Linking Users and Online Journals in TOCosphere: Journal TOCs in VSSC Library

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Abstract

Scholarly journals are the most important and expensive information sources in any library. Researchers always prefer to search, browse, and follow favourite journals in their field of interest [1]. More than 80% of the budget is invested on journal literature by research and academic libraries. Migration to online only subscription is happening faster in libraries to take advantage of its benefits and to meet the demand of the users for accessing information without any restriction of time and space. The shift from print to 'online only' needs to be done carefully, bearing in mind the visibility problem of e-only journals. It is necessary to ensure every reader his/her (online) journal and every (online) journal its reader[2]. User's preference is to discover articles with a facility to search and locate them using simple full text search features rather than journal titles. Libraries need to re-design the methods for accessing journal literature. New generation discovery tools and Library 2.0 technologies are the best solution to make the journal literature more visible to the users. Personalized services like TOC RSS feeds and TOC alerts are the right tools to promote the usage of journal literature. The paper 'Linking Users and Online journals in TOCosphere[3]' traces the initiatives taken to improve the discoverability of journal literature. A detailed picture of JournalTOCs service from Heriot-Watt University, UK is presented. Implementation of the customized version of this service in VSSC Library is also reported.

Keywords: Current Awareness Service, Table of Contents Service, RSS feed, JournalTOCs

1. Introduction

Researchers of today are heavily depending on Internet for information due to the simple reason that the net is easy to use and always available without any restriction. Quality is compromised to simplicity as information can be located effortlessly. The results of many surveys indicated that users still value services of libraries and are well aware about the quality and reliability of information available through a library. Shift in the user behavior is due to easy access of the net, time constrains and lack of patience to search and locate information. Patrons expect the information to reach them rather than they come to it. Libraries have to change the traditional approach, tools, and services to meet the expectation of the net generation users. Despite the best efforts put in by librarians users seem to move towards the net. The situation warrants a transformation from 'user-look-for-information to information-look-for-users'[4]. Unfortunately very few OPACs are internet ready to push information to the users. Hence there is need for new services in a format and time liked by them. Libraries should reach the users in the virtual space where they explore for information.

1.1   Enriching OPAC with TOC: Competing with the Net

Prominent reason for the user's affection to the net is its ability to locate information based on the content of the documents. OPACs generally do not provide facility to search deep inside the book or journal. The advent of the Internet offered users with an opportunity to search and locate information from both table of contents and full text of documents. As a result the users became frustrated to use the OPAC as they are neither content-rich nor user-friendly. However the catalogue codes are designed to index the table of contents of documents with the help of analytical entries. The field 505 in MARC 21 and the 'description' data element in DCMI indicates that catalogue codes are ready to incorporate TOC to enrich the catalogue entries. The BEAT [7] and BE Online+ [8] programmes of LC and ONIX standard format etc are major initiatives to enhance the discoverability of the catalogues using TOC in the recent past. Many university libraries have experimented to enrich their catalogue by obtaining the TOC data either freely or on payment. The initiatives like Google books, Amazon.com, Google Scholar etc further enhanced the discovery and delivery capability. As a result of these initiatives, library catalogues were ignored by the users as they were looking for features like facility to locate chapters of books, articles in periodicals etc. Online abstracting and indexing databases were an expensive interim solution to locate the full text information. This situation lead to the re-designing of the existing OPACs, and the birth of next generation catalogue tools like Web-Scale Discovery services, which provide Google like search experience to the users. All these services are expensive and will have a gap with respect to the availability of latest published articles in journals. The reason for the gap is due to the large amount of time required to harvest data from the TOC of journal issues published recently, and make them available in new generation catalogues or search engines. TOC services are the fastest to update the user with latest development reported in journals. Hence many projects were investigating ways and means to exploit TOC data.

1.2   Table of Contents Service (TOCS)

Current Awareness Service (CAS) is one of the most popular information services of all libraries. Library patrons will have their own favourite journals, which they browse regularly to keep abreast of the developments in their field. TOCS is a popular CAS in research and academic libraries. The transition from print to online was initially through the publication of electronic content pages. Libraries were the first institutions that started getting e-Content pages by e-mail. Speed is the most important factor of any CAS. The availability of TOC in electronic format helped libraries to provide better and faster CAS. Migration to e-journals enabled direct access to the TOC on the net well ahead of the receipt of journals in the library. Hence the printed TOCS lost its charm and this most important CAS became obsolete. As the online publication became predominant publishers started offering better services directly to the users to browse the content, abstract and view first page of the article. If the library is subscribing to online journal, user will be able to read the full text by accessing the article from the TOC irrespective of physical location or time. A notable impact of the electronic TOCS is that the user can set alert to receive the TOC in their email box or create an RSS feed for reading the TOC without visiting the journal homepage. Hence the development in

ICT gave the users great autonomy in accessing information without the mediation of a library. Of late, libraries recognized the benefits of this shift and started exploiting the new format and technologies to improve their service.

2. Table of Content Aggregators

2004-2005 witnessed better and free access to TOC initiated by publishers. The introduction of Web 2.0 technologies like RSS feed popularized the online TOC among users and libraries. As a result, it was possible to automate the delivery of TOC by visiting the publisher site to set an email alert for a favourite journal title to receive the TOC when a new issue is published. When libraries started migrating to more and more online journals, it became difficult to depend on the publisher site alone for providing TOCS. Many major libraries and organizations initiated research to take advantage of the online TOCS. The notable among them are TOCRoSS, TicTOC, OpenJGate, Custom JGate, Zetoc and JournalTOCs. All these services aggregate TOC from various publishers and make it available on a single platform or enrich the OPAC with TOC data. Libraries and users need only to visit one site to get access to the TOC of majority of the journals in different disciplines from different publishers. These initiatives were due to the realization of the facts like, need for simple and convenient access to the content, better visibility for online journals, and best return on investment (ROI).

3. TOC service in VSSC Library

Table of Contents service is an important CAS provided VSSC Library. When majority of the journals were in print format, library generated TOC bulletins by making copies of TOC. The content page bulletins were compiled subject wise and were circulated among different user groups. e-TOCs was initiated when table of contents started coming electronically. Library used these e-TOCs also to create a bibliographic database to provide SDI service to its patrons. Gradually many publishers started publishing the TOC on the web which was available directly to the users. When TOC were openly available from the publisher's site library began to use them to enrich the OPAC by incorporating analytical entries generated automatically from the e-TOCs to make the content more discoverable. There was 50-60% increase in the usage of journals and conference proceedings when the table of contents was made searchable. At present library database has crossed 8 lakhs of records out of which 5 lakh are analytical entries, which are connected to the source bibliographic records. Having seen the increase in usage, library realized the potential of providing access to the contents of the journal issues and conference proceedings. Learning from this experience library continued to concentrate on improving the TOCS taking advantage of the online revolution. Special efforts were taken to popularize the benefits of online journals by helping the users to create personal account with various publishers to set content alert for the subscribed journals and also through an online TOC service by re-sending the alerts received by the library to individual users. Alert service of the A&I databases were also used by the library extensively to promote the usage. Library also customized the serials management system of the ILMS to send email alert to the users when new issues of their favourite journals are received in the library.

3.1 Migration to online journals

Since 2007 VSSC Library started introducing online resources. User response to the online access was very positive and library started migrating to more online resources. At present, online access is available to 579 titles out of 705 (2012) journals subscribed by the library in which 466 titles are subscribed as online only.

3.2 Making online journals more visible

 'Institutional subscription to e-journals in their field was ranked of highest importance overall' [10] in a recent study concluded by JISC viz. 'Researchers of tomorrow'. The study clearly indicates that libraries should migrate to more online journals to meet the expectation of the users. 'Electronic journals have matured and have become an integral to library collections' [11]. The Google generation users are familiar with the new tools and can quickly adapt to the change. Library has to take care of the requirements of all patrons and ensure that online journals are visible to everyone and the journals are sufficiently used. One of the major problems with online journal is its visibility. Unlike the print version there is no physical appearance for an online journal. A user, to discover a journal title or article, should know that the journal is available and the ways and means to locate the same. Libraries are making many conscious steps to make the online journals more and more visible. Online Table of Content service is one of the best methods to connect a user to his/her favourite journal and vice versa. After trying many options, library decided to use JournalTOCs of Heriot-Watt University, UK to connect its user and journals to achieve every user his/her journal.

4. Evolution of JournalTOCs

Llibrary OPAC normally contains only titles of journals and as a result the contents of journals are not discoverable. When online journals started proliferating publishers began to open up the TOC for more visibility of the journal content obviously with a business eye. This move became a boon to the libraries and researchers all over the world as they could access the TOC freely. Many libraries experimented to index and incorporate TOCs in the OPAC. Research agencies also started to initiate investigations to exploit the TOC revolution. JISC (http://www.jisc.ac.uk/), UK has sponsored many such research initiatives to improve access to information. One of the interesting initiatives was TOCCRoSS project indented to test the 'Really Simple Syndication' (RSS) the new Web 2.0 tool to fetch the TOC to enrich the OPAC. This project was initiated in 2005 and was completed in 2006. The project successfully demonstrated that RSS is a useful tool to collect the TOC and to enrich the OPAC.

In 2007 a consortium of 14 partners, led by University of Liverpool, Heriot-Watt University (http://www.hw.ac.uk/), CrossRef, CSA, Emerald, MIMAS, Cranfield University, Nature Publishing Group, IOP, SAGE, Inderscience, OUP, TALIS, DOAJ, and Open J-Gate was awarded a grant by JISC to develop a TOC Service viz ticTOC [1]. The idea was from Heriot-Watt University with the technology support by researchers from the ICBL (http://www.icbl.hw.ac.uk/). The project was completed successfully and was declared concluded in 2009 and was kept online only up to March 2012. The project delivered a fully functioning suite of facilities dedicated to journal current awareness service. Publishers became more aware on the

issues surrounding the development of TOC RSS feeds and the need to produce standardized feeds that will benefit users, libraries, and the publishers.

As the ticTOC project had no further funding and will be closed formally in 2012, Heriot-Watt University submitted the JournalTOCs project proposal to add web services capability to ticTOCs prototype and to further develop the service to a fully operational TOC service in 2009. The project was approved and the beta version was operational in 2010. In June 2010 the first customized version was developed for Heriot-Watt University. JournalTOCs became commercial by receiving the first order in 2011. ticTOCs was officially closed in March 2012 and all the users of this service were shifted to JournalTOCs.

4.1   JournalTOCs from Heriot-Watt University

JournalTOCs is an initiative of the Institute for Computer Based Learning (ICBL) at Heriot-Watt University. It was created in 2009 with funding from the JISC Rapid Innovation Grants. JournalTOCs is an exciting new opportunity for creating an effective, low-cost, customizable current awareness service of scholarly journal articles for researchers and academics [18]. This is an ideal tool for libraries to promote the use of subscribed journals effectively. JournalTOCs is a very effective service to connect each user to his/her journal as it uses the principle 'Information-look-for-users' by delivering TOC alerts in the personal e-mail box which will hardly go un-noticed.

4.2   Content of JournalTOCs

JournalTOCs is the biggest searchable collection of scholarly journal Tables of Contents. It contains articles' metadata of TOCs for over 20,980 journals directly collected from over 1584 publishers. This service also integrated TOCs of about 5200 Open Access journals. The number of users, journals and publishers are growing steadily. 'JournalTOCs pulls together a database of Table of Contents (TOCs) from scholarly journals and provides a convenient single "one stop shop" interface to these TOCs'[13]. JournalTOCs has taken special care to include all the highest rated journals in their fields, and guarantee quality results. Currently there are over 8300 users from institutions that have customized licenses, who are following together over 14000 journals.

4.3   Features of JournalTOCs service

JournalTOCs is loaded with many features. Special value added features are available for registered users and subscribing institutions. The most important feature of this service is its open nature and free access to researchers all over the world. This service connects the researchers invisibly by tracking and displaying the number of followers for each title. JournalTOCs is an excellent management tool in the hands of an e-resources manager. Partnering with publishers, this service contributes greatly to the library fraternity to provide swift and effective current awareness service. Introduction of this service can save great amount of time and effort of LIS professional engaged in providing information services. Without Journal literature there is no existence for research and researchers, this TOCoSphere [1] (JournalTOCs) is the right location in

the virtual space for researchers to keep-up-to-date and librarians to be with the users. Publishers receive best ROI by partnering with this service, as their journals are marketed all over the world with the active participation of library patrons, librarians, academicians, students and anyone who uses this service.

Figure 1 : Journal TOCs Homepage

This is a wonderful marketing tool in the hands of a serials librarian to promote the serials procured by the library than ever before. JournalTOCs gives the customers and developers great autonomy by making available free API for customization at the user's end. The premium edition of JournalTOCs acts as a catalyst in the hands of librarians to excel in their profession and win back the users remotely. Contribution of JournalTOCs to protect the environment needs to be stressed as it saves reams of papers that would have been used to print and circulate the TOC.

4.4   Exploiting JournalTOCs to the maximum

Open JournalTOCs is no doubt a light weight discovery tool, which the new generation users like the most. However the best way to exploit this service is to become a registered user.

5.   JournalTOCs Premium (Customized JournalTOCs)

Customized version of JournalTOCs is called JournalTOCs premium and is available at very economic license rates on subscription basis. This version includes more features to the users for identifying and accessing the online journals subscribed by their library. A super-admin-account with powerful rights is the part of the subscription. Using the admin account, library will be able to run the show by creating accounts, linking journals, setting email alerts, controlling alert frequency, and creating real time current awareness service to its library patrons. JournalTOCs premium is being used by major research and academic libraries all over the world. Several levels of custom access are available through simplified end user license agreements.

5.1   30-day free trial

Institutions can register for a 30 day free trial to get a feel of the customized JournalTOCs before subscribing to the service.

5.2   VSSC JournalTOCs

Figure 2 : VSSC JournalTOCs

VSSC Library introduced JournalTOCs from March 2012 by formally registering for a trial implementation. After testing and further customization the service was formally subscribed from September 2012. The first Indian JournalTOCs premium installation is in VSSC Library. This is one of the services deeply appreciated by the library patrons. At present 200 users are following 700 journals.

5.3.   Features of VSSC JournalTOCs

5.3.1 IP based with branding

The service recognizes VSSC IP and will display the default VSSC page automatically to the users. The branding information displayed helps a user to easily identify the service. VSSC JournalTOCs page allow the users to access their personal page and also display a welcome message for the institution login indicating the number of journals subscribed and the library contact email.

5.3.2 Institutional user registration

VSSC user can use his personal or official email id to create JournalTOCs account. Registration using institutional e-mail id (from anywhere in the world) is automatically recognized by JournalTOCs and the account is created under the institution profile. All features of JournalTOCs is enabled for an institutional user from on and off the campus.

5.3.3   Email value additions

♦ Institutional Off-campus access is enabled to read the full text by clicking the email alert

♦ Institutional email feedback possible

♦ Email alerts are branded with the Library name

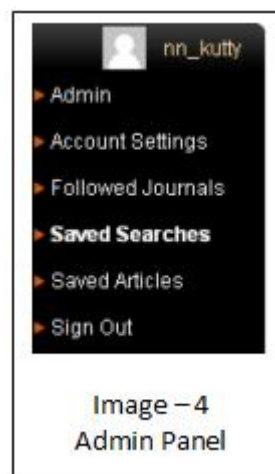### 5.3.4   Super-Admin-account

Figure 3: Super-Admin Control Panel

Each registered institution is provided with one Super-Admin-account (Image -3). Depending upon the requirement, additional admin accounts can be requested with restricted admin rights. A separate customized admin interface is provided for each institutional subscription to manage the user account and subscribed journals. Library can manage the activities easily with this user-friendly control panel.

Super-Admin-Account (Figure – 4) can

Create/remove institution user accounts
  ♦ Add/remove journals to JournalTOCs
  ♦ Add/remove titles to user account & set email alert
  ♦ Add/remove saved searches
  ♦ Set email alert to the saved search
  ♦ Enable/disable email alert and set frequency
  ♦ View the email list of institutional users
  ♦ Sort account by email/followed journals
  ♦ Export/import the list of users and followed titles
  ♦ Export the full list of subscribed titles
  ♦ Upload list of email addresses
  ♦ List followed journals with number of followers
  ♦ Sort followed journal list by title/followers

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5.3.5   Value additions

♦ Link to saved searches, saved articles, and recent TOC alerts

♦ Most followed journals at VSSC with number of followers (Figure -5)

♦ Newly published TOC list for VSSC Journals

♦ Most followed journals globally

♦ List of journals followed by the current login

♦ List of VSSC subscribed journals

♦ Link to A-Z list of VSSC Journals

♦ Search Filters (Figure -6)

♦ Subscribed full text access indicated

♦ Subscribed journals in subject indicated

♦ VSSC and OA journal indication (Figure -7)

Image - 5

Image -7

Image -6

Figure 8 : List of followed journals with filter parameters

5.4. Journal & Content Record Display

Figure -9

Journal record (Image -9) indicates - Title, RSS feed, export to Zotero icon, number of followers, check box to follow, full text access right, link to publisher site and number of titles included in JournalTOCs from the publisher of the selected title.

Figure -10

Content (image -10) indicates - Tab to expand/collapse the view, Title link to full text at journal homepage, link to RefWorks download, Full Text via Off-campus access, and link to openURL

5.4.1   OpenURL Link (Check @ Library)

If library is subscribing to a link resolver, image 'check@Library' (OpenURL link – image 10) will be displayed below each article. User can click on the OpenURL link and check the availability of the article in the print collection or send a request to the library for obtaining the full text as Inter library loan or to initiate article procurement.

5.4.2   Identify number of subscribed titles in a subject

Browse by subject will indicate the number of subscribed titles under different main subject categories along with the total number of journals available in JournalTOCs under that category. This will help the user to identify and compare the number of titles available for him in a subject.

5.4.3   A-Z list of subscribed online journals

Figure 11: A-Z List of VSSC Online Journals

As part of the subscription to the premium edition of JournalTOCs each library is provided with an A-Z list of subscribed online journals (image -11). This helps the user to navigate through the journals. The list is organized alphabetically with an option to select a journal to follow. Links are provided to the link resolver, journal home page, subject category, and publisher. As the JournalTOCs A-Z list covers only online titles a link to the View full list (E-resources) portal to view library holdings is provided. VSSC A-Z list is available only for institutional login and can be used to select a journal to follow on and off campus. The super-user login can export the full list, and add/remove title to/from this page. Link to A-Z is provided on all important screens for easy access.

5.4.4   Reports

Super-Admin-Account can generate the following reports for MIS and data analysis. Reports are in CSV format.

- ♦ List of subscribed online journals
- ♦ List of registered users
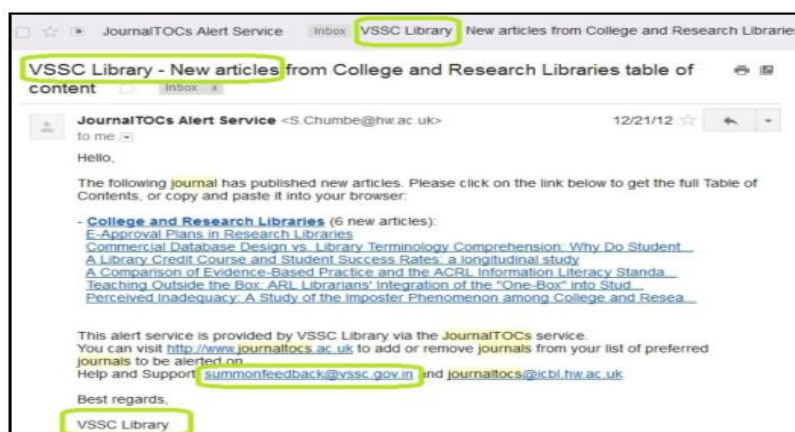- ♦ List of followed titles

5.4.5   TOC Email alert

Figure 12 : Sample e-mail alert

5.5   Application Programming Interface (API)

An institute with JournalTOCs premium edition subscription can add more features using free API available from JournalTOCs. Libraries can make use of this advance feature to create more personalized information services to its patrons. Institutional users can also make use of API calls to provide direct links from their personal websites for their favourite journals. Details on various applications of API can be accessed from the home page of JournalTOCs.

6.   Innovative Applications of Journal TOCs

6.1   Every Reader his/her Journal – Every journal its Reader

Online journals are the most important and expensive information sources. The ubiquitous nature of this information source is great attraction to the users. However there is a danger of invisibility attached to online journal. Unlike its print version, user should know precisely the location of the online journal and licensing terms to the library to access and use it. Libraries in which migration to online only journals are in its initial stage, needs a planned and deliberate effort to promote this information source. Unless this activity is taken seriously users may miss online titles. The situation will be more serious for the users who still love and argue for print versions or print+online model. Unfortunately due to budgetary constraint, libraries are moving towards online only model. To justify the investment done on these expensive resources, libraries should put in all efforts to introduce net generation tools for connecting users and online journals without any fail. JournalTOCs is the best and low cost tool to meet this requirement. Implementation of premium edition of JournalTOCs will help the librarian to play an important and visible role in connecting patrons to their favourite journals. VSSC library could attract patrons to online journals by the introduction of this service.

6.2   Marketing of OA Journals

One of the major attractions of JournalTOCs is its integration of both commercial and OA journals on a single platform. A user can clearly identify both OA and subscribed content while using this service. Libraries can easily promote the relevant OA titles to its users as discovery of OA journals and articles happens by default while using this service. Library will be able to identify the relevant OA titles for its organization within a short period of the introduction of JournalTOCs as the job of identifying will be done perfectly by the users.

6.3   Maximizing usage and Management Information

Libraries always have a passive approach for improving the usage once a title is subscribed. In the current scenario where many tools are available to gather the usage, management is more demanding to get reports on the usage of journals as it is the main source that consume major share of the library budget. JournalTOCs is a live site from where the usage data can be shown on real time to the management. As library take the lead role of connecting journals to the users, all the decision makers also can be connected to this service, so that

they get first hand usage information without any mediation. Usage reports prepared by the libraries collected using statistical tools or using the data provided by the publishers is always viewed as fabricated. JournalTOCs does this in real time as anyone who uses the service can view the followers of subscribed journals. The preliminary analysis of the usage of online titles in VSSC library indicates a clear rise in the usage of journals after the introduction of JournalTOCs. As a result, library is working hard to connect its subscribed titles to maximum number of users for enhancing usage of journals. Currently there are patrons who follow up to 60 journals. Reports generated from JournalTOCs is an ideal tool to identify the less used journals and zero used titles to promote their usage further by the introduction of better marketing methods.

6.4   Identifying Titles for Future Subscription

Libraries find it difficult to add new titles due to recurring subscription cost. There is also considerable increase of subscription cost every year. Therefore management strictly evaluates the relevance of journals before taking a decision to subscribe the same. Decision to subscribe an online only journal needs to be done very meticulously due to its very nature of existence, licensing terms, perpetual access terms, and archival issues. All scholarly online journals are connected to JournalTOCs. Library can easily connect a title to the patrons well before the library decides to subscribe the same and evaluate the usage. A feature like 'number of global followers for a title' is very useful input for subscription decision making.

6.5   Tool for Optimizing the Current Subscriptions

Library can gather very useful data on the usage of titles to identify and tag them for dropping from the current subscription. The input 'followers within the organization' indicated against a title is very useful for the serials librarian to optimize the subscription.

6.6   Monitoring Online Journal Publication

Receipt of a print journal is always monitored as each issue received in the library is registered in serials module or Kardex. However the online issue of a journal, which is subscribed as 'online only' is not easy to monitor. Online publication of a journal issue can be monitored, locating the new issues either by visiting each publisher site or by setting TOC alert for each title from different publishers. JournalTOCs can be effectively used to ensure whether an issue of subscribed journal is published as per the frequency regularly. This can be achieved by creating an account using an email identified for this purpose and setting alert to the titles for which monitoring is required. When a new issue is published a TOC alert will certainly be delivered to this email id. An automated system can be developed to capture the TOC to update the Electronic Resource Management System to monitor issues that are not published.

7.   Conclusion

Journal literature will continue to be the most preferred information source among the researchers. Irrespective of whether commercially published or Open Access, online journals need to be promoted among the users to maximize the usage and to justify the investment. Current awareness services like JournalTOCs is the

right kind of service to achieve every reader his/her journal and vice versa. There are not many such free services available in the field of LIS. No doubt this service helps the users to keep them up-to-date with the advances in their field of activity. Libraries should partner and promote novel initiatives like JournalTOCs for them to sustain. The contribution of JournalTOCs to the researchers and libraries all over the world is noteworthy. No doubt, libraries should take advantage by implementing the customized version of this service to retain its users and to make the users feel about the importance of libraries in their daily life. VSSC library patrons have all praise for this service and they rate this as one of the best services introduced recently to enhance the discoverability of online literature. JournalTOCs is an ideal tool to promote the usage of online journals in all types of libraries. By investing a small amount for the customized JournalTOCs service, libraries will not only be supporting such valuable initiatives but also will be contributing further for the research and development activities in the field of LIS.

Acknowledgement

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