

Faculty Perceptions towards Institutional Repository at Cochin University of Science and Technology, India: a Case Study

Shajitha C^{#,*} and Abdul Majeed K.C.[§]

[#]*Cochin University of Science and Technology, Kochi - 682 022, India*

[§]*Farook College, Calicut, Kozhikode - 673 632, India*

^{*}*E mail shajitha.c@gmail.com*

ABSTRACT

Explores the perceptions of faculty members towards Institutional Repository (named as *Dyuthi*) of Cochin University of Science and Technology, Kerala, India. It also discussed the content recruitment nature of faculty members in an institutional repository (IR). In order to carry out the study, a voluntary survey was conducted among faculty members. They showed high awareness and satisfaction about IR, and the highly significant relationship was observed between awareness and satisfaction. However, their self-archiving practice in *Dyuthi* was low, and they were not at all unfamiliar with the self-archiving practice outside *Dyuthi*. Faculty members tended to adopt a traditional preservation strategy to store their works, and they have supported the framing of a policy to deposit their scientific works in IR. This study concludes that to achieve the content growth, self-archiving must be encouraged, and faculty members are capable of self-archiving in IR. *Dyuthi* could elevate itself as a social medium by implementing the facilities such as commenting add-ons, request full-text copy add-ons, controlled vocabulary add-ons, the web of communication add-ons, restricted access, and storage facility similar to Google drive. *Dyuthi*'s workflow should also be altered by giving more importance to preservation.

Keywords: Open access; Institutional repository; Faculty perception; Content recruitment nature; Self-archiving; Preservation.

1. INTRODUCTION

Open access provides a situation in which users can freely access the information with minimal restrictions. Among the number of channels to facilitate open access, journals and repositories stand at the forefront. Institutional repository (IR) is a set of system and services that an institution offers to its members for the storage, preservation, management, and dissemination of the intellectual output of an institution. The ultimate aim of the open access institutional repository is free information for all. By establishing an IR, every institution is proclaiming that they support the open-access movement similar to the rest of the world.

In universities and research institutions, many research projects in various disciplines take place at the same time. Libraries must have an abundant collection of journals, databases, and other resources to satisfy the information need of scholars. However, high-priced information resources create a great deal of disruption in information transfers. Copyright is another barrier faced by scholars, and publishers are grappling the authors through approaches like digital right management (DRM). For a developing country like India, open access Institutional repositories are the best alternative to overcome these challenges.

As of March 2019, the Directory of Open Access Repositories has listed 83 repositories and Registry of Open Access Repositories has listed 121 Repositories in India. Many open-access journals have been published in India by publishers such as the Indian Academy of Sciences, Indian National Science Academy, Indian Medlars Centre of National Informatics Centre, Medknow Publications, Indian journals. com and Kamla-Raj Enterprises¹. Metadata harvesters such as the cross-archive search service for indian repositories (CASSIR), scientific journal publishing in India (SJPI) cross-journal metadata, search digital libraries (SDL), and the search engine for engineering digital repositories (SEED) have also been developed by research institutions in India. To enhance open access to Indian theses and dissertations, University Grants Commission (UGC) stipulated the researchers to deposit their electronic version of theses to UGC. In 2010, Information and Library Network Centre was assigned to construct the digital repository of Indian theses and dissertations and ShodhGanga was launched. In order to build the national asset, the pilot version of National Digital Library was introduced in May 2016, and it came into existence on June 2018.

Although the concept of an IR has been operational for many years, some of the initial problems still prevail. Among these, content recruitment is the key challenge faced by IRs²⁻³. There are many reasons for this – either author does not feel like an IR is one of the essential things, or the IRs failed to create

such feeling among authors. It may be due to the availability of other platforms for self-archiving, which better facilitate content control. It is therefore essential to study the perception of faculty members towards IR and the problems encountered by faculty members while using IR. There have been only a few studies in India on faculty perceptions and their content recruitment nature with respect to IR, and it can be stated that the faculty perceptions towards IR in India currently remains not particularly well understood. The present study discusses the faculty perceptions about IR and their content recruitment nature, benefits and hindrances faced by the faculty members relating to the contribution, the attitude of faculty members towards institutional policies and preservation methods adopted by faculty members. This study provides an insight into the approach of Indian authors towards IR.

2. LITERATURE REVIEW

Globally, there is a significant amount of research available on faculty perceptions about IRs and their self-archiving behaviour. Among these, the study conducted by Davis and Connolly⁴ at Cornell University is an important one. The authors found that most faculty members were not populating and using Cornell's DSpace and the normative culture of each discipline also influenced the faculty contribution. Abrizah⁵ observed that academics at the University of Malaya had low awareness of the IR of the University, and had good self-archiving experience on publicly accessible websites and other open access digital repositories. Kim⁶ proposed various extrinsic and intrinsic benefits related to IR contribution and found that beneficial factors were more influential than cost or contextual factors.

In the observation of Jantz⁷, the better understanding of faculty research culture, deployment of change agents as cultural intermediaries would populate the IR content with faculty members. In the author's opinion, developing a mandate policy with incentive structures, working with commercial vendors, and importing deep backfiles to an IR will also accelerate IR content with faculty members. In contrast, Xia⁸ argued that an open-access mandate policy, by itself, will not influence the existing practices regarding scholarly self-archiving. Xia⁹ did not support the belief regarding faculties that those who have a self-archiving practice in a subject-based repository are more likely to contribute to an IR than those without. However, Xu Hong¹⁰ found that physics, mathematics, or computer science are excellent faculty choices for building IR because they have an already established preprint culture. However, Zuber¹¹ strongly supported the findings of Xia through a survey conducted among IRs of universities in the USA. Gunasekhara¹² found that Social Science scholars were not familiar with open-access publishing.

Singeh¹³, *et al.* observed that factors such as performance expectancy, effort expectancy, social influence and facilitating condition did not influence authors behavioural intention to self-archive. As per the observation of Kim¹⁴, younger professors, and professors who have good technical skills, tended to self-archive in a higher proportion than others. This finding is similar to the result of Ogun and Assefa¹⁵, who found that seniority in faculty rank and faculty members' perception

of the repository is inversely proportionate. The author noted that scholarly productivity played a significant role in faculty members' perception and willingness to contribute rather than prior knowledge and experience of IRs. The majority of faculty members in Nigerian universities were aware of IR, and that they were benefitting from it. However, most of them had no self-archiving in an IR¹⁶. Faculty members of Texas and AM University had a positive attitude towards open-access publishing and were willing to publish in OA publications. However, most of them were unaware of IR and did not support OA mandates¹⁷. Academics of Nigeria used IRs to a large extent, but their submission rate was very low¹⁸. Almobarraz¹⁹ found that Saudi scholarship students have a desire to archive their work in digital repositories.

Kim²⁰ found that accessibility issues, concern about copyright and additional time and effort had deprived the authors from self-archiving. Singeh²¹, *et al.* conducted a study in five Malaysian Universities, noted that awareness and self-archiving experience was low among academics, with the principal barrier to self-archiving being plagiarism. The study revealed that authors' behavioural intentions did not affect actual self-archiving practices.

India also made their presence known in the IR landscape by establishing an IR in 2002. Fernandez²² observed that open-access initiatives in India were in its infancy. Intellectual property issues, lack of leadership, and poor infrastructure were the main barriers for Indian IRs. All Indian studies in this area have shown that users have high awareness and are willing to contribute to IR. Manjunatha and Thandavamoorthy²³ conducted a study among faculty members, researchers and postgraduate students from universities in Karnataka State and found that the majority of respondents were aware of IR. Compared to other disciplines, there was a low level of awareness among Social Science scholars, but they were willing to contribute to IR.

Sawant²⁴ found that the majority of users were aware of IRs and were willing to contribute to IR. However, their self-archiving experience in IR was low. Preservation was the primary motivating factor, which was highlighted by most users with respect to future contribution. Halder and Chandra²⁵ also found that stakeholders are aware of IR of Jadavpur University. Most faculty members at Annamalai University reported that the dissemination of work is the most important motivation for using IR, and they acknowledged that they had received an orientation class from librarians²⁶. Bhardwaj and Kaushik²⁷ found that students in the St. Stephen College were aware of their IR, but they needed specific training. Sankar and Kavitha²⁸ found that most faculty members in engineering colleges in Coimbatore were deposited/ willing to deposit research articles and theses in IR.

High awareness of IR and low submission rate were also revealed from a survey conducted by Shukla and Khan²⁹ among faculty members and research scholars in minority universities in India. Dutta and Paul³⁰ observed that more than half of faculty members were aware of IR and were ready to contribute. The majority of faculty members highlighted that professional visibility was the most important benefit of IR. An important factor that prevented faculty members from

contribution was concern about copyright, and the faculty members suggested that copyright issues should be handled by the institution. Das and Sarmah³¹ found that assistant professors at Assam University were more aware of their IR than other designated teachers.

3. BACKGROUND OF THE STUDY

Cochin University of Science and Technology (CUSAT), Kerala, was established in 1971, and is one of the most highly rated Indian Universities. It is located in Kerala. CUSAT has two repositories, Media repository, and Dyuthi. The former is organised to store and preserve videos of events, seminars, lectures of Nobel laureates, etc., while the latter archives the intellectual output of the institution. Previously, CUSAT had only one repository –*Dyuthi*, and it was established in 2007. Eventually, the Media repository was created for ease of uploading videos. *Dyuthi* is run using Dspace software, while the Media repository uses MediaCore software. In the period from September 2016 to August 2017, only 47 item have been added to the total content of *Dyuthi*. This low growth rate was one of the factors that led to conducting this study.

4. OBJECTIVES AND METHODS

The survey was conducted among faculty members of CUSAT to understand the following:

- The awareness and perceptions of faculty members about IR (*Dyuthi*)
- Content recruitment nature of faculty members in *Dyuthi*
- Evaluate the experience of faculty members with other platforms outside *Dyuthi*
- The attitude of faculty members towards institutional policies
- Preservation methods adopted by faculty members to store their published/unpublished works.

To conduct a voluntary survey among 310 faculty members of CUSAT, the authors identified the population of a study by visiting each department page of the university website. A list of faculty members was prepared, and their email addresses were also collected from the website. The final list of Assistant Professors, Associate Professors, Professors, Emeritus Professors, and Adjunct Faculties was composed and their email identifications were verified with the university diary. Contract lecturers and guest faculty members were deselected from the study in order to obtain more relevant results. An online questionnaire was designed with the help of a Google form and was sent to 310 faculty members of CUSAT. The questionnaire was prepared on the basis of similar previous studies^{5-6,32}. Follow-up emails were sent twice to all faculty members. The authors had searched the IR and created a list of faculty members, who were frequently contributed to the IR. They were contacted by phone and requested to respond to the survey, and only 49 faculty members participated. The response rate was 15.8 percent. Thus, the sample size is rather small, and the generalisation of the results is relatively confined. However, it is very difficult to get a high response rate in a country like India, where Institutional repositories are

not common. The response rate is nearly the same as that for the faculty surveys at Texas A&M University¹⁷ and California State University Northridge³².

The questionnaire comprised 15 questions, and the questions fall under five headings.

- a) Faculty perception.
- b) Faculty members' experience with *Dyuthi*.
- c) Experience of faculty members with other platforms outside *Dyuthi*.
- d) Attitude of faculty members towards Institutional Policies.
- e) Preservation methods adopted by faculty members.

The data were analysed using the percentage method and Fischer's extract test to find out the relationship. This study will help the IR managers to understand faculty attitude on how to reorganise the repositories to improve its usage.

5. ANALYSIS AND DISCUSSION

5.1 Awareness and Perceptions of Faculty Members About IR

Q.1 Do you know about the Institutional Repository (Dyuthi) of CUSAT?

Out of 49 respondents, 42 (85.7 %) faculty members were aware of the university IR, and 7 (14.3 %) were unaware of IR (*Dyuthi*). All previous studies in India have also reported that faculty members have a high awareness about IR. However, previous studies outside India are in contrast with this finding^{5-6,21,33}.

Q.2. What is your opinion about IR (Dyuthi)?

Among the 49 respondents, 36 (73.46 %) faculty members were satisfied, 6 (12.24 %) were highly satisfied and 7 (14.3 %) were not satisfied with *Dyuthi*. Fisher's extract test shows that highly significant relationship existing between awareness and satisfaction because the p- value comes to 0.000, which is less than 0.05 (Table 1).

5.2 Faculty Members Experience with IR (*Dyuthi*)

To explore the faculty members experience with *Dyuthi*, they were requested to analyse seven queries. The questions concerned the availability of faculty members' work in IR,

Table 1. The relationship between awareness and satisfaction- Fisher's extract test

Satisfaction	Awareness		Total (%)	Fisher's Value	p - value
	Yes (%)	No (%)			
Highly Satisfied	7 (100.0)	0 (0.0)	7 (100)	33.51	0.000
Satisfied	35 (100.0)	0 (0.0)	35 (100)		
Not Satisfied	0 (0.0)	7 (100.0)	7 (100)		
Total	42 (85.7)	7 (14.3)	49 (100)		

self-archiving account, benefits and problems with uploading work in IR, types of materials to be archived in IR, and an orientation program.

Table 2. The relationship between faculty perception and content recruitment nature

Faculty Perception	Content Recruitment Nature (Dyuthi)			Total (%)	Fisher's Value	p - value
	Self-archiving account=No Work available=No (%)	Self-archiving account=No Work available=Yes (%)	Self-archiving account=Yes Work available= Yes (%)			
Highly Satisfied	0 (0.0)	6 (85.7)	1 (14.3)	7 (100)	12.61	0.004
Satisfied	11 (31.4)	23 (65.7)	1 (2.9)	35 (100)		
Not Satisfied	6 (85.7)	1 (14.3)	0 (0.0)	7 (100)		
Total	17 (34.7)	30 (61.2)	2 (4.1)	49 (100)		

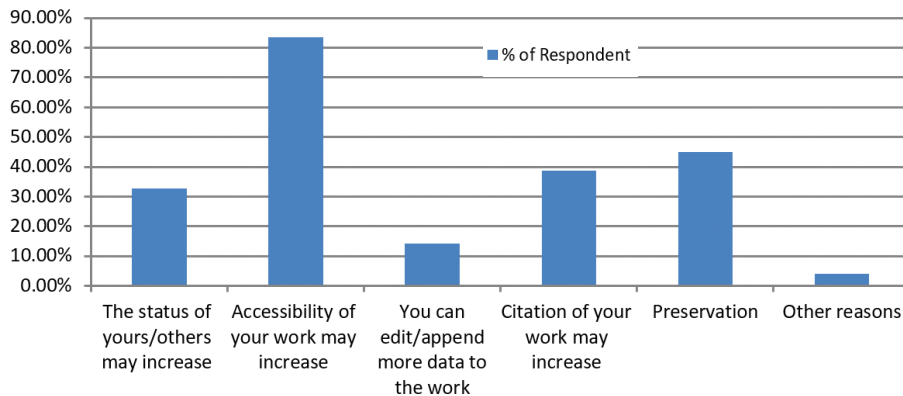


Figure 1. Benefits of uploading works in IR.

Q.3 Whether your work is available in the IR (Dyuthi) of CUSAT or not?

Thirty-two (65.31 %) faculty members responded that their works are available in IR. However, 3 (6.12 %) faculty members opined that they do not like to display their work in the IR. At the same time, 14 (28.57 %) faculty members had not contributed their works to the IR yet. Thus, there is a possibility to deposit documents in the IR in future by these 28.57% of faculty members.

Q.4. If your work is available in IR, do you have an account in Dyuthi for self-archiving?

Of the 32 faculty members who responded that their works are available in the IR, only two of them (6.25 %) had self-archiving experience. Fischer's extract test shows that there is a statistically significant relationship in between the content recruitment nature of faculty members and their perception because the p- value is lesser than 0.05 (Table 2). However, in the period from September 2016 to August 2017, only 47 items have been added to the total content of IR. From further investigation, the investigators understood that the IR presently does not encourage self-archiving in contrary to erstwhile and adopting the method of batch loading. This may be due to several reasons, such as accuracy and consistency of metadata, concerns about control over content, quality, appropriateness of content submitted and copyright permissions³⁴. Shearer³⁵ and Dubinsky found that most IRs have adopted the method

of batch loading of records by librarians on behalf of authors. This method will initially improve content, but if it continues in the long term, it will adversely affect IRs. An IR can be sustained by cultivating a culture of self-archiving among faculty members at any cost.

Q.5 What are the benefits of uploading works in Dyuthi?

Those faculty members who do not like to deposit their works in IR were excluded from this question. The majority of faculty members (83.67 %) responded that the accessibility of work is the significant benefit of IR. Faculty members also emphasised the benefits of IR such as preservation (44.9 %), citation (38.78 %), and status (32.65 %). Few respondents highlighted the feature of an option to edit/append more data to work (14.29%) as the benefit of uploading works in IR (Fig. 1).

Most faculty members pointed out the accessibility of works as the main benefit. That means, authors are beginning to see the IR as a channel of scholarly communication. This finding is in accordance with those of Omeluzor¹⁶ and Singeh²¹, et al. In this context where preservation is highlighted as a second benefit, the finding of Kutay³² is notable. Kutay found that scholars at California State University Northridge adopted various methods to preserve their research assets, although no respondents were found to use the IR for that purpose. The IR must be elevated as a trustworthy place to preserve the intellectual works of scholars in order to enhance content contribution²⁰.

Q.6. What are the hindrances you feel with regard to IR contribution (Dyuthi)?

The study revealed that most faculty members had contributed, few faculty members had not contributed yet, and very few faculty members do not like to contribute to the IR. The problems faced by these three categories related to IR contribution have to be revealed, and this question was applied to all 49 respondents.

Most faculty members responded that they had a fear of

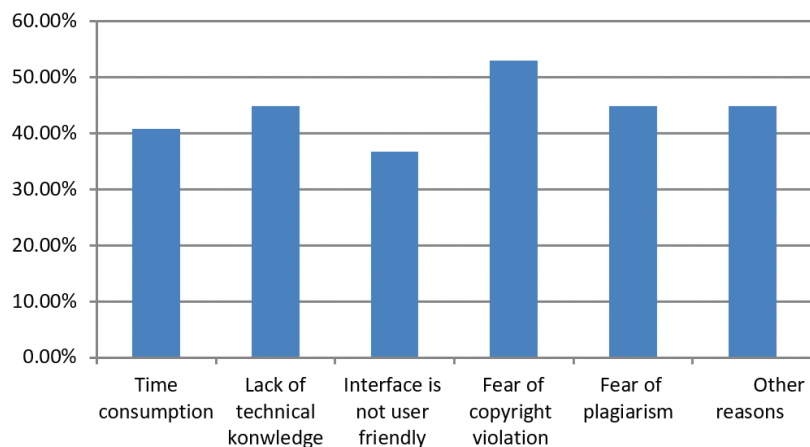


Figure 2. Factors which hindered faculty members from contributing to IR.

copyright violation (53.06 %) while archiving in IR. This finding is consistent with previous studies (Foster and Gibbons^{36,14,29,30}. Lack of technical knowledge (44.09 %) and fear of plagiarism (44.09 %) also inhibited faculty members from depositing their work in IR. Time consumption and (40.80 %) and non-friendly IR interface (36.73 %) were the other hindrances which need immediate attention of IR managers. Uploading of work, searching for content and downloading should be possible through simple steps, which would facilitate faculty contribution in IR. IR managers must take necessary steps to find out other impediments, which are faced by 44.09% of faculty members (Fig.2).

Q.7 What type of materials do you want to archive in the IR?

The 49 respondents were requested to answer this question to determine their actual requirements and expectations about IR. Most faculty members reported that they would like to deposit their published works such as articles (79.6 %) and conference papers (51.02 %) in the IR. Table 3 indicates that 38.78 per cent of faculty members would like to archive teaching materials and some (16.33 %) wish to place datasets in the IR. Few respondents (14.29 %) preferred to archive articles, which are awaiting peer review and very few faculty members (4.08 %) wish to deposit other types of materials in the IR (Table 3).

As noted by Abrizah⁵, faculty members of CUSAT would also like to deposit various types of items including teaching materials, datasets and unrefereed articles in the IR. Faculty members view the IR not only as a way to provide their intellectual output to academics, but also a tool for storing other resources important to them. It would be beneficial if the IR could provide a storage facility similar to Google drive for faculty members, and it should be designed in such a way that an author can share stored files with others when he feels it is necessary. Facilities such as commenting add-ons, request full-text copy add-ons, controlled vocabulary add-ons, web of communication add-ons (Ferreiraes, et-al.³⁷) and restricted access³² would help to maximise the IR's functionality. In such a way, an IR could elevate itself as a social medium.

Q.8 Did you receive any orientation program from authorities on how to upload an article, how to search etc.?

Approximately 95.8% of faculty members had not received any orientation program on IR from the authorities. On the other hand, 4.2% of faculty members responded that they had received such orientation.

Q.9 Do you think the orientation program is essential for self-archiving in Dyuthi?

The majority of faculty members (65.2 %) noted that the orientation program is essential for self-archiving in Dyuthi. However, 17.4 % of faculty members reported like they do not think that the orientation program is essential and 17.4 % faculty members had no opinion about orientation related to self-archiving in Dyuthi.

6. EXPERIENCE OF FACULTY MEMBERS WITH OTHER PLATFORMS OUTSIDE DYUTHI

Experience of faculty members with other platforms outside Dyuthi was analysed by the survey to identify the reasons behind the lack of contribution by faculty members in IR (Dyuthi). This analysis allowed the determination of whether the faculty members are familiar with other platforms and they have self-archiving behaviour or not.

Q.10 Are you doing self-archiving anywhere other than IR (Dyuthi)?

Twenty-one (42.9 %) respondents reported that they had self-archiving experience outside Dyuthi. At the same time, 28 (57.1 %) faculty members had no self-archiving experience anywhere other than IR (Dyuthi). Thus, faculty members were found to be not unfamiliar with self-archiving, which provides hope for the distant future with respect to this area.

Q.11 Have you read/downloaded the self-archiving articles of others?

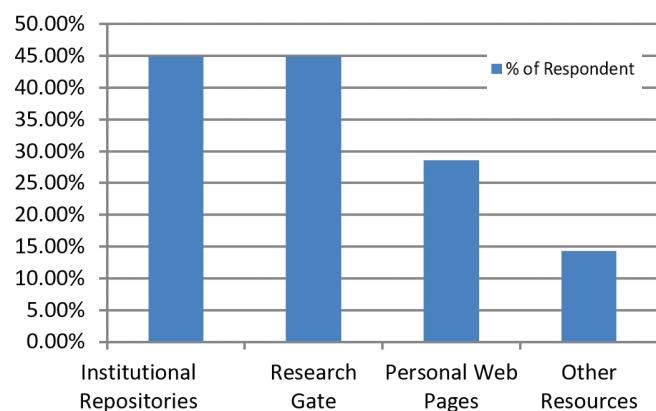
Out of 49 respondent, 31(63.3 %) faculty members stated that they had read/downloaded the self-archiving articles of others, while 18 (36.7 %) faculty members responded that they had not done so. This result indicates that faculty members are

Table 3. Type of materials that faculty members want to archive

Type of materials	Respondents (Per cent)
Published articles	79.60
Conference papers	51.02
Teaching materials	38.78
Data sets	16.33
Articles awaiting peer review	14.29
Other	4.08

Table 4. The Relationship between experience with other platforms and content recruitment nature (Dyuthi)

Experience with Other Platforms	Content Recruitment Nature(Dyuthi)			Total (%)	Fisher's Value	p - value
	Self-archiving account= No Work available=No (%)	Self-archiving account=No Work available=Yes (%)	Self-archiving account=Yes Work available= Yes (%)			
Self-archiving account=No Reading others work=No	8 (57.1)	6 (42.9)	0 (0.0)	14 (100)	11.69	0.027
Self-archiving account=Yes Reading others work = Yes	2 (11.8)	13 (76.5)	2 (11.8)	17 (100)		
Self-archiving account=No Reading others work = Yes	4 (28.6)	10 (71.4)	0 (0.0)	14 (100)		
Self-archiving account=Yes Reading others work = No	3 (75.0)	1 (25.0)	0 (0.0)	4 (100)		
Total	17 (34.7)	30 (61.2)	2 (4.1)	49 (100)		

**Figure 3. Type of resources used to access the self-archived articles of others.**

performing self-archiving outside Dyuthi as well as using the self-archived work of others. Thus, faculty members are playing a significant role in the open-access environment and they have good open-access awareness. However, corresponding growth is not seen regarding IR usage³⁸.

Table 4 indicates that Fischer's value= 11.69, $p = 0.027$. The p -value is less than 0.05. Hence, a statistically significant relationship has been existing between the experience of faculty members with other platform outside Dyuthi and their content recruitment nature in IR (Dyuthi).

Q.12 If yes, from where did you access that?

This question was limited to the 31 respondent, who had read/downloaded the self-archiving articles of others. IR and Research Gate (44.9% each) were the most important resources used to access the self-archived articles of others. At the same time, personal web pages and other resources were used by 28.57 per cent and 14.29 per cent of faculty members, respectively (Fig. 3).

7. INSTITUTIONAL POLICIES

CUSAT has no other policies except these mandates regarding IR contribution. The present study is also concerned to know the opinion of faculty members about the framing of such policies in the University.

Q.13 What is your opinion about providing incentives for persons who are uploading more articles in Dyuthi?

It is to be noted that approximately 40 per cent of faculty members neither agreed nor disagreed about providing incentives to authors. However, 35.6 per cent of faculty members agreed to provide incentives to authors, and 24.4 per cent expressed their disagreement regarding incentives. The comment formation has not been made for this question. This indicated that faculty members have no distinct idea about the meaning of incentives. If a brief description of incentives were available within the survey, the study would have had more clear results. An incentive is not only a financial aspect but also something that motivates the carrying out of a particular action. Zuber¹¹ reported that most US IRs are equipped with incentives for publications such as 'Paper of the Day', 'Most Recent' and 'Most Popular'.

Q.14 What will be your response if the university demands to deposit all scientific works in the IR.?

The majority of faculty members (58.3 %) supported the framing of the policy which directs that all scientific works should be deposited in the IR. At the same time, 20.8 per cent of faculty members did not support the framing of this policy, and 20.8 per cent of faculty members had no opinion on this matter.

8. PRESERVATION

The study also intended to find out the methods adopted by the faculty members to preserve their published/unpublished works.

Q.15 How you are preserving your published/unpublished works?

Backing up documents on personal computers was considered the best way for preservation by the majority of faculty members (73.47 %). Using external storage media (38.78 %) was the next most popular method. An encouraging fact is that the study found that 28.57 per cent of faculty members of the CUSAT performed the method of archiving for preservation. There are many methods available for archiving, such as academic platforms and IRs. When performing digital preservation through IRs, IR managers must encourage authors to create preservation metadata during the ingest process and embed digital preservation into a repository workflow³⁹. If the Dyuthi change its workflow like this, the time that it is counted as a primary preservation tool is not a distant reality. Other activities performed by faculty members for preservation were usage of drives (26.53 %), and digital scanning (12.24 %). Few respondents (6.1 %) used other methods to store their published/unpublished works.

9. CONCLUSIONS

Most of the faculty members were aware of and satisfied with Dyuthi. However, an IR cannot achieve content growth only because of faculty satisfaction and awareness. It needs creative intervention from the authorities. In contrast to previous studies in India and abroad^{20,24,39,26}, which pointed out preservation as one of the leading advantages of an IR, accessibility of work was highlighted by the majority of faculty members in CUSAT. Dissemination and preservation are the primary goals of an IR. An IR reaches its entirety only when these two features are equally experienced by its authors, and Dyuthi's workflow should also be altered by giving more importance to preservation. Most faculty members have accessed the self-archived works of others, and for that, they used Research Gate and IRs equally. Likewise, approximately half of the faculty members were not unfamiliar with self-archiving. The study also found that there was a significant relationship between the experience of faculty members with other platform outside Dyuthi and their content recruitment nature in IR. These aspects point to the fact that faculty members are capable of self-archiving in IR, and it should be promoted by the authorities to attain content growth.

REFERENCES

1. Ghosh, S.B. & Das, A. Open access and institutional repositories: A developing country perspective: A case study of India. *IFLA Journal*, 2006, **33**(3), 229-50.
2. Pinfield, S. Open archives and UK institutions. *D. Lib.*, 2003, **9**(3). <http://www.dlib.org/dlib/march03/pinfield/03pinfield.html> (accessed on 2 February 2018).
3. Kuchma, Iryn & Rosenblum, Brian. Report on open repository development in developing and transition countries. eIFL-OA, EU, 2010.
4. Davis, P.M. & Connolly, M.J.L. Institutional repositories: Evaluating the reasons for non-use of Cornell University's installation of Dspace. *D-Lib Magazine*, 2007, **13**(3/4). www.dlib.org/dlib/march07/davis/03davis.html (accessed on 20 January 2018).
5. Abrizah, A. The cautious faculty: Their awareness and attitudes towards institutional repositories. *Malaysian J. Lib. Inf. Sci.*, 2009, **14**(2), 17-37.
6. Kim, J. Motivating and impeding factors affecting faculty contribution to institutional repositories. *J. Digital Inf.*, 2007, **8**(2). <http://journals.tdl.org/jodi/article/viewArticle/193/177> (accessed on 6 January 2018).
7. Jantz, R.C., & Wilson, M.C. Institutional repositories: Faculty deposits, marketing, and the reform of scholarly communication. *J. Acad. Lib.*, 2008, **34**(3), 186-195. doi: 10.1016/j.acalib.2008.03.014.
8. Xia, J., et-al. A review of open access self-archiving mandate policies. *Portal: Lib. Acad.*, 2012, **12**(1), 85-102. doi: 10.1353/pla.212.0000.
9. Xia, J. Assessment of self-archiving in institutional repositories: Across disciplines. *J. Acad. Lib.*, 2007, **33**(6), 647-654. doi: 10.1016/j.acalib.2007.09.020.
10. Xu, Hong. The theory analysis of faculty participation in institutional repositories. *CALA Occasional Paper Series* no. 1, 2009, 2-15.
11. Zuber, P.A. A study of institutional repository holdings by academic discipline. *D-Lib Mag.*, 2008, **14**(11/12). doi: 10.1045/november2008-zuber.
12. Gunasekera, C. Social science scholars perception towards open access and institutional repositories. *People: Int. J. Soc. Sci.*, 2017, **3**(2), 2244-2259.
13. Singeh, F.; Abrizah, A. & Karim, N. Malaysian authors' acceptance to self-archive in institutional repositories: Towards a unified view. *Electron. Lib.*, 2013, **31**(2), 188-207. doi: 10.1108/02640471311312375.
14. Kim, J. Faculty self-archiving: motivations and barriers. *J. Am. Soc. Inf. Sci. Technol.*, 2010, **61**(9), 1909-1922. doi: 10.1002/asi.21336.
15. Oguz, F. & Assefa, S. Faculty members' perceptions towards institutional repository at amedium-sized university: Application of a binary logistic regression model. *Lib. Rev.*, 2014, **63**(3), 189-202. doi: 10.1108/LR-07-2013-0088.
16. Omeluzor, S.U. Institutional repository (IR) awareness and willingness of faculty staff to deposit research work: A study of faculty staff in selected public and private universities in Nigeria. *Open Access Lib. J.*, 2014, **1**: e1139. doi: 10.4236/oalib.1101139.
17. Yang, Z.Y. & Li, Y. University faculty awareness and attitudes towards open access publishing and the institutional repository: A case study. *J. Lib. Scholarly Commun.*, 2015, **3**(1), eP1210. doi: 10.7710/2162-3309.1210.

18. Ukwoma, S.C. & Mole, A.J.C. Utilisation of institutional repositories for searching information sources, self-archiving and preservation of research publications in selected Nigerian universities. *Afr. J. Lib., Arch. Inf. Sci.*, 2017, **27**(2), 117-130
19. Almobarraz, A. Students' Perception of building a digital repository for the intellectual outputs of Saudi scholarship students. *SRELS J. Inf. Manage.*, 2018, **55**(2), 59-67. doi: 10.17821/srels/2018/v55i2/119715.
20. Kim, J. Motivations of faculty self-archiving in institutional repositories. *J. Acad. Lib.*, 2011, **37**(3), 246-254. doi: 10.1016/j.acalib.2011.02.017.
21. Singeh, F.; Abrizah, A. & Karim, N. What inhibits authors to self-archive in open access repositories? A Malaysian case. *Inf. Dev.*, 2013, **29**(1), 24-35.
22. Fernandez, L. Open access initiatives in India - An evaluation. *Partnership: Can. J. Lib. Inf. Pract. Res.*, 2006, **1**(1). <https://journal.lib.uoguelph.ca/index.php/perj/article/view/110#.WhTEBVuCzIU> (accessed on 6 January 2018).
23. Manjunatha, K. & Thandavamoorthy, K. A study on researchers' attitude towards depositing in institutional repositories of universities in Karnataka (India). *Int. J. Lib. Inf. Sci.*, 2001, **3**(6), 107-115.
24. Sawant, Sarika. Indian institutional repositories: A study of user's perspective. *Program*, 2012, **46**(1), 92 – 122. doi: 10.1108/00330331211204584.
25. Halder, S.N. & Chandra, S. Users' attitudes towards institutional repository in Jadavpur university: A critical study. *Int. J. Manage. Sustainability*, 2012, **1**(2), 45–52.
26. Dhanavandan, S. & Tamizhchelvan, M. A critical study on attitudes and awareness of institutional repositories and open access publishing. *J. Inf. Sci. Theory Pract.*, 2013, **1**(4), 67–75. doi: 10.1633/JISTaP.2013.1.4.5.
27. Bhardwaj, R.K. & Kaushik, S. An institutional repository for undergraduate students: A case study at St. Stephen's college, University of Delhi (India). *Legal Inf. Manage.*, 2013, **13**(1), 52-62. doi: 10.1017/S1472669613000108.
28. Sankar, P. & Kavitha, E.S. Challenges in contributing in institutional repository system: A Study. *Int. Refereed J. Rev. Res.*, 2017, **5**(6). <http://irjrr.com/irjrr/November2017/2.pdf> (accessed on 5 January 2018).
29. Shukla, P. & Khan, A.M. Implications of institutional repositories on contributors' professional and publishing practices: A survey. *J. Int. Inf. Lib. Rev.*, 2014, **46**(¾), 125-136. doi: 10.1080/10572317.2014.970061.
30. Dutta, G. & Paul, D. Awareness on institutional repositories-related issues by faculty of University of Calcutta. *DESIDOC J. Lib. Inf. Technol.*, 2014, **34**(4), 293-297. doi: 10.14429/djlit.34.5138.
31. Das, Silchar Susmita & Sarmah, Mukut. Teachers' awareness and participation in institutional repository movement at Assam university. In 11th convention PLANNER-2018: Rejuvenate academic library as a social hub, 15-17 November, 2018, Agartala, Tripura. 2018. Pp. 112-117. <https://ir.inflibnet.ac.in/handle/1944/2288> (accessed on 27 June 2019).
32. Kutay, S. Advancing digital repository services for faculty primary research assets: an exploratory study. *J. Acad. Lib.*, 2014, **40**(6), 642-649. doi: 10.1016/j.acalib.2014.08.006.
33. Covey, D.T. Recruiting Content for the institutional repository: The barriers exceed the benefits. *JODI: J. Digital Inf.*, 2011, **12**(3), 1-18.
34. Dubinsky, E. A current snapshot of institutional repositories: Growth rate, disciplinary content and faculty contributions. *J. Lib. Scholarly Commun.*, 2014, **2**(3). doi: 10.7710/2162-3309.1167.
35. Shearer, K. The CARL institutional repositories project. *Lib. Hi. Tech.*, 2006, **24**(2), 165–172. doi: 10.1108/07378830610669547.
36. Foster, N.F. & Gibbons, S. Understanding faculty to improve content recruitment for institutional repositories. *D-Lib Magazine*, 2005, **11**(01). <http://www.dlib.org/dlib/january2005-foster> (accessed on 5 January 2018).
37. Ferreira, M.; Rodrigues, E.; Baptista, A.A. & Saraiva, R. Carrots and sticks. *D-Lib Magazine*, 2008, **14**(½). doi: 10.1045/january2008-ferreira.
38. Serrano-Vicente, R.; Melero, R. & Abadal, E. Open access awareness and perceptions in an institutional landscape. *J. Acad. Lib.*, 2016, **42**(5), 595–603. doi: 10.1016/j.acalib.2016.07.002.
39. Hockx-Yu, H. Digital preservation in the context of institutional repositories. *Program*, 2006, **40**(3), 232-243. doi: 10.1108/00330330610681312.

CONTRIBUTORS

Mr Shajitha C. Presently working as Junior librarian in the Department of Computer Applications, Cochin University of Science and Technology, Kerala. She is pursuing part- time research at the School of Social Sciences, Mahatma Gandhi University. Her areas of interest include: Institutional repository, digital library and digital curation.

Her contribution in the current study included research problem selection, data collection, analysis and discussion of the findings.

Dr Abdul Majeed K.C. Currently serving as Associate professor and Head of Dept. of Library and Information Science, Farook College, Kerala. He has published several research paper in national and International Journals. His areas of interest include: Service quality, institutional repository, digital library, library networks and green libraries.

His contribution in the current study included research methodology design and questionnaire preparation.