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REGISTERING, INDEXING AND DIGITALLY PRESERVING RDBCI: PRODUCTION INDICATORS OF 2003 TO 2016

REGISTRANDO, INDEXANDO E PRESERVANDO DIGITALMENTE A RDBCI: INDICADORES DA PRODUÇÃO DE 2003 A 2016

REGISTRARSE , INDEXACIÓN PRESERVACION Y DIGITAL LA RDBCI: INDICADORES DE PRODUCCIÓN DE 2003 A 2016

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ABSTRACT
The question of explosion and digital preservation issues are totally in vogue today. In this context, the aim of this study is to analyze bibliographically the typeset production and published the "RDBCI: Revista Digital de Biblioteconomia e Ciência da Informação" in these its thirteen years of existence, in order to disclose the analysis of published scientific production, featuring the themes of articles and the most representative authors, contributing to the community area in question as well as enhance the importance of the magazine to the field of Library and Information Science. The journal is entirely digital, born and incubated on free platform OJS/SEER, provided by IBICT since 2004. Moreover, in these years of experience the magazine is effective information vehicle of the area and its existence confirms that electronic publications born in this format, survive in the digital world. From 2013, the RDBCI began to integrate Cariniana Network (IBICT), digitally preserving your entire collection through the LOCKSS software, and other institutions aggregated to the network, and in March 2016 began to integrate The Keepers Registry, making If the first Brazilian publication to be part of this international digital preservation network. The methodology adopted was through a survey of articles published from 2003 to 2016, collecting data such as access numbers, downloads, and other statistical and qualitative indicators, making use of tools such as Google Analytics, Altmetrics, Index h and alternative metrics as well as databases, directories, portals and indexes where the journal is indexed. We believe the result of this work serves as a qualitative analysis model for other periodicals and promotes growth of more national and international scientific publications with open access.

KEYWORDS: Flow of information. Digital preservation . Electronic journals. Publishing literature review. Open access. Bibliometric indicators. Indexers

RESUMO
A questão da explosão e da preservação digital é um assunto totalmente em voga nos dias atuais. Nesse contexto, o objetivo deste trabalho é analisar bibliograficamente a produção editorada e publicada da "RDBCI: Revista Digital de Biblioteconomia e Ciência da Informação" nestes seus treze anos de existência, sob três aspectos: indicadores estratégicos, de preservação e de indexação, a fim de construir indicadores de gestão do fluxo editorial da revista. Em 2013, a RDBCI começou a integrar a Rede Cariniana (IBICT), passando a preservar digitalmente toda a sua coleção por meio do software LOCKSS da mesma forma que as demais instituições agregadas a essa rede. Em março de 2016, começou a integrar o "The Keepers Registry", tornando-se a primeira publicação brasileira a fazer parte dessa rede de preservação digital internacional. Com relação a

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metodologia adotada foi realizado levantamento de dados dos artigos publicados de 2003 a 2016, com o objetivo de mapear indicadores estatísticos e qualitativos, caracterizando as temáticas dos artigos e os autores mais representativos. Para esses indicadores a revista utiliza-se das ferramentas de métricas: Google Analytics, Altmetrics, MIAR e Journal Scholar Metrics. No caso do Google acadêmico temos hoje em torno de 1384 citações e índice h7. A revista possui hoje 20 indexadores, sendo eles distribuídos em bases de dados, diretórios, portais e índices. Acreditamos que o resultado deste trabalho sirva como modelo de análise qualitativa para outras publicações periódicas, bem como fomente o crescimento do número de publicações científicas nacionais e internacionais com acesso aberto.

PALAVRAS-CHAVE: Fluxo da informação. Preservação digital. Periódicos eletrônicos. Análise bibliográfica editorial. Acesso aberto. Indicadores bibliométricos. Indexadores.

RESUMÉN
La cuestión de los problemas de explosión y la conservación digital son totalmente en boga hoy en día. En este contexto, el objetivo de este estudio es analizar bibliográficamente la producción tipográfica y publicado el "RDBCI: Diario digital de la Biblioteca y Ciencias de la Información" en estos sus trece años de existencia, con el fin de divulgar el análisis de la producción científica publicada, con los temas artículos y los autores más representativos, lo que contribuye a la zona de la comunidad de que se trate, así como mejorar la importancia de la revista al campo de la Biblioteconomía y Documentación. La revista es totalmente digital, nació y se incuba en el libre plataforma OJS / SEER, proporcionada por IBICT desde el año 2004. Por otra parte, en estos años de experiencia de la revista es el vehículo eficaz de la información de la zona y su existencia confirma que las publicaciones electrónicas nacido en este formato, sobrevivir en el mundo digital. A partir de 2013, la RDBCI comenzó a integrar Cariniana red (IBICT), la conservación digital de toda su colección a través del software LOCKSS, y otras instituciones agregadas a la red, y en marzo el año 2016 comenzó a integrar los guardianes del registro, haciendo Si la primera publicación brasileña a ser parte de esta red internacional de la preservación digital. La metodología adoptada fue a través de una encuesta de los artículos publicados desde 2003 hasta 2016, la recogida de datos, tales como números de acceso, descargas y otros indicadores estadísticos y cualitativos, haciendo uso de herramientas como Google Analytics, altmetrics, índice h y métricas alternativas, así como bases de datos, directorios, portales y los índices donde se indexa la revista. Creemos que el resultado de este trabajo sirve como un modelo de análisis cualitativo para otras publicaciones periódicas y promueve el crecimiento de las publicaciones científicas más nacionales e internacionales con acceso abierto.

PALABRAS CLAVE: Flujo de información. La preservación digital. Revistas electrónicas. Publicación de revisión de la literatura. Acceso abierto. Indicadores bibliométricos. Indexadores.

1 THE FLUX OF INFORMATION IN JOURNALS

Science mainly uses technical and scientific publications to disseminate research results. According to Targino (2000, p.54), it is "the scientific communication that favors to the product (scientific production) and producers (researchers) the necessary visibility and possible credibility in the social environment in which product and producers fall."

The real importance of scientific journals is their role as disseminating channels of scientific production in the most various areas of knowledge, and its primary goal is the creation, dissemination and preservation of information related to these areas. It is in the printed or electronic scientific journal that the scientific knowledge is disclosed, as it is known for being up to date and reliable due to its publication periodicity and rigorous review and evaluation processes.

According to Spuidet, Werlag and Presser (2012, p.103),

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> Scientific journals currently constitute the main scientific communication tool, having the functions of dissemination and retrieval of produced knowledge, providing the visibility of the institution, the journal, authors and editors.
> Universities and higher education institutions have a social duty to economic, political and technological changes, be it promoting analysis and critical reflection on society, or deconstructing and building new social paradigms through research and publications of its results, processes that are conducted at the heart of the academic environment.

As another essential feature, authors mention that an essential condition for a scientific journal is that rules and procedures established by the bodies that regulate and evaluate this type of vehicle be followed, as it is important the whole process management and workflow aimed at quality of its editions.

With RDBCI - Digital Journal of Library and Information Science is not different. Driven by collaborative ideals since its inception, the magazine has been acting systemically, fulfilling their role of disseminating knowledge in the field of Library and Information Science. At the time, this area was lacking in tools for greater visibility. Thus, RDBCI, which was projected by librarians, is the first scientific journal conceived and installed in a library system with a high degree of recognition that enables its existence.

It is a publication linked to the University of Campinas' Library System and established in September 2003. The journal is characterized by publishing articles, research and experience reports. When completing three years of existence, the RDBCI editorial team developed a special issue on the theme "The Name of the Rose", in which were made reinterpretations of the homonymous work by Umberto Ecco by guest authors.

RDBCI was born entirely for the digital format in HTML and PDF, and is incubated since 2004 on the free access platform Open Journal System/Electronic System of Journal Editing (OJS/SEER) provided by the Brazilian Institute of Information Science and Technology. Today, it is part of the University of Campinas' Scientific Journals' Portal (PPEC). It aims to disseminate knowledge and innovative research in the field of Librarianship and Information Science, having become a space of incentive to research and production in different fields of knowledge. (SANTOS; FERREIRA, 2014).

Initially, RDBCI was adept of the Dewey Decimal Classification (CDD) to rate its articles. In 2014, it started utilizing the JITA Classification Schema.

> The JITA Classification Schema was developed from a fusion between the News Agent Topic Rating Plan (maintained by Mike Keen at Aberystwyth, United Kingdom, until March 31st 1998) and the RIS classification scheme of the (now extinct) containing review of the area of Information Science, originally designed by Dagobert Soergel (University of Maryland). JITA is an acronym of the initials of

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the first names of its authors: José Manuel Barrueco Cruz, Imma Subirats Coll, Thomas Krichel and Antonella De Robbio [...] (emphasis added),[3]

In its thirteen years of existence, RDBCI was faced with the need to reflect on its published technical-scientific production in order to analyze the production with a view to the themes of the articles and the most representative authors. The aim was to make a contribution to the community of the area in question as well as to enhance the importance of the journal to the field of Library and Information Science.

Thus, this work aims to being a reflection seeking to analyze edited production in order to build the editorial flow management indicators by three aspects that will be presented throughout this article: preservation, indexing and strategic indicators. We believe that this work, under the focus on editorial flow management, works as the foundation in which to be developed routines evaluation processes and activities aimed at consolidating the journal in its field.

According to Spuidet, Werlag and Presser (2012, p.107) "these measurement and evaluation criteria of scientific placement are intended to ensure the originality, legitimacy, credibility, usability and visibility of the scientific production of a journal and highlight the importance of editorial flow management [...]".

Continuing with Spuidet, Werlag and Presser (2012, p.109) "watching these indicators characteristics implies, according to Trzesniak's observations (1998, p.164), avoiding wrong decision making with serious moral damage to persons or institutions, due to an excess of confidence in the validity numbers not sufficiently established." That is, the function of the indicators relates to guidance and standards that contribute to improvements policy and management goals plan of a journal.

Thus, we believe that this mapping will provide us with necessary information to better strategically understand the whole management process of RDBCI, as well as boost levels of quality with regard to the preservation of digital information and indexing sources of the journal, items that will be developed below.

2 RDBCI'S DIGITAL PRESERVATION

In relation to digital preservation, Márdero Arellano and Andrade (2006) point out that the establishment of standards for the development of digital archives allows us to envision possibilities for access and retrieval of data. If it is possible to integrate scientific documentation repositories, we may think of its integration with archival collections or its representations, so that it can be interconnected creating virtual access points to an enormous amount of institutions and its informational stocks.

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[3] JITA. Avalable at: <http://www.askosi.org/jita/index.html>. Last accessed in: February 27th 2016.

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A lasting perception of digital preservation needs to encompass many generations of systems and technologies and unite the organizational changes to the updating needs of those responsible for the digital collections.

The issue of digital preservation has multiple development fronts. Of the policies to techniques, a large set of critical points is found and, therefore, professionals interested in information maintenance under their responsibility must understand and get involved with the elaboration of the answers. The common interest of managers of the various types of collections in meeting digital preservation is the reason that leads to the research and consequent development of application solutions in the reality in which we operate, collectively and individually. (SANTOS; CAMARGO, 2012).

Cultural institutions are increasingly devoting money and resources to building their digital collections, both by reformatting physical materials as by the creating and acquiring of original documents in this format. Ensuring the sustainability of this digital asset requires more than static storage and backup systems. Systems and software are needed that require active management of this digital information over time to ensure its viability and accessibility.

The librarian has in the digital preservation practices an object of study that encompasses all the tasks involved in the information flow, which after being experienced by the researcher, can become focal points for originality in the area. (SANTOS, PASSOS, SAE, 2014).

> In the area of librarianship, as well as all information science, the use of digital technology that substitutes traditional preservation methods, such as microfilming, brought with it the concern over the rules for the use of digital techniques and its readiness in the task of long-term preserving (CHEPESUIK, 1997). The experts in the field who work with information in digital formats are developing standards needed to properly store and share these materials, as well as seeking the formulation of institutional preservation policies. According to Webb (2000), libraries are responsible for maintaining collections for permanent use, protecting them from threats, or saving them and restoring them to counterbalance its impacts (MÁRDERO ARELLANO; ANDRADE, 2006). (Emphasis added).

The concern over the preservation of digital documents in Brazilian institutions started in the beginning of this century, and is marked by the restructuring of Electronic Documents Technical Board of the National Council on Archives (CTDE / CONARQ). It is still a little explored and doubtful subject to the whole area of information science and other areas in Brazil (INNARELI 2011 SANTOS apud, PASSOS, SAE, 2014).

Digital preservation, being a complex and recent subject, does not adhere to the study of media, backup, migration, authentication techniques etc. The subject deserves an interdisciplinary and institutional study, being left to the information professionals and other professionals involved in the field to guarantee the preservation and maintenance of digital documents uprightly and authentically (INNARELI 2011 SANTOS apud, PASSOS, SAE, 2014).

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Digital preservation has different meanings for information professionals depending on the context; for example, for some it may be the infrastructure and institutional commitment needed to protect the represented digitally information, while for the experts of computer science it would be a way to mitigate the technological obsolescence and enhance human memory.

According to Márdero Arellano (2007), digital preservation "refers to the mechanisms that allow storage in digital data repositories, and guarantee the continuity of its contents."

Márdero Arellano (2012, p.90) further states that:

> Digital preservation can be considered a set of complex activities, which require years of planning and significant costs. Adopting technologies geared to the creation of collaborative networks can help change this reality. The option of digital preservation software for research libraries is the first step in solving the problem of protection of digital documents.

For the State Library - New South Wales[4], digital preservation can be defined as "the coordinated and continuous set of processes and activities which ensure long term storage, free of digital information errors with means for the recovering and interpretation which cover the necessary information, all the time" (ours translation).

Regarding UNICAMP, it has 67 journal titles editorialized by the institutes, colleges, centers, research centers and complementary bodies and has been concerned with the digital preservation of its publications. Of the 67 titles available in digital and print environments, only 45 journal titles have the qualifications for possible admission in the University's PPEC. After analysis by the Advisory Council of the PPEC using the established criteria, only 25 titles have entered the Portal to date, including RDBCI - Digital Journal of Library and Information Science, the focus of this study. (SANTOS, 2012)

PPEC utilizes for managing the 25 journals accredited in the Portal, including RDBCI, the Open Journal System (OJS) software, which was translated by IBICT as Journal Editing Electronic System (SEER). The system has a plugin which stablishes a direct link for the LOCKSS software, acronym for *Lot of Copies Keep Save Safety*, created by Stanford University in the United States. The editorial flow of OJS/SEER is exemplified in Figure 1.

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[4] State Library – New South Wales. Introduction to digital preservation. Disponível em: <http://www.sl.nsw.gov.au/public-library-services/digital-practice-guidelines-public-libraries/digital-preservation>. Acesso em: 18 jul. 2016.

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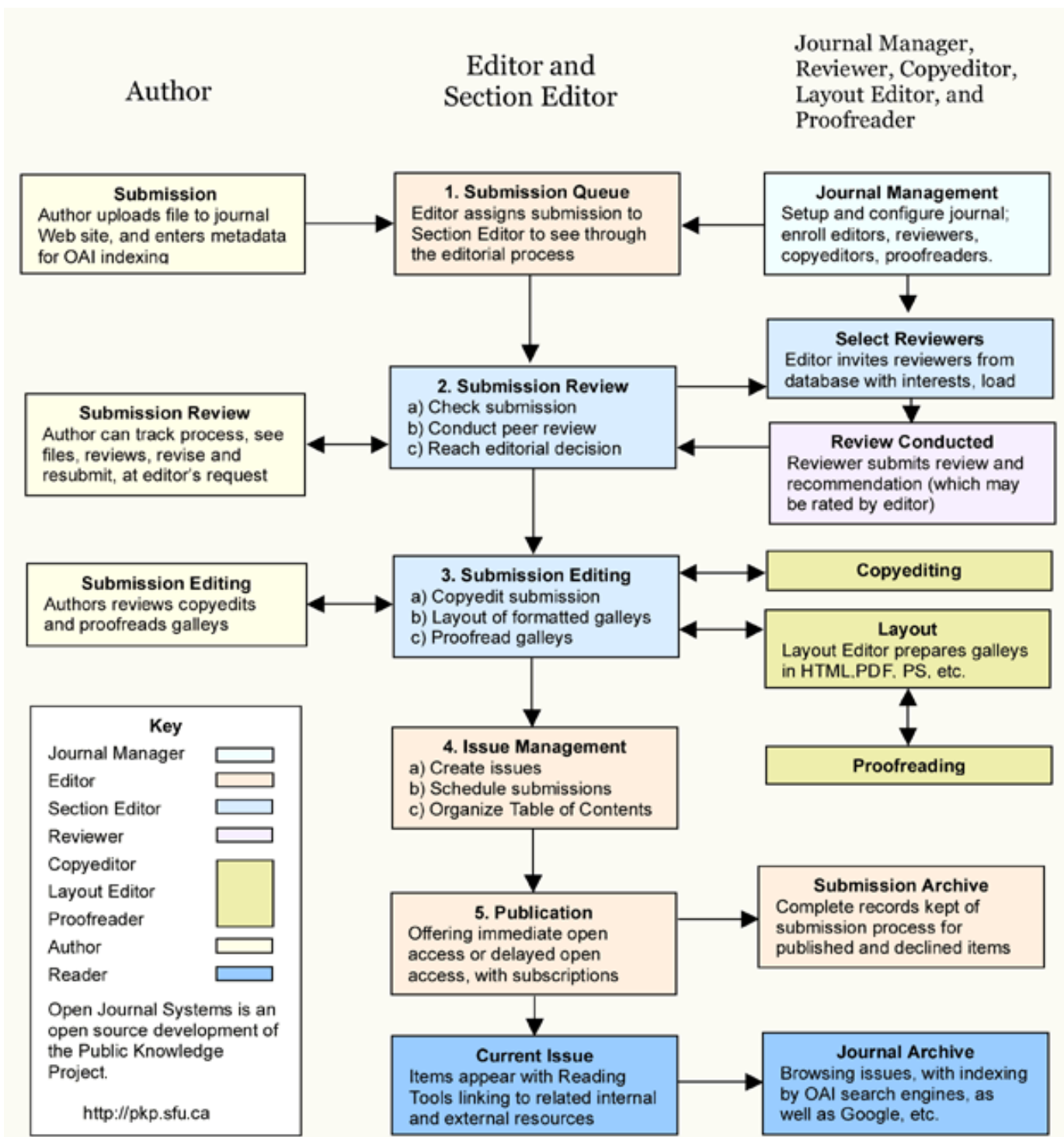
Figure 1. OJS editorial flow chart
Source: OJS/PKP – ver. 2.4.8.0.

IBICT is the official representative of LOCKSS in Brazil. LOCKSS allows the digital preservation of journals using OJS/SEER, and through it, it was possible to create the Cariniana Network of digital preservation. The network aims to preserve digitally the journals and other documents in the form of box storage, or LOCKSS boxes (SANTOS,

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2015b). In figure 2, we can observe the operation and structure of Cariniana and LOCKSS networks.
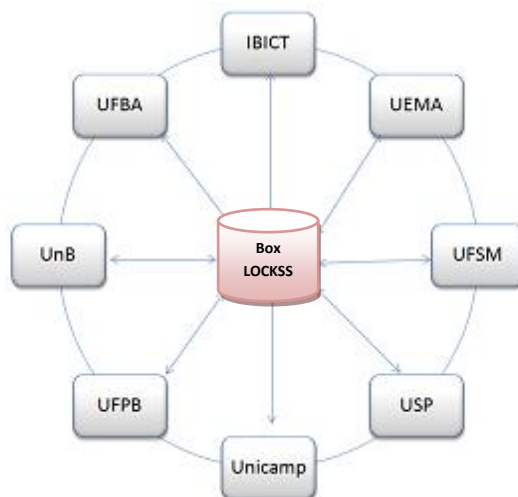
Figure 2. Cariniana Network/LOCKSS
Source: Adapted from the website http://cariniana.ibict.br/index.php/component/content/article?id=19

LOCKSS is an open source system that creates a data replication network (shared copies of electronic journals and other documents), allowing participants to access reliable data preserved through a connection restricted to a group.

> The Cariniana Network uses a private LOCKSS network and supports the LOCKSS Alliance. All magazines that were preserved in the network were registered voluntarily in the IBICT open access services. IBICT maintained an agreement with the Public Knowledge Project to collaborate with spreading the OJS platform across the country since 2008. More than a thousand Brazilian journals have signed the manifesto page for the preservation of its volumes [in the Cariniana network]. Guidelines instructing editors on their rights and duties for being a part of the network are published in the Cariniana Network (emphasis added).
> The Cariniana Network follows the LOCKSS Alliance model and established guidelines and periodic updates of its recommendations for all its institutional partners. The Internal Management Committee is responsible for periodically reviewing the network policies, including recommendations of accepted technologies and specific recommendations as well as the necessary procedures.
> The Network services and products are designed to responsibly ensure its partners the safeguarding of copies of the content in LOCKSS boxes administered independently. A small number of representatives of these institutions have controlled access and take part in an independent verification of the integrity of the Cariniana files, allowing the Internal Management Committee to validate the technical decisions that were made over time[5]. (Ours translation).

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[5] The Keepers Registry. Available at: <http://thekeepers.org/registry.asp?action=agencies& naecache=7#cariniana>. Accessed in: 22 jul. 2016.

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Since the entry of UNICAMP in the Cariniana network with the agreement signed in 2015, the University has 32 journals preserved by LOCKSS to date. Although some of them are not part of PPEC, all who use the OSJ/SEER software are set to be preserved.

Another great digital preservation project which RDBCI is part of through the Cariniana Network is The Keepers Registry[6], an international system of digital preservation administered by EDINA of University of Edinburgh, UK.

Therefore, RDBCI as a regular member of PPEC, is part of the Cariniana Network and has 31 journals digitally preserved since 2003, which showed no occurrence of loss of integrity. Since March 2016, it is the first Brazilian publication to be a member of The Heepers Registry.

Given the reality of the journal in relation to digital preservation, we can infer that we are on track, always with the concern to monitor the maintenance of these tools and to meet new conservation initiatives, seeking to ensure the integrity and authenticity of the records and memories of our issues.

3 RDBCI AND THE INDEXING SOURCES

Indexing is a process of analytical transfer and description of the information, being the most important in the Library Science field. Through this process, we can identify terms and subjects recorded in a standardized manner in the systems and information resources.

These information resources - databases, directories, portals and indexes – indicate, both manually or automatically, where one or more publications (journals, magazines, newspapers, newsletters, etc.) are indexed; They are responsible for the large number of information and data stored in a secure and standardized manner.

Since the open access movement, which emerged in 2002, there has been a big proliferation in the field of electronic journals. Anxious to give visibility to these journals, many publishers have sought to submit them immediately to indexing in the various databases, directories, portals and indexes.

Thus, today, the search of scientific journal's editors for indexation in the above-mentioned information resources is relatively busy. A periodical publications launched with the same theme of another in the planet is likely to compete with others that have existed for longer and that already have higher prestige and recognition than the one that was born recently in different databases.

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[6] Available at: http://goo.gl/zGCzKp. Accessed in 22 jul. 2016.

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To apply for indexing in certain fonts, or rather bases, directories or specialized portals, the interested in the publication must follow the criteria strictly published by the management organizations of these mechanisms in the original language in which they are kept. Both public and private sources have their rules and their indexing criteria.

Public sources are those administered by a public entity or non-governmental organizations (NGOs), and aim the expansion and dissemination of the information of a particular area of expertise, not aiming for profit. Examples: Edubase, Capes Portal, DOAJ, BRAPCI, Latindex, etc. (SANTOS, 2015a).

Private, or proprietary, sources are those registered and administered by a company (commercial supplier) who sells its products aiming the spread of one or more areas of knowledge. As examples, we cite: Web of Science (Thomson Reuters); Scopus (SciVerse/Elsevier); Academic OneFile (Gale Cengage); among other suppliers, such as ProQuest, EBSCO Host Emerald Publishing Group. (SANTOS, 2015a).

The aforementioned bases, we highlight the Web of Science (WoS), which is a set of databases compiled by the ISI (Institute for Scientific Information), which allows the recovery of papers published in important international information sources, presenting their references and allowing the reader to see how many times an article has been cited and by whom. (ROCHA; HOFFMAN, 2014).

In addition to private and public indexing sources, there are also autonomous ones, which are managed by an independent nonprofit team aimed at disseminating information from all areas of open access knowledge. Examples of such sources are Cite Factor, Sumários.org, Genamics, Academic Journals Database, E-LIS (SANTOS, 2015a)

The organization of the sources are categorized into four levels of recognition: local; regional; national and international. This categorization can also take up a single or hybrid form, meaning it can be at the same time local, but also considered regional, and so on. Hybrid is considered the most active classification form of the category. (SANTOS, 2015th).

As many private indexing sources have the entry policy restricted because of the criteria used in the evaluation and acceptance process, emerge open databases. These features are similar to the commercial bases and indexes in that they aggregate metadata and reference catalogues in one searchable database or list relating to the directories. The main types of open databases include open indexes, directories and search engines. One of the main advantages is that they are freely available on the Internet for use of individual readers and libraries. (STRANACK, 2006).

Many open databases are flexible in content inclusion criteria and its access policy. In addition, its content can be included more quickly in open databases. (STRANACK, 2006).

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Open databases are becoming increasingly important for researchers and editors. Although they do not have the same prestige or influence of those most desired commercial indexes, journals indexed in open databases have significantly increased visibility. (STRANACK, 2006).

Today in the information market there are several databases and directories aimed at general (multidisciplinary) and specific thematic. Knowing how to choose the indexing sources is very important to contextualize the journal and for its visibility by various institutions and suppliers. Appropriating the guidelines given by the indexing sources, RDBCI follows rules and criteria from each information resource to perform its indexing.

Having caution in relation to the indexing criteria, as well as concern for the digital preservation of its fascicles, RDBCI now has a list of about 20 national and international indexers, 06 of those being databases, 09 directories, 03 portals, and 02 indexes, as shown in Table 1:

Chart 1. RDBCI indexing sources.

	Nome do Recurso Informacional	Área de cobertura	Categoria	País
Databases	• Academic OneFile	• Multidisciplinar	• Internacional	• EUA
	• BRAPCI	• Bibliot. + CI	• Nacional	• Brasil
	• Edubase	• Educ. + Bibliot.+CI	• Nacional	• Brasil
	• Google Acadêmico	• Multidisciplinar	• Internacional	• EUA
	• INFOBILA	• Bibliot. + CI	• Nacional	• México
	• Informe Academico	• Multidisciplinar	• Internacional	• EUA
Directories	• Diadorim	• Multidisciplinar	• Nacional	• Brasil
	• Dialnet	• Multidisciplinar	• Internacional	• Espanha
	• DOAJ	• Multidisciplinar	• Internacional	• Suíça
	• E-LIS	• Bibliot. + CI	• Internacional	• Itália
	• EZB	• Multidisciplinar	• Internacional	• Alemanha
	• Journals for Free	• Multidisciplinar	• Internacional	• EUA
	• Latindex	• Multidisciplinar	• Internacional	• México
	• Sherpa/ROMEO	• Multidisciplinar	• Internacional	• Reino Unido
	• Ulrich´s Web	• Multidisciplinar	• Internacional	• EUA
Indexes	• CiteFactor	• Multidisciplinar	• Internacional	• EUA
	• ERIHPlus	• Multidisciplinar	• Internacional	• Noruega
Portals	• PKP	• Multidisciplinar	• Internacional	• Canadá
	• Portal de Revistas SEER	• Multidisciplinar	• Regional	• Brasil
	• PPEC-UNICAMP	• Multidisciplinar	• Local	• Brasil

Source: Drafted by the authors.
Caption: Librarianship; Information Science; Teaching.

Given this universe of indexing sources from which RDBCI takes part, we believe that the journal fulfills its goal of ensuring the visibility and integrity of its records.

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Continuing with this work, a study was conducted on the journal's management indicators. In the following paragraphs, data will be presented on the particular impact of RDBCI issues.

4 METHODOLOGIC PROCEDURES

As mentioned earlier, since 2005 RDBCI adopts the OJS/SEER platform as an editorial management tool, meaning all of the journal's editing and management processes are fully online. Therefore, this qualitative, quantitative and descriptive study, which focuses on exploratory research, aims to present data collected on the platform and others that will be highlighted below.

The methodology consisted in colecting and drawing the RDBCI data related to the following items:

- Numbers (issues) and published sessions – OJS/SEER;
- Highlighted contributions from foreign authors – OJS/SEER;
- Themes and more common topics - OJS/SEER;
- Alternative metric strategies - Google Acadêmico, MIAR e Journal Scholar Metrics.

This data will be presented and commented on the following paragraphs.

5 RESULTS

Starting the description of the results according to the collected data, we present the total scientific production in Librarianship and Information Science published in the last 13 years of the journal. This quantification was conducted by year and by sections represented in the journal, as in Table 2:

Chart 2. Quantity of issues per year and sections.

Year	Articles	Communications	Experienc e Report	Research	Review	Others
2003	05	00	00	00	00	01
2004	10	00	01	00	02	02
2005	10	00	05	00	00	04
2006	15	02	02	02	00	04
2007	12	00	02	01	00	02
2008	11	00	01	01	00	02
2009	15	01	05	01	00	02
2010	15	01	03	04	02	02
2011	16	01	04	02	00	01
2012	14	01	03	03	01	02

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2013	13	00	05	04	01	02
2014	29	00	03	01	00	03
2015	26	00	03	08	00	03
2016	16	01	01	01	01	02
Total	207	07	38	28	07	32

Source: Authors.

Given this table, we point out that from September 2003 to May 2016, 427 works were submitted with a total of 2,532 registered users in the system.

In 2005, we began translating the journal's "editorial" section, which is now also presented in English. In the "other" section, highlighted in Table 2, we included the RDBCI's editorials and the "news and information" section.

In 2009, we noted the gradual growth of article submissions. In 2014, we conducted a more thorough evaluation of the submission system and implemented some changes, which resulted in new significant increase in the number of submissions. One of the major changes was the change in the journal's periodicity, from biannual to quarterly, which significantly improved the time between submission, evaluation process and publication of articles, and administration of the editorial flow. We believe this change has increased the journal's credibility.

In the year of 2016, we began the bilingual publication of articles, publishing in the original language of the article and in English. In past editions, we had noticed the incidence of publication of works in other languages, so we believe that the change will be reflected in the number of submissions received by the journal, which for us is very positive.

The next table presented (table 3) shows the frequency of the most submitted authors in RDBCI and their respective institutions (see Table 6 in the attachment).

Table 3. Occurence of authors vs. Institutions most submitted in RDBCI.

Author	Instituition	Publication year	Nº Articles*
Waldomiro Vergueiro	USP	2003, 2004, 2007, 2009, 2010,2013	**6**
Isa Maria Freire	UFPB	2005, 2006, 2008, 2009, 2010	**5**
Úrsula Blattmann	UFSC	2004, 2004, 2005, 2006	**4**
Cesar Augusto Castro	UFAM	2004, 2006, 2006, 2015	**4**

Source: the authors.

We highlight that the majority of the most productive authors are from state or federal public institutions. We also emphasize that two of the institutions (University of São Paulo and Federal University of Paraiba) are part of the Cariniana Network of Digital Preservation.

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The importance of knowing these indicators of author/institutions is that it leads us to prospect marketing or other actions of work and partnerships to project the journal forward, as it happened with the Cariniana Network.

Table 4 brings a ranking of the most reoccurring article topics published by RDBCI.

Table 4. Most reoccurring topics in published articles by RDBCI.

Calssification	Terms	Incidence
1°	Information management	147
2°	Library	128
3°	Librarian	73
4°	Information society	69
5 °	Technology of Information and Communication	68
6 °	Knowledge management	65
7 °	university library	28
8 °	Distance Education	27
9 °	Social inclusion	21
10 °	Competitive intelligence	19

Source: The authors.

This table shows an overview of the issues in vogue published in the journal and that prevail in the world of Librarianship and Information Science research. Of the 10 subjects analyzed, we found the predominance of works related to information management, the Library environment itself, and related to the librarian, important themes aimed at the recognition and reaffirmation of librarianship as an important field of activity today.

We can also highlight other thematic trends of research as related to society, technology and knowledge management. Studies on the university library are the most present, perhaps because the RDBCI is incubated in a university libraries system and presents characteristics that point to more research in these environments, backed by experience reports.

Long distance education, social inclusion and competitive intelligence are the following topics.

Some topics circulated in the magazine through articles have a key role in corporate environments, which work with processes supported on information and knowledge. Librarianship and Information Science are recognized, in this context, as areas that provide research and studies on its practices and actions.

Another finding is that the information technologies have led to many changes in the field; so, more and more research and articles have meant to discuss this phenomenon.

In Table 5, we highlight the strategies of alternative metrics mapped in order to better know and understand these indicators for the management of RDBCI.

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We used known metric tools like Google Scholar, worldwide known indexer that also analyzes bibliometric data of the last 5 years (h-index). The MIAR - Information Matrix of the Analysis of Journals, scientific database of journal assessment developed by the University of Barcelona, which generates an ICDS[7] (Secondary Composite Index Broadcasting), an indicator that shows the magazine's visibility in different scientific databases of international scope, or journal evaluation repertoires. And the Journal Scholar Metrics, developed by the University of Granada, which is a bibliometric tool that seeks to measure the performance of journals in the fields of Arts, Humanities and Sciences, using Google Scholar data.

Table 5. Alternative metrics.

Type	Impact Indicator	
• Google Scholar	Citations: 1384 H Index: 7 i10 Index: 7	Since: 2011
• MIAR	ICDS (Secondary Composite Index Broadcasting) = 4.1	Since: 2014
• Journal Scholar Metrics	Totals H5-Index: 6 H5-Median: 8 H Citations: 54	Withouth journals self citations H5-Index: 6 H Citations: 53

Source: The authors.

The figures (3, 4 and 5) below show the results of the before mentioned tools, which are of great importance for the journal's management.

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[7] Quanto mais alto o ICDS (Secondary Composite Index Broadcasting) significa que o periódico está presente em diferentes fontes de informação de relevância internacional (MIAR, 2016).

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Figure 3. Google Scholar index and median
Source: https://goo.gl/VfEhPG

Figure 4. ICDS of MIAR – *Information Matrix of the Analysis of Journals*
Source: http://miar.ub.edu/issn/1678-765X

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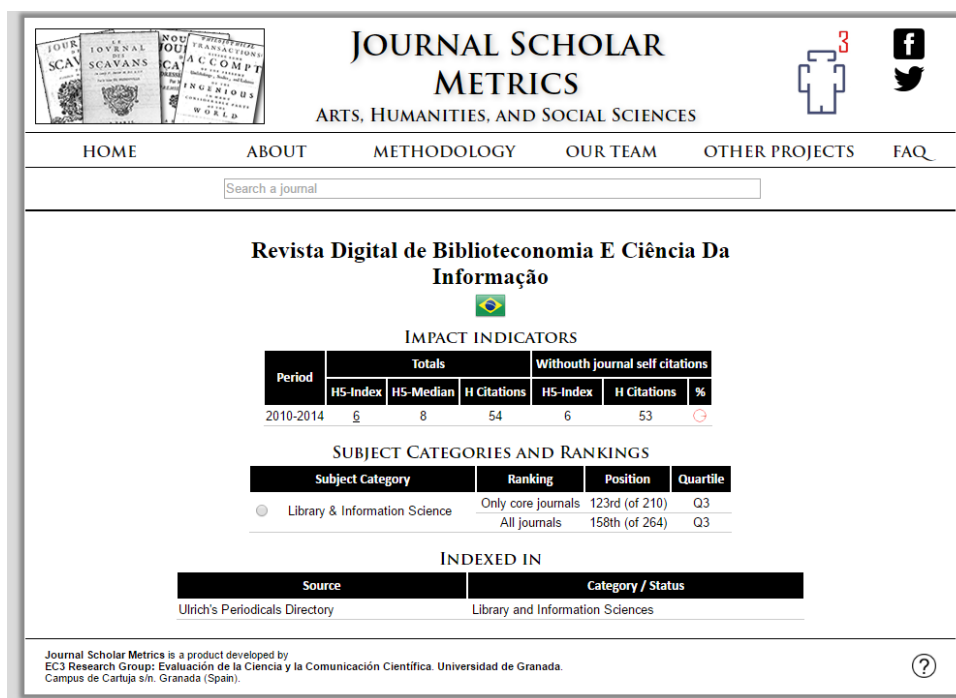
Figure 5. *Journal Scholar Metrics*
Source: http://goo.gl/Nlvxy0

There are other metric tools that are also important for the visibility and reach of journals. One is Altmetrics which shows the number of downloads made of the articles in PDF (developed by PKP - Public Knowledge Project in partnership with PLoS - Public Library of Science for OJS tool[8]), Metrics EC3 (CIRC - Classificación Ciencias Sociales) which maps the publications in rank order between A and D, and which is based on the MIAR information.

Another scientific disseminator and metric indicator tool, still emerging at least in Brazil, is Facebook. Large Brazilian and international journals have fan pages and communicate with their audiences through this tool. RDBCI also has a Facebook page since February 2016, with 392 likes. In addition to Facebook, there is also another tool to promote the journal's visibility that can be shared on the Add This installed in the journal by OJS/SEER, as shown in Figure 6:

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[8] Ver no Anexo desse artigo o Quadro 6 que apresenta o panorama dos trabalhos publicados pelos autores que mais contribuíram na RDBCI.

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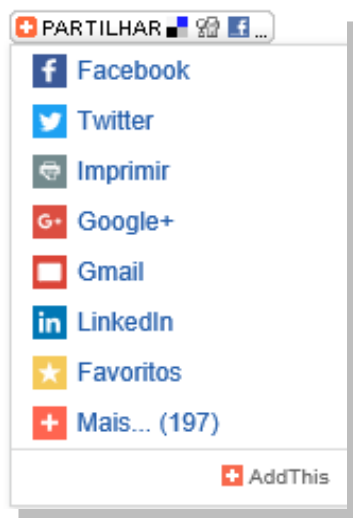
Figure 6. Journal's Add This and its connection to other social networks.
Source: OJS – RDBCI.

The information and analyzes made and exemplified in this article, the case of RDBCI, are meant to show the importance of these tools which provide bibliometric studies, for, from this information, the journals can make decisions related to their management and future planning.

6 FINAL THOUGHTS

It is extremely important that the Brazilian scientific journals follow a standard of quality. To establish standards and indicators is a challenge and implies the acceptance and reputation of these journals in the scientific field as well as its own professional field. Therefore, all this effort related to content standards, standardization and preservation actions and indexing databases are critical, as well, of course, a dedicated team to ensure excellence in the management of the editorial flow. Another important aspect is the internationalization of these journals, which is one of the ways to bring science to other borders.

On the objectives this paper set for itself, we can say that it sought to reflect on the production published in regards to the indicators focusing on the electronic management of the editorial flow to reaffirm the importance of digital preservation and indexing of its issues and to optimize aspects of the journal management routine. We conclude, therefore, that in the case of RDBCI, efforts were concentrated in elevating excellence standards in order to optimize the editorial management and evaluate the routines and activities that consolidate the journal in its field. Because we understand it is the duty of the editorial staff to maintain this standard, but to also set new goals, such as indexing in important tools and databases of world science such as SciELO, Web of Science and Scopus.

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