20.91)	183(69.58)	80(30.42)	263
Gulbarga University	125(44.64)	59(21.07)	184(65.71)	96(34.29)	280
Total	806(46.43)	405(23.33)	1211(69.76)	525(30.24)	1736

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
28.231	5	11.070

Out of 337 scholars of Mysore university 24.04 % (n=81) are not aware of IRs, 76.49 % (n=244) scholars from Bangalore university are aware about IRs, similarly 68.21 % (n=191) scholars from Mangalore university are aware about IR concept.

It could be seen clearly from the above discussion that the Bangalore University occupy the first position with respect to realization the concept of Institutional Repositories and Kuvempu university lag behind the all other university in Karnataka in this regard.

The data is tested through chi-square test revealed that there is no relationship between the university and awareness on Institutional Repositories.

5.4.1.4 Gender-wise awareness on Institutional Repositories

A study on data in Table 5.17 indicates that gender wise respondents' awareness on IRs.

The male academic scholars take the first position with respect to their overall awareness on Institutional Repositories as they secured 74.71%. The female academic scholars have the second position with respect to their overall awareness on Institutional Repositories as they secured 63.90%.

Table 5.17 Gender-wise awareness on Institutional Repositories

Gender	Knew lot about this	Knew little about this	Total Knew about IRs	Don't Know	Total
Male	489(51.97)	214(22.74)	703(74.71)	238(25.29)	941
Female	317(39.87)	191(24.03)	508(63.90)	287(36.10)	795
	806(46.43)	405(23.33)	1211(69.76)	525(30.24)	1736

It could be seen clearly from the above discussion that the male respondents occupy the first position with respect to awareness on Institutional Repositories and female academic scholars lag behind the male academic scholars in this regard.

5.4.2.1 Source of IRs by academic category

The most common way that these terms had been discovered was through searching the Internet. Majority of the academic scholars were discovered through internet and through academic journals, similar number found out about IRs through debates or via colleagues in their discipline. Relatively few respondents had first heard of these terms via another discipline or through a debate within their institutions. Those who first heard about IRs from their universities or another discipline are better aware. In particular those who heard about the terms from faculty are the most aware of IRs.

Table 5.18 Source of IRs by academic category

Category	Through Internet	Through Journals	Faculty	Friends	Library	Others	Total
Professors	17 (27.42)	33 (53.23)	2 (3.23)	6 (9.68)	3 (4.84)	1 (1.61)	62
Associate Professors	39 (36.11)	25 (23.15)	21 (19.44)	3 (2.78)	11 (10.19)	9 (8.33)	108
Assistant professors	59 (38.82)	36 (23.68)	3 (1.97)	16 (10.53)	23 (15.13)	15 (9.87)	152
Research scholars	139 (29.76)	114 (24.41)	103 (22.06)	41 (8.78)	31 (6.64)	39 (8.35)	467
PG Students	108 (25.59)	94 (22.27)	139 (32.94)	53 (12.56)	19 (4.50)	9 (2.13)	422
Total	362 (29.89)	302 (24.94)	268 (22.13)	119 (9.83)	87 (7.18)	73 (6.03)	1211

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
242.862	20	31.410

Majority of the professors 53.23% (n=33) are heard on IRs terms through academic journals and secondly through Internet (27.42%, n=17). Library and other sources are least preferred ways to find out Institutional Repositories by professors. 29.76% (n=139) academic scholars are heard about Institutional Repositories through Internet, which is higher ratio among all other ways learning about Institutional Repositories. Conversely post graduate students believes their faculty help more in understand the concepts of open access (32.94%, n=139).

In other hand it is observed that faculty is the least preferred source of open access terms for Assistant professors (1.97%, n=3), where as professional friends is best reliable source of OA terms for post graduate students.

The chi-square test is applied for further discussion. The computed chi-square value is 242.862, which is greater than its tabulated value at 5 percent level of significance. Hence the difference in academic status is statistically identified as significant with respect to respondent's mode of learning on Institutional Repositories. It could be seen clearly from the above discussion that research scholar respondents mainly learned about Institutional Repositories through Internet.

5.4.2.2 Source of IRs by Discipline

A study of data table in 5.19 indicates the discipline wise source of Institutional repositories. It could to noted that Internet is most reliable source to aware Irs for Arts & Humanities and Science discipline scholars (32.24%, n=49 and 32.81%, n=252). Whereas faculty is the most preferred source for social science discipline scholars (25.43%, n=74).

Table 5.19 Source of IRs by Discipline

Discipline	Through Internet	Through Journals	Faculty	Friends	Library	Others	Total
Arts & Humanities	49 (32.24)	41 (26.97)	27 (17.76)	13 (8.55)	11 (7.24)	11 (7.24)	152
Social Science	61 (20.96)	72 (24.74)	74 (25.43)	41 (14.09)	17 (5.84)	26 (8.93)	291
Science	252 (32.81)	188 (24.48)	167 (21.74)	65 (8.46)	59 (7.68)	37 (4.81)	768
Total	313 (25.85)	261 (21.55)	241 (19.90)	106 (8.75)	76 (6.28)	62 (5.12)	1211

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
27.64	10	18.31

In the other hand scholars from Arts and Humanities discipline got information on IR by Internet(32.24%, n=49), conversely Social science scholars discovered the concept

of Irs with help of their faculty (25.43%, n=74). But interestingly Science discipline scholars preferres Internet is best source to aware the concept of IRs(32.81%, n=252).

5.4.2.3 Source of IRs by University

The most common way that these terms had been discovered was through searching the Internet. Majority of the university were discovered through internet and through academic journals, similar number found out about IRs through debates or via colleagues in their discipline. Relatively few disciplines had first heard of these terms via another discipline or through a debate within their institutions. Those who first heard about IRs from their universities or another discipline are better aware. In particular those who heard about the terms from faculty are the most aware of IRs. 31.48% (n=68) respondents from Mysore university were discovered through internet and through academic journals, similar number found out about IRs through debates or via colleagues in their discipline.

Table 5.20 University wise source of IRs

University	Through Internet	Through Journals	Faculty	Friends	Library	Others
Mysore University	68 (31.48%)	61 (41.22)	43 (29.05)	19 (12.84)	14 (9.46)	11 (7.43)
Bangalore University	73 (34.11%)	51 (36.17)	18 (12.77)	14 (9.93)	23 (16.31)	35 (24.82)
Mangalore University	51 (26.70%)	35 (25.00)	44 (31.43)	31 (22.14)	21 (15.00)	9 (6.43)
Kuvempu University	55 (27.09%)	61 (41.22)	60 (40.54)	18 (12.16)	2 (1.35)	7 (4.73)
Karnataka University	53 (28.96%)	49 (37.69)	44 (40.54)	21 (12.16)	13 (1.35)	3 (4.73)
Gulbarga University	62 (30.39%)	45 (31.69)	59 (41.55)	16 (11.27)	14 (9.86)	8 (5.63)

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
117.589	25	34.382

5.4.2.4 Gender wise source of Institutional Repositories

The most common way that these terms had been discovered was through searching the Internet. 283 (40.26%) male respondents were discovered through internet and 169(24.04%) male respondents through academic journals, but only 80(11.38%) found out about IRs through colleagues in their discipline. Relatively few female had first heard of these terms via another discipline or through a debate within their institutions. Those who first heard about IRs from their universities or another discipline are better aware. In particular those who heard about the terms from faculty are the most aware of IRs.

Table 5.21 Gender wise source of Institutional Repositories

Source of awareness	Male	Female	Total
Through Internet	283(40.26)	79(15.56)	362(29.89)
Through journals	169(24.04)	133(26.18)	302(24.94)
Faculty from discipline	73(10.38)	195(38.39)	268(22.13)
Professional Friends	80(11.38)	39(7.68)	119(9.83)
Library staff	35(4.98)	52(10.24)	87(7.18)
From other sources	63(8.96)	10(1.97)	73(6.03)
Total	703(58.05)	508(41.95)	1211

t-value = 0.7506, df=5, Standard error of difference=43.296, T critical value=2.015

5.4.3 Academic ranking wise access and deposit to Institutional Repositories

In the survey, data regarding what types of work that academic scholars would like to use for deposit and access to IR were ascertained. Table 5.22 present results on researchers' usage of IRs. It can be noted from Table 5.22 that the majority 45.22 % (n=785) of the respondents claimed to have had access to IRs materials while 83.70 % (n=1453) claimed to have accessed such content.

Table 5.22 Academic ranking wise access and deposit to IRs

Category	access to IR	Deposit to IR
Professor	58(93.55)	59(95.16)
Associate Professor	83(76.85)	97(89.81)
Assistant professor	87(52.41)	134(80.72)
Research scholars	264(41.25)	480(75.00)
PG Students	293(38.55)	683(89.87)
Total	785(45.22)	1453(83.70)

In the other hand it is noted that Assistant professors would to like deposit their research work (80.72%, n=134) rather than access to Irs(52.41%, n=87), the post graduate students category believes in deposit to IR is more fruitful to their carrier (89.87%, n=683).

5.4.3.2 Discipline wise access and deposit to Institutional Repositories.

It can be noted from Table 5.23 that the majority 70.96 %(n=557)) of the respondents from science discipline claimed to have had access to IRs materials while 63.94 %(n=929) claimed to have deposit to IRs. Scholars from Arts and Humanities neither interested to access nor deposit in IRs.

Table 5.23 Discipline wise access and deposit to IRs

Discipline	access to IR	Deposit to IR
Arts & Humanities	69(8.79)	181(12.46)
Social Sciences	159(20.25)	343(23.61)
Science	557(70.96)	929(63.94)
Total	785	1453

5.4.3.3 University wise access and deposit to Institutional Repositories.

Table 5.24 University wise access and deposit to IRs

University	access to IR	Deposit to IR
Mysore University	161(47.77)	294(87.24)
Bangalore University	123(38.56)	275(86.21)
Mangalore University	118(42.14)	241(86.07)
Kuvempu University	103(40.08)	191(74.32)
Karnataka University	139(52.85)	213(80.99)
Gulbarga University	141(50.36)	239(85.36)
Total	785(45.22)	1453(83.70)

5.4.3.4 Gender wise access and deposit to Institutional Repositories.

In the study, data regarding what types of work gender wise would like to use for access and would like to deposit were ascertained. This result indicates that there are various types of resources that respondents would employ for self-archiving.

Table 5.25 Gender wise access and deposit to IRs

Gender	access to IR	Deposit to IR
Male	408(51.97)	764(52.58)
Female	377(48.03)	689(47.42)
Total	785	1453

I t is cleard from the above table that female respondents more interested in deposit to institutioanl repositories than access to it, conversely male respondents claim that they access to IR than deposit to IR.

5.4.4 Type of research work deposited by academic scholars

Another question which was asked to academic scholars is what kind of research materials would you be interested in contributing to Institutional Repositories, the following table shows their preference to contribute to IRs.

It can be seen in the above table that out of 1736 respondents 1005 academic scholars responded to this question. Interestingly, more professors were very much interested in contributing conference papers than thesis and conference papers. The least frequent type of materials to be contributed by the researchers was found to be datasets, software, video and audio materials. This might have been due to all state universities not having a suitable technology for video and audio type of martial and most often much of scholarly research output are produced in text than in video and audio formats. However, even the number of researchers interested in submitting scholarly articles and conference proceeding documents is very small compared to the number of respondents, even though these types of materials were chosen most frequently by the respondents as interesting to contribute.

Table 5.26 Type of research material deposited by academic scholars

Category	Thesis (Full text)	Thesis (Abstract)	Pre-prints	Post-prints	Technical Reports	Conference Papers	Book Chapters	Software's	Audio/ Videos& Photos
Professor	19 (30.65)	52 (83.87)	14 (22.58)	55 (88.71)	31 (50.00)	58 (93.55)	14 (22.58)	0 (0.00)	53 (85.48)
Associate Professor	71 (65.74)	97 (89.81)	11 (10.19)	95 (87.96)	21 (19.45)	95 (87.96)	27 (25.00)	0 (0.00)	87 (80.56)
Assistant professor	125 (82.24)	134 (88.16)	78 (51.32)	130 (85.53)	78 (51.32)	132 (86.84)	89 (58.55)	4 (2.63)	146 (96.05)
Research scholars	423 (90.58)	415 (88.87)	189 (40.47)	395 (84.58)	69 (14.78)	289 (61.88)	41 (8.78)	14 (3.00)	425 (91.01)
PG Students	415 (98.34)	405 (95.97)	234 (55.45)	404 (95.73)	285 (67.54)	408 (96.68)	296 (70.14)	155 (36.73)	414 (98.10)
Total	1053 (86.95)	1051 (86.79)	512 (42.28)	1024 (84.56)	453 (37.41)	982 (87.45)	453 (37.41)	173 (14.29)	1005 (82.99)

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
535.702	32	46.19

The chi square test is applied for further discussion. The computed chi square value is 535.702, which is greater than its tabulated value at five percent level of significance. Hence, the difference in academic ranking is stastically identified as significant with respect to type of research material willing to deposit in Instittional Repositories.

It could be seen clearly from the above discussion that the there is definite relationship between academic ranking and type of research material to deposit in Institutional Repository.

5.4.4.2 Discipline wise deposit of research material.

A study of data in Table 5.27 indicates the discipline wise respondents willing to deposit research material in Institutional Repositories.

It could be noted that 14.78% (n=179) academic scholar from Arts & Humanities discipline would like deposit Thesis (Abstract) in the Institutional Repositories than thesis(13.29%, n=161), book chapters(9.99%, n=121) and pre prints(3.39%, n=41). Social sciences discipline scholars are very much interested deposit to Audio, video files(26.26%, n=318) respective Repositories. The least frequent type of materials to be contributed by the researchers was found to be software and software related materials. This might have been due to all state universities not having a suitable technology for such martial.

In the other hand it is observed that thesis (full text) is the most interested research material to deposit Irs by science discipline (58.05%, n=703). Conversely thesis (abstract) is preferred by social science discipline scholars (27.75%, n=336).

Table 5.27 Discipline wise deposit of research material

Discipline	Thesis (Full text)	Thesis (Abstract)	Pre-prints	Post-prints	Technical Reports	Conference Papers	Book Chapters	Soft wares	Audio/ Videos& Photos
Arts & Humanities	161 (13.29)	179 (14.78)	41 (3.39)	159 (13.13)	11 (0.91)	135 (11.15)	121 (9.99)	0 (0.00)	171 (14.12)
Social Science	299 (24.69)	336 (27.75)	96 (7.93)	301 (24.86)	26 (2.15)	289 (23.86)	124 (9.99)	0 (0.00)	318 (26.26)
Science	703 (58.05)	918 (75.81)	389 (32.12)	829 (68.46)	447 (36.91)	835 (68.95)	222 (18.33)	142 (11.73)	846 (69.86)

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
368.46	16	26.30

The chi square test is applied for further discussion. The computed chi square value is 368.46, which is greater than its tabulated value at 5% level of significance26.30). Hence the difference in discipline is statistically identified as significant with respect to type of research work deposit in Institutional Repositories.

5.4.4.3 University wise deposit of research material to IRs.

A study of data in Table 5.28 indicates the university wise views on the type of research material depositing in Institutional Repositories. It could be noted that out of the 1211 respondents from different universities, 294 (24.28%) academic scholars from Mysore University and 275(22.71%) respondents from Bangalore University are willing to deposit thesis (Full text) in respective Repositories, which is highest ratio among all other type of research material willing to deposit in Institutional Repositories.

Table 5.28 University wise deposit of research material

University	Thesis (Full text)	Thesis (Abstract)	Pre-prints	Post-prints	Technical Reports	Conference Papers	Book Chapters	Soft wares	Audio/ Videos& Photos
Mysore University	294 (24.28)	292 (24.11)	89 (7.35)	275 (22.71)	83 (6.85)	268 (22.13)	83 (6.85)	33 (2.73)	274 (22.63)
Bangalore University	275 (22.71)	272 (22.46)	94 (7.76)	249 (20.56)	89 (7.35)	249 (20.56)	84 (6.94)	37 (3.06)	253 (20.89)
Mangalore University	241 (19.90)	239 (19.74)	98 (8.09)	212 (17.51)	87 (7.18)	212 (17.51)	75 (6.19)	24 (1.98)	221 (18.25)
Kuvempu University	191 (15.77)	187 (15.44)	78 (6.44)	158 (13.05)	77 (6.36)	151 (12.47)	69 (5.70)	24 (1.98)	178 (14.70)
Karnataka University	213 (17.59)	209 (17.26)	83 (6.85)	194 (16.02)	78 (6.44)	188 (15.52)	88 (7.27)	26 (2.15)	195 (16.10)
Gulbarga University	239 (19.74)	234 (19.33)	84 (6.94)	201 (16.60)	70 (5.78)	191 (15.77)	68 (5.62)	29 (2.39)	214 (17.67)

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
27.111	40	55.76

A more than half of the schoalrs from Gulbarga University willing to deposit thesis absctract to institutoanal Repositories, interesting majority of scholar from all discipline not willing to deposit soffware research material in respective Repositories.

The chi square test is applied for further discussion. The computed chi square value is 27.111, which is lesser than its tabulated value at five percent level of significance. Hence, the difference in deposit of research material is stastically identified as insignificant with respect to university status.

It could be seen clearly from the above discussion that the there is no relationship between university and type of research material to deposit in Institutional Repository.

5.4.4.4 Gender wise deposit of research material to IRs

A study of data in Table 5.29 indicates the gender wise views on the type of research material depositing in Institutional Repositories. It could be noted that a more than half of the male willing to deposit thesis abstract to Institutional Repositories. A considerable male respondents (69.18%, n=651) willing to deposit thesis full text to Institutional Repositories. Majority of the female academic scholars are willing to deposits conference papers to their respective Institutional Repositories.

The chi square test is applied for further discussion. The computed chi square value is 302.881, which is greater than its tabulated value at five percent significance level. Hence the difference in gender is statistically identified as insignificant with respect to type of research material to be deposited in Institutional Repositories.

Table 5.29 Gender wise deposit of research material to IRs

Material Type	Male	% Male	Female	% Female
Thesis (Full Text)	651	69.18	512	64.40
Thesis (Abstract)	903	95.96	530	66.67
Pre-prints	148	15.73	378	47.55
Post-prints	702	74.60	587	73.84
Technical reports	203	21.57	281	35.35
Conference Papers	605	64.29	654	82.26
Book chapters	284	30.18	183	23.02
Software	69	7.33	104	13.08
Audio/ videos & Photos	841	89.37	494	62.14

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
302.881	8	15.51

It could be seen clearly from the above discussion that a considerable number of male respondents mainly willing to deposit bibliographic details of thesis and majority of the female respondents are would like to deposit post prints to Institutional Repositories.

5.4.5 Target Audiene for research output.

In this study, researcher made attempt on finding target user for research output of acacemic scholars from different discipline of six state universities of Karnataka.

5.4.5.1 Academic ranking wise audience for research output.

A study of data in Table 5.30 indicates the academic ranking wise respondents views on target audience for research output. When asked who the target of research publications was, the research funder themselves was the least common target. Only 9.36% of respondents targeted their research funder, nearly 26.63% just a small group of researchers in their discipline, and over 51.69 % chose scholars in same discipline.

Table 5.30 Academic ranking -wise target audience for research output

Category	Small group	Scholars in discipline	Academic community	Funding agency
Professor	3(5.08)	14(23.73)	35(59.32)	7(11.86)
Associate Professor	14(14.43)	37(38.14)	19(19.59)	27(27.84)
Assistant professor	27(20.15)	79(58.96)	14(10.45)	14(10.45)
Research scholars	130(27.08)	257(53.54)	54(11.25)	39(8.13)
PG Students	213(31.19)	364(5.329)	57(8.35)	49(7.71)
Total	387(26.63)	751(51.69)	179(12.31)	136(9.36)

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
437.0184	12	21.026

The chi square test is applied for further discussion. The computed chi square value is 437.018, which is greater than its tabulated value at five percent level of significance. Hence the difference in educational status is statistically identified as significant with respect to respondents' views on target audience for research output.

5.4.5.2 Discipline wise target audience for research output.

A study of data in Table 5.31 indicates the discipline wise target audience for research output in the respective universities. It could be noted that more than half of the scholars from different discipline are intended to reach to scholars from the same discipline. Only 9.36 % from all discipline intended to reach funding agency, which is lowest ratio among all types of target audience for research output.

Table 5.31 Discipline wise target audience for research output

Discipline	Small group	Scholars in discipline	Academic community	Funding agency
Arts & Humanities	77(42.54)	87(48.07)	13(7.18)	4(2.21)
Social Science	124(36.15)	128(37.32)	56(16.33)	35(10.20)
Science	186(20.02)	536(57.70)	110(11.84)	97(10.44)
Total	387(26.63)	751(51.69)	179(12.32)	136(9.36)

Chi-Square summary results

Chi square Calculated value	Degree of Freedom	Chi square tabulate value
84.593	6	12.59

The chi square test is applied for further discussion. The computed chi square value is greater than its tabulated value at 5 percent level of significance. Hence, the difference in discipline is statistically identified as significant with respect respondents' views on target audience for their research output.

It could be seen clearly from the above discussion that social sciences scholars intended to reach limited numbers of scholars' community, science discipline scholar (57.70%, n=536) intended to reach all scholars of concerned academic community.

5.4.5.3 University wise target audience for research output.

A study of data in Table 5.32 indicates the University wise target audience for research output in the respective universities. It could be noted that more than half51.69%, n=751) of the scholars from different university are intended to reach to smaller group scholars from the same discipline. Only 9.36 %(n= 136) from all university academic scholars intended to reach funding agency, which is lowest ratio among all types of target audience for research output.

Table 5.32 University wise target audience for research output

University	Small group	Scholars in discipline	Academic community	Funding agency
Mysore University	98(33.33)	146(49.66)	31(10.54)	19(6.46)
Bangalore University	83(30.18)	122(44.36)	34(12.36)	36(13.09)
Mangalore University	59(24.48)	147(61.00)	23(9.54)	12(4.98)
Kuvempu University	44(23.04)	77(40.31)	35(18.52)	35(18.32)
Karnataka University	59(27.70)	112(52.58)	29(13.62)	13(6.10)
Gulbarga University	44(18.41)	147(61.51)	27(11.30)	21(8.79)
Total	387(26.63)	751(51.69)	179(12.32)	136(9.36)

It could be seen clearly from the above discussion that Mysore university(49.66%, n=146) scholars intended to reach small group of scholars' community, Gulbarga university (61.51%, n=147) scholar intended to reach all scholars of concerned academic community and Kuvempu university(40.31%, n=77) scholars would like disseminate their research output the within the academic community.

5.4.5.4 Gender wise target audience for research output.

A study of data in Table 5.33 indicates the Gender wise target audience for research output in the respective universities. It could be noted that more than half of the male academic scholars' states that they prefer to have scholars from same

discipline as target audience for their research output. 20.68% of male respondents intended to reach small group of academic scholars, but only 12.57% male scholars would like have funding or sponsoring agency as target audience.

Table 5.33 Gender wise target audience for research output

Gender	Small group	Scholars in discipline	Academic community	Funding agency
Male	158(20.68)	413(54.06)	97(12.70)	96(12.57)
Female	229(33.24)	338(49.06)	82(11.90)	40(5.81)
Total	387(26.63)	751(51.69)	179(12.32)	136(9.36)

It could be seen clearly from the above discussion that both male and female respondents would like to disseminate their research output to scholars from same discipline than any other types of target audience for their research findings.

5.5 Motivations for contributing to Institutional Repositories

Gadd et al. (2003) describe in-depth research into attitudes towards depositing research output into Institutional Repositories. Genoni (2004) recognises the need for learning and teaching material Repositories to 'broaden the content of Institutional Repositories where they include many types of texts that would fall outside those categories of material previously collected in libraries'. We therefore need to know which materials academics would like to contribute and find in Repositories. Drake (2004) identified a range of Repositories: 'Repositories may be limited to one field, one department, one institution or a consortium of several institutions'.

The **Further Education Resources for Learning** (FERL, 2005) carried out a survey and found that the main incentive for contributing was the opportunity for, and satisfaction of, sharing. However, higher education academics might have different reasons for contributing material to Repositories.

In the final part of the survey, academic scholars were invited to put tick marks with a number of statements about their potential use of the Institutional

Repositories. And these were classed as motivations to depositing to Institutional Repositories.

5.5.1 Academic ranking wise reasons for contributing to Institutional Repositories

A study of data in Table 5.34 indicates the academic ranking wise respondents' views on reasons for contributing to Institutional Repositories. It can be assessed with help of ten factors. These include To communicate Research results, can add multimedia data to research work, number of citations gets increase, chances of getting promotion, and disseminate quickly, permanent archive, easy to find published work, cheaper access to users, against plagiarism and Repositories will be well indexed and archived.

Out of the total chosen ten factors, the academic scholars rate first order motivation in depositing to IRs in terms of access of works is cheaper to others as it secure mean score 4.16 on a five point rating scale. This is a highest level of reason to contribute their research output to Institutional Repositories. The respondents' second order reason to deposit in Institutional Repository in terms of Communicate Research results as it secures 4.07 on 5 point rating scale. Research work will disseminate more quickly is rated at third order reasons as it secures mean score 4.05 on 5 point rating scale.

The academic ranking wise analysis reveals the following facts. The research scholars take the first position with respect to their overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 3.49 on 5 point rating scales. The Assistant Professor ranking scholars have the second position with respect to overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 3.47 on 5 point rating scales. Associate professor from academic scholars category holds the third position with respect to their overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 3.31 on 5 point rating scales.

Table 5.34 Academic Ranking wise perceptions on characteristics on Depositing to IR

Characteristics of depositing in IRs	Professor	Associate Professor	Assistant Professor	Research Scholars	PG Students	Mean
To Communicate Research results	4.25	4.21	4.18	4.74	2.98	4.07
Can add multimedia data to my work	2.18	3.01	3.19	3.59	4.17	3.23
Number of citations of my work gets increase	4.17	3.18	3.89	3.18	3.58	3.60
Chances for get promotion are increased	1.18	2.96	3.01	2.12	1.16	2.09
Work is disseminated more quickly	3.98	3.56	4.17	4.26	4.28	4.05
Work will be permanently archived and available	3.05	3.25	3.58	4.18	3.12	3.44
Published material is easy to find	3.00	3.77	3.38	3.23	4.06	3.49
Depositing my work in IR protects it from plagiarism	1.12	1.98	2.01	2.23	1.09	1.69
access to work is cheaper to others	4.01	4.19	4.02	4.46	4.12	4.16
Repository is well indexed and archived	2.96	3.01	3.26	2.86	2.98	3.01
Mean	2.99	3.31	3.47	3.49	3.15	3.28

ANOVA					
Source of Variation	**SS**	**df**	**MS**	**F-ratio**	**F crit@5%**
Rows	31.02228	9	0.446815	5.4795016	1.9976
Columns	1.78726	4	3.44692	42.271194	2.6335
Error	9.46186	36	0.081543		
Total	**42.2714**	**49**			

The ANOVA two way model is applied for further discussion. At one point, the computed ANOVA value is 42.2711945, which is greater than its tabulated value at 5 % level of significance. Hence there is significant variation among chosen academic ranking with respect reasons for contributing to Institutional Repositories. At another point, the computed ANOVA value is 5.4795016, which is greater than its tabulated value at 5 % level of significance. Hence variation among the attributes relating to academic scholars overall perceptions on reasons for contributing to Institutional Repositories is statistically identified as significant.

5.5.2 Discipline wise reasons for contributing to Institutional Repositories

A study of data in Table 5.35 indicates the discipline wise respondents' views on reasons for contributing to Institutional Repositories. It can be assessed with help of ten factors. These include accessibility of work increased, can add multimedia data to research work, number of citations gets increase, chances of getting promotion, and disseminate quickly, permanent archive, easy to find published work, cheaper access to users, against plagiarism and Repositories will be well indexed and archived.

Out of the total chosen ten factors, the academic scholars rate first order motivation in depositing to IRs in terms of communicate research results as it secure mean score 3.85 on a five point rating scale. This is a highest level of reason to contribute their research output to Institutional Repositories. The respondents' second order reason to deposit in Institutional Repository in terms of access to work is cheaper to others as it secure 3.80 on 5 point rating scale. Research work will disseminate more quickly is rated at third order reasons as it secures mean score 3.77 on 5 point rating scale.

Table 5.35 Discipline wise reasons for contributing to Institutional Repositories

Reasons for contributing to Institutional Repositories	Arts & Humanities	Social Science	Science	Mean
To Communicate Research Results	3.46	3.87	4.21	3.85
Can add multimedia data to my work	1.98	2.73	3.76	2.82
Number of citations of my work gets increase	2.96	3.50	3.86	3.44
Chances for get promotion are increased	1.58	1.87	2.29	1.91
Work is disseminated more quickly	3.45	3.53	4.32	3.77
Work will be permanently archived and available	1.85	2.27	4.28	2.8
Published material is easy to find	1.98	2.70	4.10	2.93
Depositing work in IR protects it from plagiarism	1.45	1.27	1.89	1.54
access to work is cheaper to others	2.96	3.87	4.56	3.80
Repository is well indexed and archived	2.02	3.20	3.11	2.78
Mean	2.37	2.88	3.64	3.11

ANOVA					
Source of Variation	**SS**	**df**	**MS**	**F-ratio**	**F crit@5%**
Rows	16.7029	2	8.351425	51.6995	3.55
Columns	8.15185	9	0.905761	5.60711	2.51
Error	2.90768	18	0161538		
Total	**27.7624**	**29**			

The discipline wise analysis reveals the following facts. The science discipline take the first position with respect to overall perceptions on reasons to contributing to Institutional Repositories as it secured mean score 3.64 on 5 point

rating scales. The social Sciences discipline scholars have the second position with respect to overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 2.88 on 5 point rating scales. Arts & Humanities academic scholars' category holds the third position with respect to their overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 2.37 on 5 point rating scales.

The ANOVA two way model is applied for further discussion. At one point, the computed ANOVA value is 51.6995, which is greater than its tabulated value at 5 % level of significance. Hence there is significant variation among chosen academic ranking with respect reasons for contributing to Institutional Repositories. At another point, the computed ANOVA value is 5.60711, which is greater than its tabulated value at 5 % level of significance. Hence variation among the attributes relating to Discipline overall perceptions on reasons for contributing to Institutional Repositories is statistically identified as significant.

5.5.3 University wise reasons for contributing to Institutional Repositories

A study of data in Table 5.36 indicates the University wise respondents' views on reasons for contributing to Institutional Repositories. It can be assessed with help of ten factors. These include communicate Research Results , can add multimedia data to research work, number of citations gets increase, chances of getting promotion, and disseminate quickly, permanent archive, easy to find published work, cheaper access to users, against plagiarism and Repositories will be well indexed and archived.

Table 5.36 University wise reasons for contributing to Institutional Repositories

Reasons for contributing to Institutional Repositories	Mysore university	Bangalore University	Mangalore University	Kuvempu University	Karnataka University	Gulbarga University	Total
To Communicate Research Results	4.56	4.2	3.96	3.96	4	3.74	4.1
Can add multimedia data to my work	3.31	3.3	3.45	3.01	3.1	3.25	3.23
Number of citations of my work gets increase	3.78	3.4	3.78	3.61	3.5	3.45	3.6
Chances for get promotion are increased	2.16	2.1	1.96	2.21	2.2	2.09	2.1
Work is disseminated more quickly	4.16	4.3	4.15	4.01	4	3.73	4.1
Work will be permanently archived and available	3.33	3.5	3.01	3.58	3.8	3.37	3.4
Published material is easy to find	3.56	3.5	3.37	3.58	3.6	3.39	3.5
Depositing my work in IR protects it from plagiarism	1.75	1.8	1.96	1.56	1.5	1.44	1.7
access to work is cheaper to others	4.08	4.2	4.07	4.25	4.4	4.02	4.2
Repository is well indexed and archived	3.02	3.1	3.12	3.12	3.1	2.95	3.1
Total	3.37	3.3	3.28	3.29	3.3	3.14	3.3

ANOVA					
Source of Variation	**SS**	**df**	**MS**	**F-ratio**	**F crit@5%**
Rows	37.05594	9	0.063228	0.5939188	1.9976
Columns	0.31614	5	4.117327	38.675236	2.4221
Error	1.303036	45	0.106459		
Total	**38.67512**	**59**			

Out of the total chosen ten factors, the academic scholars rate first order motivation in depositing to IRs in terms of access to work is cheaper to others as it secure mean score 4.2 on a five point rating scale. This is a highest level of reason to contribute their research output to Institutional Repositories. Communicate research results and permanently archived jointly rates second order reason to deposit in Institutional Repository in terms of access to work is cheaper to other as it secure 4.1 on 5 point rating scale. Number of citations of work gets increase is rated at third order reasons as it secures mean score 3.6 on 5 point rating scale.

The University wise analysis reveals the following facts. The Mysore University takes the first position with respect to overall perceptions on reasons to contributing to Institutional Repositories as it secured mean score 3.37 on 5 point rating scales. The Karnataka University has the second position with respect to overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 3.30 on 5 point rating scales. Kuvempu University holds the third position with respect to their overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 3.29 on 5 point rating scales.

The ANOVA two way model is applied for further discussion. At one point, the computed ANOVA value is 0.5939188, which is lesser than its tabulated value at 5 % level of significance. Hence there is significant variation among chosen academic ranking with respect reasons for contributing to Institutional Repositories. At another point, the computed ANOVA value is 38.675236, which is greater than its tabulated value at 5 % level of significance. Hence variation among the attributes relating to Discipline overall perceptions on reasons for contributing to Institutional Repositories is statistically identified as significant.

5.5.4 Gender wise reasons for contributing to Institutional Repositories.

A study of data in Table 5.37 indicates the Gender wise respondents' views on reasons for contributing to Institutional Repositories. It can be assessed with help of ten factors. These include communicate research results, can add multimedia data to research work, number of citations gets increase, chances of getting promotion,

and disseminate quickly, permanent archive, easy to find published work, cheaper access to users, against plagiarism and Repositories will be well indexed and archived.

Table 5.37 Gender wise reasons for contributing to Institutional Repositories

Reasons for contributing to Institutional Repositories	Male	Female	Total
To Communicate Research Results	4.18	4.00	4.07
Can add multimedia data to my work	3.35	3.10	3.20
Number of citations of my work gets increase	3.61	3.60	3.61
Chances for get promotion are increased	2.15	2.00	2.08
Work is disseminated more quickly	4.01	4.10	4.07
Work will be permanently archived and available	3.02	3.90	3.44
Published material is easy to find	3.56	3.42	3.49
Depositing my work in IR protects it from plagiarism	1.25	2.10	1.68
access to work is cheaper to others	4.05	4.30	4.16
Repository is well indexed and archived	2.98	3.10	3.02
Total	3.22	3.40	3.29

t-value =1.1287, df=9, Standard error of difference=0.129, T critical value=2.262

A study of data in Table 5.37 indicates the gender wise respondents' views on perceptions on reasons for contributing to Institutional Repositories. The female respondents take the first position with respect to their reasons to contribute to Institutional Repositories as they secured mean score 3.40 on a 5 point rating scale. The male respondents take the second position with respect to their overall perceptions on motivations for deposit in Institutional Repositories as they secured mean 3.22 on a 5 point scale.

The t test is applied for further discussion. The computed t value is 1.1287, which is lesser than its tabulated value at 5 % level of significance(table value=2.262). Hence, there is no significant relationship between male and female academic scholars with respect to their perceptions on reasons to deposit in Institutional Repositories.

It could be seen clearly from the above discussion that the female academic scholars occupy the first position with respect to reasons for depositing to Institutional Repositories and male scholars lag behind the female academic scholars in this regard.

5.6 Reasons for not contributing to Institutional Repositories

Respondents were also asked to specify their reasons that made them not willing to contribute content to University Institutional Repository.

In the survey, academic scholars were invited to put tick marks with a number of statements about their potential non use of the Institutional Repositories. And these were classed as reasons for not to depositing in Institutional Repositories.

5.6.1 Academic ranking wise reasons for not contributing to Institutional Repositories

A study of data in Table 5.38 indicates the academic ranking wise respondents' views on reasons for not contributing to Institutional Repositories. It can be assessed with help of ten factors. These include prefer available in own website, Repositories have low prestige, others may copy without permission, , depositing work is time consuming, no clear idea about depositing, copyright issues and no review process implemented in Institutional Repositories.

Table 5.38 Academic ranking wise reasons for not contributing to Institutional Repositories

Reasons for not depositing in IRs	Professor	Associate Professor	Assistant Professor	Research Scholars	PG Students	Mean
Prefer to make my work available only on my personal website	3.75	4.22	4.78	3.01	2.96	3.74
Repository have low prestige	3.56	4.25	4.89	4.18	2.98	3.97
Others might have copy my work without my permission	4.41	4.21	4.58	4.91	3.75	4.37
University might expect me to pay to deposit my work	2.56	2.98	3.12	2.59	3.12	2.87
Difficult and time-consuming to deposit my work	2.21	2.12	2.32	2.56	3.78	2.59
Do not know how and what to deposit	3.23	3.96	3.48	4.26	3.25	3.64
Concerned that if I deposit my work in the University's Repository I may not be able to publish it elsewhere	4.14	4.25	4.28	4.45	2.78	3.98
Publishers would not let me put my work in a Repository	4.21	4.48	4.56	4.75	3.12	4.22
Concerned that my work might not be preserved in the long term	3.12	3.97	3.28	3.96	4.01	3.67
No peer-review process	4.45	4.58	4.57	4.41	4.78	4.56
Mean	3.56	3.90	3.99	3.91	3.45	3.76

ANOVA					
Source of Variation	**SS**	**df**	**MS**	**F-ratio**	**F crit@5%**
Rows	17.39628	9	0.564438	8.7791517	1.9976
Columns	2.257752	4	1.93292	30.0642372	2.6335
Error	10.41013	36	0.064293		
Total	**30.06416**	**49**			

Out of the total chosen ten factors, the academic scholars rate first order motivation in not depositing to IRs in terms of no review process in Institutional Repositories as it secure mean score 4.56 on a five point rating scale. This is a highest level of reason for not contribute their research output to Institutional Repositories. The respondents' second order reason for not deposit in Institutional Repository in terms of Others might have copy my work without my permission as it secure 4.37 on 5 point rating scale. Copyright issues rated at third order reasons as it secures mean score 4.22 on 5 point rating scale.

The academic ranking wise analysis reveals the following facts. Assistant professors take the first position with respect to their overall perceptions on reasons for not contributing to Institutional Repositories as they secured mean score 3.99 on 5 point rating scales. The research scholars ranking scholars have the second position with respect to overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 3.91 on 5 point rating scales. Associate professor from academic scholars category holds the third position with respect to their overall perceptions on reasons for not contributing to Institutional Repositories as they secured mean score 3.90 on 5 point rating scales.

The ANOVA two way model is applied for further discussion. At one point, the computed ANOVA value is 30.0642372, which is greater than its tabulated value at 5 % level of significance. Hence there is significant variation among chosen academic ranking with respect reasons for not contributing to Institutional Repositories.

At another point, the computed ANOVA value is 8.7791517, which is greater than its tabulated value at 5 % level of significance. Hence variation among the attributes relating to academic scholars overall perceptions on reasons for not contributing to Institutional Repositories is statistically identified as insignificant.

5.6.2 Discipline wise reasons for not contributing to Institutional Repositories.

A study of data in Table 5.39 indicates the discipline wise respondents' views on reasons for not contributing to Institutional Repositories. It can be assessed with help of ten factors. These include prefer available in own website, Repositories have low prestige, others may copy without permission, depositing work is time consuming, no clear idea about depositing, copyright issues and no review process implemented in Institutional Repositories.

Out of the total chosen ten factors, the discipline wise academic scholars rate first order motivation in not depositing to IRs in terms of no review process in Institutional Repositories as it secure mean score 4.39 on a five point rating scale. This is a highest level of reason for not contribute their research output to Institutional Repositories. The respondents' second order reason for not deposit in Institutional Repository in terms of does not know how and what to do deposit as it secure 4.21 on 5 point rating scale. Plagiarism issues rated at third order reasons as it secures mean score 4.11 on 5 point rating scale.

The discipline wise analysis reveals the following facts. Social sciences discipline takes the first position with respect to their overall perceptions on reasons for not contributing to Institutional Repositories as they secured mean score 3.86 on 5 point rating scales. The science discipline have the second position with respect to overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 3.82 on 5 point rating scales. Arts & Humanities holds the third position with respect to their overall perceptions on reasons for not contributing to Institutional Repositories as they secured mean score 3.70 each on 5 point rating scales.

Table 5.39 Discipline wise reasons for not contributing to Institutional Repositories.

Reasons for not depositing in IRs	Arts & Humanities	Social Science	Science	Mean
Prefer to make my work available only on my personal website	2.56	2.98	4.21	3.25
Repository have low prestige	3.78	3.87	4.08	3.91
Others might have copy my work without my permission	3.68	4.17	4.47	4.11
University might expect me to pay to deposit my work	4.08	3.08	2.48	3.21
Difficult and time-consuming to deposit my work	4.25	3.29	2.14	3.87
Do not know how and what to deposit	4.25	4.16	3.18	4.21
Concerned that if I deposit my work in the IR I may not be able to publish it elsewhere	3.01	3.49	4.29	3.60
Publishers would not let me put my work in a Repository	3.09	3.95	4.66	3.90
Work might not be preserved in the long term	4.09	3.99	4.66	3.84
No peer-review process	4.21	4.2	4.76	4.39
Mean	3.70	3.86	3.82	3.80

ANOVA					
Source of Variation	**SS**	**df**	**MS**	**F-ratio**	**F crit @5%**
Rows	5.0271	2	2.513549	5.3919	3.55
Columns	0.2273	9	0.025259	0.0541	2.51
Error	8.3910	18	0.46617		
Total	**13.6455**	**29**			

The ANOVA two way model is applied for further discussion. At one point, the computed ANOVA value is 5.3919, which is greater than its tabulated value at 5 % level of significance. Hence there is significant variation among chosen academic ranking with respect reasons for not contributing to Institutional Repositories. At another point, the computed ANOVA value is 0.05541, which is lesser than its tabulated value at 5 % level of significance. Hence variation among the attributes relating to academic scholars overall perceptions on reasons for not contributing to Institutional Repositories is statistically identified as insignificant.

5.6.3 University wise reasons for not contributing to Institutional Repositories.

A study of data in Table 5.40 indicates the University wise respondents' views on reasons for not contributing to Institutional Repositories. It can be assessed with help of ten factors. These include prefer available in own website, Repositories have low prestige, others may copy without permission, depositing work is time consuming, no clear idea about depositing, copyright issues and no review process implemented in Institutional Repositories.

Table 5.40 University wise reasons for not contributing to Institutional Repositories

Reasons for not depositing in IRs	Mysore university	Bangalore University	Mangalore University	Kuvempu University	Karnataka University	Gulbarga University	Mean
Prefer to make my work available only on my personal website	3.96	3.71	3.59	3.66	3.70	4.00	4.00
Repository have low prestige	3.45	4.02	4.22	4.24	3.90	4.00	4.00
Others might have copy my work without my permission	4.68	4.32	4.36	4.12	4.20	5.00	4.38
University might expect me to pay to deposit my work	2.36	2.99	2.69	3.01	3.20	3.00	3.00
Difficult and time-consuming to deposit my work	3.96	2.27	2.25	2.21	2.50	2.00	2.60
Do not know how and what to deposit	4.28	3.57	3.98	3.18	3.20	4.00	4.00
Concerned that if I deposit my work in the University's Repository I may not be able to publish it elsewhere	4.12	3.86	3.88	3.76	4.20	4.00	3.97
Publishers would not let me put my work in a Repository	4.05	4.18	4.26	4.25	4.50	4.00	4.00
Concerned that my work might not be preserved in the long term	4.08	3.63	3.61	3.56	3.60	4.00	4.00
No peer-review process	4.68	4.72	4.41	4.52	4.50	4.50	4.60
Mean	3.96	3.73	3.73	3.65	3.70	4.00	4.00

ANOVA					
Source of Variation	**SS**	**df**	**MS**	**F-ratio**	**F crit@5%**
Rows	22.10758	9	0.068179	0.774911062	1.9976
Columns	0.613615	9	2.456397	27.91899572	1.9976
Error	5.197935	81	0.087983		
Total	**27.91913**	**99**			

Out of the total chosen ten factors, the University wise academic scholars rate first order motivation in not depositing to IRs in terms of no review process in Institutional Repositories as it secure mean score 4.60 on a five point rating scale. This is a highest level of reason for not contribute their research output to Institutional Repositories. Others might have copy my work without my permission rated at second order reasons as it secures mean score 4.38 on 5 point rating scale.The respondents' third order reason for not deposit in Institutional Repository in terms of Others might have copy my work without my permission, Copyright issues, do not know how and what to deposit and prefers to deposit personal website jointly as it secures 4.00 on 5 point rating scale.

The University wise analysis reveals the following facts. Gulbarga University takes the first position with respect to their overall perceptions on reasons for not contributing to Institutional Repositories as they secured mean score 4.00 on 5 point rating scales. The Mysore University has the second position with respect to overall perceptions on reasons to contributing to Institutional Repositories as they secured mean score 3.96 on 5 point rating scales. The Bangalore and Mangalore university jointly holds the third position with respect to their overall perceptions on reasons for not contributing to Institutional Repositories as they secured mean score 3.73 each on 5 point rating scales.

The ANOVA two way model is applied for further discussion. At one point, the computed ANOVA value is 27.91899572, which is greater than its tabulated value at 5 % level of significance. Hence there is significant variation among chosen

academic ranking with respect reasons for not contributing to Institutional Repositories. At another point, the computed ANOVA value is 0.774911062, which is lesser than its tabulated value at 5 % level of significance. Hence variation among the attributes relating to academic scholars overall perceptions on reasons for not contributing to Institutional Repositories is statistically identified as insignificant.

5.6.4 Gender wise reasons for not contributing to Institutional Repositories

A study of data in Table 5.41 indicates the Gender wise respondents' views on reasons for not contributing to Institutional Repositories. It can be assessed with help of ten factors. These include prefer available in own website, Repositories have low prestige, others may copy without permission, depositing work is time consuming, no clear idea about depositing, copyright issues and no review process implemented in Institutional Repositories.

Table 5.41 Gender wise reasons for not contributing to Institutional Repositories

Reasons for not depositing in IRs	Male	Female	Mean
Prefer to make my work available only on my personal website	4.01	3.47	3.74
Repository have low prestige	4.31	3.63	3.97
Others might have copy my work without my permission	3.98	4.76	4.37
University might expect me to pay to deposit my work	2.78	2.96	2.87
Difficult and time-consuming to deposit my work	2.96	2.22	2.59
Do not know how and what to deposit	3.45	3.83	3.64
Concerned that if I deposit my work in the University's Repository I may not be able to publish it elsewhere	3.95	4.01	3.98
Publishers would not let me put my work in a Repository	4.22	4.22	4.22
Concerned that my work might not be preserved in the long term	4.12	3.22	3.67
No peer-review process	4.51	4.61	4.56
Mean	3.83	3.69	3.76

t-value =0.7815, df=9, Standard error of difference=0.17, T critical value=2.262

A study of data in Table 5.41 indicates the gender wise respondents' views on perceptions on reasons for not contributing to Institutional Repositories. The male respondents take the first position with respect to their reasons for not contributing to Institutional Repositories as they secured mean score 3.83 on a 5 point rating scale. The female respondents take the second position with respect to their overall perceptions on motivations for deposit in Institutional Repositories as they secured mean 3.69 on a 5 point scale.

The t test is applied for further discussion. The computed t value is 0.7815, which is lesser than its tabulated value at 5 % level of significance (t critical value=20262). Hence, there is no significant relationship between male and female academic scholars with respect to their perceptions on reasons to not to deposit in Institutional Repositories.

It could be seen clearly from the above discussion that the male academic scholars occupy the first position with respect to reasons for not depositing to Institutional Repositories and female scholars lag behind the female academic scholars in this regard.

5.7 File formats preferred by academic scholars to deposit in IRs.

Respondents were also asked to specify type of file formats willing to deposit in University Institutional Repository.

In the survey, academic scholars were invited to put tick marks with a number of file formats to prepare research material and same will be deposit in Institutional Repositories. And these were classed as file formats to depositing in Institutional Repositories

5.7.1 Academic ranking wise file formats preferred to deposit in IRs.

Academic scholars were asked which file formats they generally used and therefore might wish to deposit. The faculties' responses are presented in Table 5.42.

Table 5.42 Academic ranking wise file formats preferred to deposit in IRs.

File Formats	Professor	Associate Professor	Assistant Professor	Research Scholars	PG Students	Total
Pdf	51 (18.35)	99 (22.45)	132 (13.41)	475 (25.11)	675 (19.74)	1432 (82.49)
Ppt	59 (21.22)	93 (21.09)	175 (17.79)	279 (14.75)	652 (19.07)	1258 (72.47)
Html	14 (5.04)	11 (2.50)	78 (7.93)	189 (9.99)	234 (6.84)	526 (30.29)
Ms-Word	55 (19.78)	94 (21.32)	129 (13.11)	411 (21.72)	603 (17.64)	1292 (74.42)
Rtf	31 (11.15)	21 (4.76)	78 (7.93)	69 (3.65)	285 (8.34)	484 (27.89)
Post script	3 (1.08)	11 (2.50)	156 (15.86)	14 (0.74)	49 (1.43)	233 (13.42)
Image	14 (5.04)	27 (6.12)	89 (9.05)	41 (2.17)	296 (8.66)	467 (26.91)
Audio/ video	51 (18.34)	85 (19.27)	147 (14.94)	414 (21.88)	625 (18.28)	1322 (76.15)

It is observed from the above table that 18.35 %(n=51) of research scholars, 22.45% (n=99) of Associate professors and 19.74% (n=675) post graduate students preferred PDF format to deposit in IRs. Conversely Assistant professors prefers power point presentation (PPT) to deposit research material in IRs (17.79%, n=175), where as professors believes that MS-Word will be suitable file format to deposit in IRs (19.78%, n=55).

The academic category wise analysis reveals the following facts. Pdf file format takes the first position with respect to their overall file formats to deposit in IRs with 82.49%(n=1432). Pdf is the most commonly used. It is most likely that all respondents believed that an appropriately formatted PDF file was the most suitable format. Perhaps this stemmed from faculties' concern of others altering their research work. Interestingly Audio and video formats like mp3, mp4 and wmv file formats takes second position to deposit in IRs (76.15%, n=1322). Microsoft word takes third position among all other file formats preferred to deposit in IRs with

74.42% (n=1292). Other popular file formats are PPT presentation (72.47%, n=1258), HTML (30.29%, n=526). Post script files are least preferred file formats of academic scholars to deposit in IRs (13.42%, n=233).

5.7.2 Discipline wise file formats preferred to deposit in IRs.

A study of data in Table 5.43 indicates the discipline wise respondents' preferred file formats to deposit in Irs.

Table 5.43 Discipline wise file formats preferred to deposit in IRs

File Formats	Arts & Humanities	Social Science	Science	Total
Pdf	179(20.36)	290(18.89)	963(20.38)	1432 (82.49)
Ppt	160(18.20)	299(19.48)	856(18.11)	1258(72.47)
Html	41(4.66)	100(6.51)	385(8.15)	526(30.29)
Ms-word	159(18.09)	301(19.61)	882(18.66)	1292(74.42)
Rtf	10(1.14)	56(3.65)	413(8.74)	484(27.89)
Postscript	6(0.68)	26(1.69)	204(4.32)	233(13.42)
Image	37(4.21)	104(6.78)	319(6.75)	467(26.91)
Audio/video	287(32.65)	359(23.39)	704(14.90)	1322(76.15)

It is observed from the above table that 32.65 %(n=287) of scholars from Arts and Humanities prefers audio and video file formats like mp3, mp4and wmv to deposit in IRs, Pdf file formats takes second position to deposit in IR (20.36%, n=179). In case of Social science discipline also prefers audio and video file formats (23.39%, n=359). Conversely Science discipline scholars preferred PDF format to deposit in Irs(20.38%, n=963), which is highest type of file format preferred by science discipline scholars.

5.7.3 University wise file formats preferred to deposit in IRs.

The University-wise file formats preferred to deposit in IRs are tabulated as follows. The data given in Table 5.44 shows the different file formats among different universities in Karnataka.

Table 5.44 University wise file formats preferred to deposit in IRs

File Formats	Mysore University	Bangalore University	Mangalore University	Kuvempu University	Karnatka University	Gulbarga University	Total
Pdf	283 (22.04)	274 (21.37)	239 (20.89)	188 (18.34)	211 (19.20)	237 (20.14)	1432 (82.48)
Ppt	202 (15.73)	179 (13.96)	219 (19.14)	201 (19.61)	223 (20.30)	234 (19.89)	1258 (72.47)
Html	84 (6.54)	78 (6.08)	98 (8.57)	94 (9.17)	83 (7.56)	89 (7.56)	526 (30.30)
Ms-word	249 (19.39)	275 (21.45)	202 (17.66)	168 (16.40)	194 (17.66)	201 (17.08)	1289 (74.25)
Rtf	93 (7.24)	99 (7.72)	77 (6.73)	68 (6.63)	58 (5.28)	89 (7.56)	484 (27.89)
Postscript	49 (3.81)	41 (3.20)	39 (3.41)	34 (3.32)	43 (3.91)	27 (2.30)	233 (13.42)
Image	68 (5.30)	88 (6.86)	69 (6.03)	75 (7.32)	84 (7.64)	83 (7.05)	467 (26.90)
Audio/video	256 (19.94)	248 (19.34)	201 (17.57)	197 (19.22)	203 (18.47)	217 (18.44)	1322 (76.15)

It is cleared from the above table that Mysore University scholars prefers Pdf file formats to deposit in IRs(22.04%, n=283), which is highest ratio among all other file formats and Microsoft Word takes second position with 19.39% (n=249)

and Post script file format is the least preferred file format to deposit in IRs(3.81%, n=49) for the Mysore university scholars. MS-Word is the most suitable file format to deposit in Irs for Bangalore University Scholars (21.45%, 275), Scholars from Mangalore university trusts pdf format (20.89%, n=239), interestingly Kuvempu and Karnataka university scholars comfortable with Power point presentation (ppt) formats (19.61%, n=201), (20.30%, n=223) respectively. Again Pdf format is most comfortable and secured format for the Gulbarga University Scholars (20.14%, n=237).

5.7.4 Gender wise file formats preferred to deposit in IRs.

A study of data in Table 5.45 indicates the gender wise preferred file formats to deposit in Irs.

Table 5.45 Gender wise file formats preferred to deposit in IRs

File Formats	Male	Female	Total
Pdf	735(21.90)	697(19.07)	1432(82.49)
Ppt	503(14.99)	755(20.66)	1258(72.47)
Html	148(4.41)	378(10.34)	526(30.30)
Ms-word	587(17.49)	702(19.21)	1289(74.25)
Rtf	203(6.05)	281(7.69)	484(27.89)
Postscript	103(3.07)	130(3.56)	233(13.42)
Image	274(8.16)	193(5.28)	467(26.90)
Audio/video	803(23.93)	519(14.20)	1322(76.15)

The majority of male academic scholars prefers Audio and video file formats (23.93%, n=23.93) followed by pdf format (21.90%, n=21.90) and post script file format is the least preferred file format the Male academic scholars (3.07%, n=103). Conversely female respondents believes power point presentation is the best format to deposit in Irs(20.66%, n=755) followed by MS-Word (19.21%, n=702), again

post script file format neglected by female respondents also (3.56%, n=3.56) since it requires Linux based word processors.