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PERSPECTIVES FOR THE USE OF OBSERVATIONAL RESEARCH IN UNIVERSITY LIBRARY: A STUDY IN THE COLLECTION OF PERIODICALS

PERSPECTIVAS PARA O USO DA PESQUISA OBSERVACIONAL EM BIBLIOTECA UNIVERSITÁRIA: UM ESTUDO NA COLEÇÃO DE PERIÓDICOS

PERSPECTIVAS PARA EL USO DE LA INVESTIGACIÓN OBSERVACIONAL EN BIBLIOTECA UNIVERSITARIA: UN ESTUDIO EN LA COLECCIÓN DE PERIÓDICOS

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RESUMO: Analisa o uso da coleção de periódicos impressos numa biblioteca universitária, por meio de pesquisa observacional estruturada, sistemática e não participante e também do levantamento de dados estatísticos de uso, no período compreendido entre os anos de 2012 a 2015, junto à Biblioteca. Enquadra-se, academicamente, na grande área de "usos da informação e acervos", com inspiração na contribuição intelectual de Lancaster e de outros autores no campo de estudos de usuários. A partir dos dados obtidos, espera-se contribuir para um possível estabelecimento de uma política para readequação do espaço atualmente utilizado por este acervo de periódicos, visando colaborar com a comunidade acadêmica para estar em sintonia com as linhas de pesquisa e projetos desenvolvidos na Universidade.

PALAVRAS-CHAVE: Estudo de usuários. Usos da informação e acervos. Periódicos impressos: estudo de caso.

ABSTRACT: Reports on a study that analyzes the use of a collection of printed journals in a Brazilian university library, using structured and systematic non-participant observational research. The study is placed within the area of "information and collection use", inspired by the contributions of Lancaster, Wilson and other authors in the field of user and use studies. Use of this journal collection was also analyzed using the Library´s own statistical data on collection use, for the period of 2012 to 2015. From the data obtained, we hope to contribute to the definition of policy parameters aiming to adjust the physical space currently used for this printed journal collection, aiming to collaborate so that the library might be more in tune with user needs and the research and projects developed in the University.

KEYWORDS: User Studies. Uses of information and collections. Printed journals. Case study.

RESUMEN: Se analiza el uso de la colección de periódicos impresos en una biblioteca universitaria, por medio de una investigación observacional estructurada, sistemática y no participante y también del levantamiento de datos estadísticos de uso, en el período comprendido entre los años 2012 a 2015, junto a la Biblioteca. Se encuadra, académicamente, en la gran área de "usos de la información y acervos", con inspiración en la contribución intelectual de Lancaster y de otros autores en el campo de estudios de usuarios. A partir de los datos obtenidos, se espera contribuir a un posible establecimiento de una política para readecuación del espacio actualmente utilizado por este acervo de periódicos, con el fin de colaborar con la comunidad académica para estar en sintonía con las líneas de investigación y proyectos desarrollados en la Universidad.

PALABRAS CLAVE: Estudio del usuario. Usos de la información y las colecciones. Revistas impresas: un estudio de caso.

1 INTRODUCTION

User studies have grown substantially over the last decades, shifting from a systems-oriented approach to an approach in which the information user becomes the principal agent and active subject of the processes involving the library. This shift of focus meant that Libraries and Information Centres began to take the information needs of the user and their behaviour in the search for information as the starting point for studies, in which qualitative data referring to these needs prevailed over quantitative, system-centred data.

Today, the focus of library user and use studies is directed towards the "new" reality that most people do not feel the need to use libraries – physically and virtually – to get information they need (CONNOWAY, 2015). The literature refers to the "Google generation" and "screenagers" (teenagers and young people whose lives are permeated by their constant affinity for electronic communication through the screens of their telephone, computer, television etc.) for whom the point of departure in the search for information will always be the Internet, and specifically through certain search engines (NOVELLI et al., 2010; LEHMKUHL; CHAGAS, 2012). The implications of this, notes Connoway (2015) is that the library needs to become embedded in the habits and lifestyles of users and potential users. According to Dempsey (2015), this fact will translate into the need for a deep focus of the library, which now has to be "in the life of the user" and not as before, when it was expected that the user fit into the life of the library.

In this work, we propose to analyse the user through structured, systematic and non-participant observational research (RICHARDSON, 1999; CUNHA, 1982), collecting the number of users and type of material consulted and, with the aid of statistical data previously collected by the Library, investigate how much the printed journals made available in a university library are actually being used. In fact, Ranganathan himself had already realised in 1931 that user observation is a natural and potentially powerful way to understand user behaviour in the library, with a view to how to improve the services and products provided by the library. Concerning his fourth law of Librarianship ("Save the time of the reader"), Ranganathan noted that:

> Perhaps this law is not as obvious as the others. However, it has been responsible for many changes in library administration and has great potential to affect far more in the future. Perhaps the most convenient method of studying the consequences of this law will be to follow the reader from the moment he enters the library to the moment he leaves it. (RANGANATHAN, 1931, p. 337)

Even considering all the technological evolution and the advances in the studies of user behaviour and the search for information, modern Librarianship can hardly fail to ignore the teachings of this great thinker of the area.

More recently, in the literature on "UX: User Experience", the use of ethnographic methods of observation is taking a central role in order to reveal the finer details and day-to-

day experiences of the users in relation to the services provided by the library (PRIESTNER; BORG, 2016). This more recent approach adds to and deepens the other paradigm shift in the field of user studies that occurred in the 1970s and 1980s, which focused on the user rather than the system or library, and which in the literature, is usually referred to as the "alternative approach" or "user perception approach" (FERREIRA, 1997; GONÇALVES, 2013).

The research presented in this article fits within the wider area of "information and collection use", inspired by Lancaster (1993), and we also seek references in the intellectual contribution of important authors in the field of information needs and behaviour, such as Wilson, Dervin and Taylor, among others. The aim is to understand and explain aspects related to the information needs and behaviour of the users of the library researched in the study. The study carried out was based on structured observational research, with a data-collection form having previously been prepared for the research, the creator of which (the first author here) was also responsible for the empirical observations conducted during the study. No interventions were made in the observed environment, thus characterising it as systematic research (NOGUEIRA, 1969, p. 82), and no attempt was made to manipulate variables, since the research was of the non-participant type.

For the study, the Community Library (Biblioteca Comunitária - BCo) of the Federal University of São Carlos (UFSCar) was chosen. Inaugurated in 1995, the BCo presents itself as a pioneering project in Brazil, with the aim of democratising its physical space and collection, its products and services, seeking to attend to the needs of the university and scientific community, as well as to those of the general public of the external community. Thus, the BCo is also considered a dynamic and efficient channel, a catalyst for the information generated and stored in the University (PADILHA, LIMA, 2006). In a study published by Ninin et al. (2015), in which the BCo was also selected as a case-study unit, the authors found that this library had a collection of approximately 241,000 monographic works, in addition to more than 4,000 journal titles, and an equal number of theses and dissertations. In addition to these categories, the collection includes special collections, such as the Florestan Fernandes Archive and the multimedia collection, among others.

The present study analysed specifically the use and users of the collection of printed journals available for consultation in the BCo-UFSCar, in accordance with the research question: how much are these printed journals used? Could the space currently occupied by this collection be adapted to another purpose?

Thus, we sought to review the theoretical aspects related to the area of user studies and, through observation, to understand the use that is made of the collection in general, which in turn, determines the role of the librarian in processes that support the institution´s teaching activities. According to Almeida (2000), this type of study is equally important to observe what the aims of the institution are, as well as the opinion of the users who use the library, so that the information products or services are evaluated qualitatively.

2 USER AND USE STUDIES

Research on the topic 'user studies' passed through a stage in which it remained relatively unchanged for more than 40 years, focussing on data collection to create or evaluate information products and services, as well as seeking to better understand the flow of information transfer (BAPTISTA; CUNHA, 2007). For Baptista and Cunha (2007), numerous studies carried out over the last decades have resulted in studies that cannot be compared, mainly due to the use of differing techniques for data collection. During the 1940s, another substantial contribution to the study of users appeared, which was the change in the profile of the library: from passive, understanding little of what users knew or of what they did not make use of among the information available, to active, now being concerned with the improvement of existing services and the creation of new ones such as selective dissemination of information, alert services, bulletins, among others. (RIBEIRO, COSTA, 2011).

Figueiredo (1994) argues that user and user studies are channels of communication that open up between the library and the community it serves. And a more convenient way of characterising them is to divide them into two types: 1) use-oriented studies with objectives such as data collection in order to evaluate, improve or create information services; 2) user-oriented studies, whose objectives, among others, include seeking to better understand the flow of information. These two types of objectives, in a deeper research, are not exclusive, but are complementary,seeking to obtain a broader view of the service under study. "[...] there is a need for further longitudinal studies so that variations in the use and need for information can be measured over a longer period." (BAPTISTA, CUNHA, 2007, p.169). Ninin et al (2015) point out that use studies are designed to assess how much and how a particular collection is being used.

Considering the broad area of 'information uses and collections', Lancaster (1993) observed that the evaluation of an information service can be “subjective or objective”. The subjective studies, based on opinions, are important for the measurement of the users' feelings about the service. However, if the evaluation is analytical and diagnostic, trying to find out how the service could improve, its usefulness becomes of the utmost importance, because for this it is necessary to adopt objective criteria and procedures, with results that can be quantifiable. Lancaster (1993) ruminates on the evident difference between the measures of use in the library itself and the measure of registered circulation, demonstrating the ambiguity of the first: if a document is borrowed or not, does that constitute use? If it is removed from the shelf, partially read and then returned to its place, would it have been used? There is no way to make sure that any item is used within a library, without representative users being interviewed or, at least, without being observed for a reasonable period of time.

Figueiredo (1983) clarifies that research on user studies, those which aim to know what individuals need in terms of information or if their information needs are adequately

met or not, are the communication channels that open up between the library and the community it serves. Moreover, these studies follow the scientific method, because they meet all the requirements posited by scientific thought, but they have the variable 'human being', which enables their being treated as a social phenomenon. Therefore, they are "[...] considered to be scientific in method and social in application." (FIGUEIREDO, 1983, p.43).

Aiming to collect readers' preferences, the early library user studies gradually incorporated the methods of behavioural science, with the primary concern being "[...] explanation of phenomena, prediction of use and control of the use of information by manipulating the essential conditions." (LIMA, 1974, p.51). Analyses by Ferreira (1997), Pithan (2009), and Baptista and Cunha (2007) show that in the period between the 1960s and 1980s, the main focus of the research agenda was on quantitative studies, with intensive use of statistical techniques, both in the collection and their treatment and they had "[...] as their aim to ensure greater precision in the analysis and interpretation of the results, thus trying to increase the margin of reliability regarding the inferences of the results found." (BAPTISTA, CUNHA, 2007, p.170). Gradually, the user starts to be presented as a participatory subject in practically all the processes that involve the library. This is even more evident in the context of online digital collections, in which the user becomes the author and manager of the digital resources made available by the library (AOYAMA, 2011).

The literature on information needs, through user studies, has already accumulated a large number of surveys. Miranda (2006) recalls that these studies rely on literature reviews and analyses published in the Annual Review of Information Science and Technology (ARIST) that are rich in pointing out characteristics, trends and important variables in the studies of use and information needs.

Studies by Bettiol (1990) and Case (2012) argue that the concept of information need is broad, and difficult to define, isolate or measure, as several researchers have attempted to interpret the meaning of the term "information need" and, as one of the more complex subjects in the area of user studies, there is still no satisfactory definition on this topic, which will lead us to address the opinions of several authors. According to Figueiredo (1983), the concept of information need is also one of the most complex in the user studies field and, in order to better understand the subject, the author is based on the definition of Line (1974), who argues that need is usually constructed as a contribution to a relevant, non-frivolous, even recreational, purpose. Regarding information search, Choo (2000) observes that this is "... the human and social process by which information becomes useful to an individual or group" (CHOO, 2000, p.99), and he proposes that in the information search process, there is a conceptual division in three stages: the clarification of the information need, the search and the use of the information.

Using the cognitive approach of sense-making developed and applied by Brenda Dervin, the emotional reactions that accompany the Information Search Process (ISP)

reported by Carol Kuhlthau, and the approach proposed by Robert Taylor on the situational dimensions of the environment in which information is used, Choo (2000) concludes that each of these three perspectives sheds its own light on the choices and actions in the main stages of behaviour in the process of information search: clarity of need, search and use of information. This active behaviour of the individual has been classified by Ellis and other authors as "[...] information-seeking activities in starting, chaining, browsing, differentiating, monitoring, extracting, verifying and ending." (CHOO, 2000, pp. 113, 114).

3 OBSERVATIONAL RESEARCH IN USER AND USE STUDIES

There is a consensus in the literature that quantitative methods and techniques have predominated in the area of user and use studies. The use and analysis of statistics routinely collected by the library (indicators on the use of certain items in the collection, frequency of use of certain parts of the collection, number of library website views, number of e-book downloads, footfall) is often conjoined with data collection directly from the users, through questionnaires and interviews. Gonçalves (2013) summarizes well the chronology of this tendency for the choice of these methods in the area, which Chowdhury and Chowdhury (2011, p.381) call "positivist and reductionist approaches", and which Janes (2012) criticises for not leading to a sophisticated understanding of information use. This is due to the fact that questionnaires tend to be answered by users who are already more pro-library use, and that self-reporting on the user's own behaviour is not entirely reliable.

Regarding flaws that are more inherent to questionnaires and structured interviews – and especially those made up of closed questions to supposedly collect the respondent´s opinion on a given topic, Bourdieu (1982, p.139) has warned that the main flaw of this type of survey is to "precisely get people to answer questions that they have not ever asked themselves." On the other hand, Priestner and Borg (2016) contextualize more pragmatically the tendency for the professional librarian to opt for these survey methods: they are relatively cheap, fast, and simple to implement. Besides these aspects, they say, the professional librarian usually has not been trained in the use of other qualitative, and possibly more complex and interpretive methods.

Chowdhury and Chowdhury (2011) compare the quantitative and qualitative methods in user and use studies, observing that the former sought to generate data about a specific phenomenon, capturing what happens at a given moment, and understood to represent an objective and impartial reality. Qualitative methods, on the other hand, seek to gather information from the context in which events occur, and also seek to describe those events, especially from the perspective of the actors participating in those events. Qualitative methods seek to interpret and describe the complexity and pluralism of the study context, assigning centrality to the user´s point of view.

As an example, we have the sense-making approach, developed from 1983 onwards by Brenda Dervin, which is composed of a set of conceptual and theoretical guidelines for analysing the way people construct meaning in their reasoning and how they make use of information and other resources in this process (DERVIN and NILAN, 1986). Ferreira (1997) develops and reviews the idea of sense-making as a useful and valuable tool that human beings seek in their attempts to aggrandize their own lives, in their search for information and knowledge.

Observation is a data collection instrument used to collect qualitative data in user study research that involves the observation and recording of events or situations (CHOWDHURY; CHOWDHURY, 2011). According to Richardson (1999), generically, the basis of all social research is observation, which can be used in scientific work at all levels, from the simplest to the most advanced stages, since "observation, in one aspect or another, is essential in any scientific research process, since it can either be combined with other data collection techniques or it can be used independently and/or exclusively"(RICHARDSON, 1999, p.259). In common parlance, observation is the meticulous examination of a phenomenon in its entirety or in some of its parts, capturing precisely what is desired of the examined object. In science, its meaning goes further, incorporating new elements into the usual sense of the word, presenting a broader and more complex dimension. Traditionally, observation is classified as a qualitative research method and, as such, is criticized both positively and negatively. It requires of the researcher, among other things, much attention, humility, methodological rigor and intellectual honesty. In this respect, Selltiz, Cook and Wrightsman (1987) define observation as:

> [...] not only one of the most diffused activities in daily life: it is also a basic instrument of scientific research. Observation becomes a scientific technique when it serves a formulated research aim, and is systematically planned, systematically recorded, and tied to more general propositions, and instead of being presented as a set of interesting curiosities, it is subjected to checks, and to controls for validity and accuracy. (SELLTIZ & COOK & WRIGHTSMAN, 1987, p.45)

For Nogueira (1969), knowledge begins with observation and depends on it, and every human individual, insofar as s/he lives, also observes the world, both in its physical and social aspects. However, spontaneous, informal observation may present a number of disadvantages, from the scientific point of view: 1) it can be casual and sporadic; 2) the observer can perceive certain aspects of the world around him and fail to notice others; 3) the individual may not clearly separate what results from the observation, confusing what was found from what was inferred; 4) the attention of the observer may be more attracted by the picturesque rather than by the ordinary and commonplace which will often go unnoticed; 5) in this type of observation, the individual usually does not take notes or records.

As spontaneous observation is casual and sporadic, this act of observing without definition of the object to be observed can be something positive for the emergence of new ideas and objects of study. In view of this, Nogueira (1969) considers as a better solution the

use of systematic observation, which presupposes precise delimitation in the field of intended investigation, both in time and space. In this sense, systematic observation allows the observer

> [...] to acquire the capacity to perceive what is routine, that which is usual, in short, that which is usually left unnoticed, either because it has become monotonous and habitual, or because it has been relegated to the sphere of observations that are often taken for granted, implicit, as matters of 'indisputable' common sense. (NOGUEIRA, 1969, p.88).

Vieira (2013), Chowdhury and Chowdhury (2011) and Cunha (1982) have questioned the observational research method, highlighting some disadvantages, such as: a) the observer can only observe certain behaviours and physical aspects; b) the observer cannot collect information about motivations or intentions; c) the sample is typically intentional, that is, the researcher chooses where, how and who to observe, so that the results for the entire population are not generalized; d) the observer can only collect data when they occur within their field of observation; e) if users being observed are aware that they are under observation, they may change their behaviour; f) lack of uniformity, because different things can be observed at different times; g) the observer can neglect important factors and see what he is not prepared to see; h) if more than one observer is involved, there may be inconsistencies and discrepancies in the registers kept between them.

Among the advantages of observation as a data collection method, Chowdhury and Chowdhury (2011), and Priestner and Borg (2016) note that observation:

- Provides direct experience;
- Provides insights into the existing system;
- Does not require the investment of time by the user;
- Because it is a relatively simple technique, it requires little training (although it helps if the observer is familiar with the organization or activity being observed).

Concerning user studies in the 1970s phase, Wilson (2000) observed that library practitioners were usually disappointed that these studies did not generate recommendations for changes in the provision of services and products. These predominantly quantitative studies did not depict the details of the context within which the phenomena of access and use take place, so they did not provide a picture of what actually happens to the user, and why. Instead, Wilson (2000) proposes:

> A shift of focus in information science research towards qualitative methods and action research would support the proposition that information science is a social science by insisting upon the more intelligent use of social research methods for the development of models from the point-of-view of the philosophy of social (rather than physical) science.

For Wilson (2000) the results of user studies using qualitative methods coming from the social sciences, may be candidates for more obvious and immediate application in the

organization being studied. Tarapanoff, Araújo Junior, and Cormier (2000) also arrived at a similar conclusion about the potential "usefulness" of results of user studies in general (both quantitative and qualitative), which, in their conception, should be considered as a strategy management tool in the library. This is because the information needs of the user can be anticipated and their function exceeds the generation of data regarding the user profile, and should generate indicators that could formulate, mainly items of quality control for the services provided by the information unit.

Practitioners and proponents of the current "ethnographic turn" in user studies within the "UX: User Experience" perspective, while recognizing the complexity and great investment of time and manpower required for the proposed ethnographic methods, also clearly visualize the potential and tangible uses of the results of such studies by the organization. As Laclos (2016, p.24-5) observes:

> Qualitative research is messy, in execution as well as in the data it yields. Qualitative research in libraries has two primary purposes: to improve user experiences and to more effectively communicate with those who fund and otherwise support libraries.

It is also worth noting that the part of ethnographic studies based on more traditional techniques such as observation can add a context, through a layer of rich and dense interpretation, to the data and statistics that a given department in the library already routinely produces (JAMIESON, 2016).

4 METHODOLOGICAL PROCEDURES

Although traditionally classified as a qualitative method, observation is also quantifiable and, to this end, one should not only look at and see the phenomenon under study, but also establish some preconditions for its development. (RICHARDSON, 1999). In view of this, the data were collected in the form of a case study, in which the research universe comprised the BCo's collection of printed journals, related to its use in the period from January 2012 to December 2015, including the amount used to attend the bibliographic exchange programmes, known as COMUT.

The research consisted of the following steps: 1) identification and collection of the BCo's statistical data on the use of printed periodicals, for the period 2012 to 2015; 2) elaboration of the form, or data collection protocol, for structuring the observation; 3) random selection of sampling periods; 4) observation of the users in the printed journals section, located on the fourth floor in the BCo; 5) data collection, analysis and interpretation; 6) presentation of the results. For the structuring of the observation, a form or data collection protocol was elaborated (Figure 1), so as not to interfere with the observed environment, characterizing it, therefore, as systematic research (NOGUEIRA, 1969, p.82). The user behaviour that occurred spontaneously in natural contexts were observed, without

participation in what ocurred and without any attempt to manipulate variables, since the research was of the non-participant type.

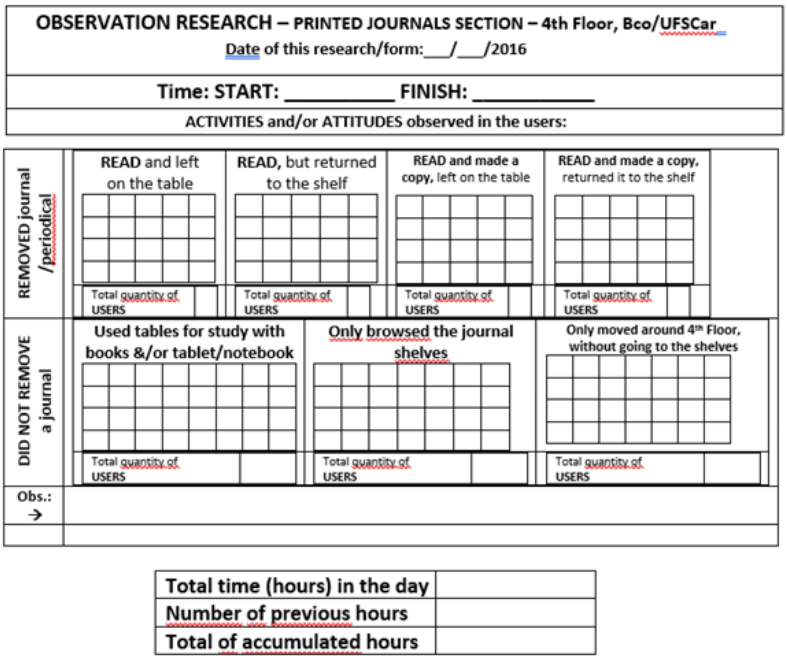

Figure 1 - Form elaborated and used for the structuring of the observational research in alternating days and times

The observations were carried out between April 5 and May 10, 2016, totalling 48 hours and 20 minutes of structured, systematic and non-participant observation, prioritising the times with the usual highest concentration of users, which is between 9am and 10pm, according to Ninin et al. (2015, p.67), based on 100,662 records referring to BCo loan transactions made in 2011.

5 DATA DESCRIPTION AND ANALYSIS

The data collection was comprised of two phases: the first focussing on statistics on journal (periodical) use already collected by the BCo, based on the count of the material left on the tables. The second phase, carried out in 2016, was the observational research done with users who attended the print journals section on the 4th floor of the BCo, identifying how many made use of the periodicals and how many only used the space for their studies, without consulting the collection.

The BCo statistical data collected in the first phase, were tabulated in Microsoft Excel spreadsheets, the processing of which followed strictly the categorization and original quantities provided by the BCo. The aim was to compare values of each year analysed, classifying the titles by frequency of use in descending order. From these results, graphs were elaborated to facilitate the reading of the tabulated data.

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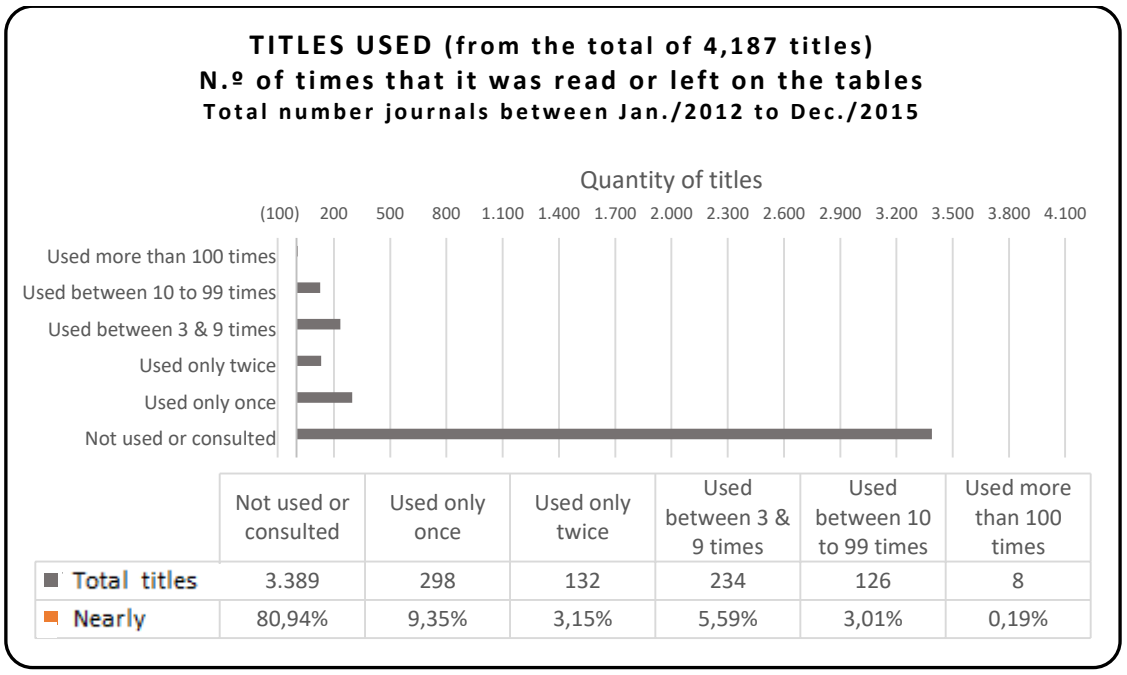
The BCo print journals (periodicals) section currently holds a total stock of 4,187 titles, according to data provided by the Library. From these data, it was possible to observe that in the period between 2012 and 2015, only 798 titles were used, including for the bibliographical exchange (COMUT) service, which represents 19% of the total. In Graph 1 we show that, of these 798 journal titles used, most had a minimal number of accesses or use, and uses were distributed (in per cent), as follows:



	Not used or consulted	Used only once	Used only twice	Used between 3 & 9 times	Used between 10 to 99 times	Used more than 100 times
Total titles	3.389	298	132	234	126	8
Nearly	80,94%	9,35%	3,15%	5,59%	3,01%	0,19%

Graph 1 - Demonstration of the amount of titles used, according to the number of times each item was read or left on the tables

Source: survey data, 2016. Notes: Prepared based on table counting statistics, for the period from January 2012 to December 2015, made available by BCo (includes calls via COMUT).

After 48 hours and 20 minutes of observation conducted, the number of users that effectively removed a journal issue in the section under analysis was identified. This amount was much lower than initially expected. It was also possible to observe the behaviour of the visitors (potential users) to the printed journals section on the 4th floor of the BCo.

Graph 2 shows the results referring to users who removed, or not, a journal issue or volume from the shelves:

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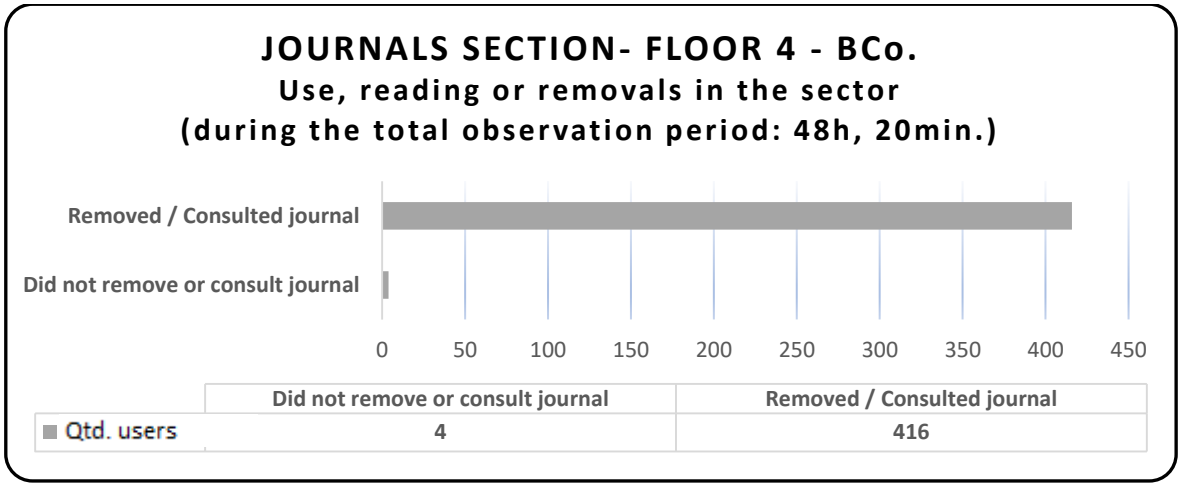

Graph 2 – Quantity of users who removed/used periodicals/journals

Notes: Elaborated from data collected from the observation research conducted between April 4th and May 10th, 2016, after 48 hours and 20 minutes of field research.

6 RESULTS AND DISCUSSION

Analysing the results, it can be observed that of the 4,187 journal titles available in the journals collection, only 798 titles (19.01%) were used during the period from 2012 to 2015, meaning 3,389 titles (80.94%) were not used. Among the 798 journal titles used in the period, the 45 most accessed are, in fact, back numbers of magazines that do not publish scientific articles, such as: *Veja; Época; Isto é; Superinteressante; Caros Amigos; Carta Capital; Isto é Dinheiro; Você S. A.; Kappa Magazine; Exame; Placar*, among other non-academic journals. In addition, of the 798 titles used in the period, about 69% also refers to journals that have no tradition in the publication of scientific articles, in the case of journals of general interest, segmented by public or specific professional interests.

Comparing the statistical dataset of use data with those collected during the observation research, we found a gradual fall in the use of printed journals, year by year, in the BCo. This situation confirms that this phenomenon is similar to that occurring in other higher education institutions, as analysed by COSTA (2007), in which the accesses or consultations to scientific journals are increasingly being made electronically through the Portal de Periódicos CAPES (CAPES Journals Portal), among others.

The access statistics for the CAPES Journals Portal, regarding users from UFSCar, and made available by CAPES (2016) in the CAPES Geo-referenced Information System (GEOCAPES), demonstrate the curve of the trend in the evolution of access for the years 2011 to 2014, according to Graph 3 (during the elaboration of this article, data for 2015 were not yet available):

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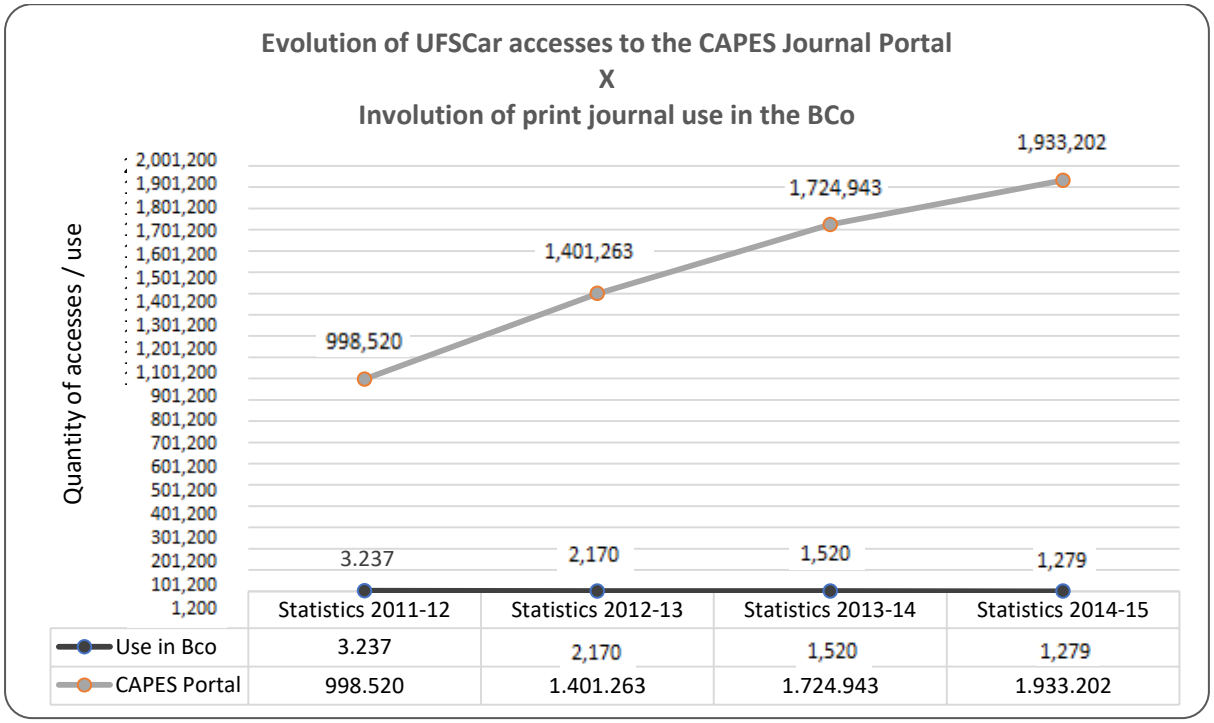

Graph 3 - Annual evolution of the number of accesses to the CAPES Journals Portal - UFSCar data from 2011 to 2014

Source: BCo statistics 2012-2016; GEOCAPES, 2016. Notes: Elaborated from data from GEOCAPES – Sistema de Informações Georreferenciadas | CAPES and BCo statistics.

We also found that the largest share of users (405 users out of a total of 420) who frequented the printed journals section on BCo's 4th floor, was there with the intention of using the area for their studies and for use of the open wireless network, using only books from the library's collection and/or their own notebooks or tablets. The material left on the tables revealed that they were undergraduate or postgraduate students from the most diverse areas of knowledge of the courses offered by the University.

There was a preference for tables installed near windows, especially on warmer days. On days with cooler temperatures, users were more evenly distributed at tables available all over the 4th Floor. The BCo has a substantial amount of users, and throughout the library, there is a sizeable coming and going of users. At times, the available spaces for study seem insufficient to meet the demand of users. In view of this, there is discomfort and commentary among the regular library users when they see the large space occupied on the 4th floor by the collection of printed journals that practically nobody uses.

The results obtained comprised a set of indicators that corroborated the initial hypothesis that, currently, the printed journals of the BCo collection have little use. This has not come as a surprise, as the same phenomenon has been occurring in other Higher Education institutions around the world, according to studies by Liu (2005), Costa (2007), Breeding (2010), Oliveira (2013), Lown, Sierra e Boyer (2013), who have studied user

perceptions of print versus electronic resources, and the advantages and disadvantages of the evolution of journals in their electronic format.

In possession of the evidence, the Library Director might be able to plan and advocate for a separate space, apart from the BCo, in which to keep and preserve the printed journal collection, thereby freeing up prime space currently occupied on the 4th Floor of the library by the printed journals. This would allow an increase in space dedicated to items from the basic bibliography of all courses offered at the university, the acquisition of which is regularly conducted to comply with Law number 10.861 of April 14th, 2004 (BRASIL, 2004), in which the National System of Higher Education Evaluation (SINAES) was instituted by the Ministry of Education. Furthermore, a comparative study between print journals that are found online could identify that most of the print collection is also found online and in journal databases, thereby also highlighting the fact that access to print collections is unnecessary, so that those remaining can be put in storage for preservation.

It is always very important to observe evaluation parameters, verifying if the collection satisfies the users. With rapid technological development, there is an urgency to keep up to date with changes, in order to benefit all the library´s user communities and stakeholders. Observation methods can be usefully employed in user and use studies, with which librarian practitioners can appreciate user demands as well as user satisfaction; even after 85 years, Ranganathan's words are still highly relevant and true: "[...] books are for use [...] to every person his or her book. [...] to each book its reader. [...] save the time of the reader. [...] a biblioteca é um organismo em crescimento. [...]" (RANGANATHAN, 1931, p. 1-382).

7 CONCLUSION

The study presented here aimed to identify, through structured, systematic and non-participant observation research, the habits of use and actions by the library users frequenting the journal section and how many of these users consulted and made use of the collection. The study was also based on statistical use data, already collected and made available to us by the BCo, based on the count of the material left on the tables, as "[...] the easiest way to find out what items or types of items are consulted in the Library is to examine the material that has been left on the tables, this being one of the most frequently-adopted methods" (LANCASTER, 1993, p.81).

For the BCo and UFSCar, we suggest the relocation of the print journals to another space – but not their disposal – since their use has been declining sharply, especially considering that of the 4,187 titles currently available in the collection, part of these is also made available digitally.

The BCo's management, together with its employees and collaborators, has been making efforts to identify which titles of the print journals are fully available in electronic format, which the community of this Higher Education institution can access through the UFSCar network, be they subscription (non-open access) or open access content. For the time being, it has not been our intent to approach the issue of user-centered quality of library services and products, as well as the importance of periodically evaluating how this quality is being perceived by users, although we appreciate that, following the precepts and research agenda of the more recent User Experience UX paradigm, even deeper, more ethnographic and observation research needs to be carried out to unpack the multifaceted dimensions of the quality concept for users. This approach could complement the popular quantitative service quality assessment method currently used in libraries around the world, namely LibQUAL+®. It is a method that helps the management of academic libraries to identify strengths and weaknesses of the services offered, by asking users to answer a structured questionnaire. The results, being standardized, allow the library administration to benchmark the quality of their library services with other libraries. In general, it is a tool that can contribute to a more professional administration of libraries. (BRITO; VERGUEIRO, 2013; LibQUAL+®, 2016).

The execution of this study initially proved to be a complex challenge, but with the valuable cooperation of the staff and management of the BCo, the research was concluded in a way that both benefits, hopefully, the library management, as well as contributing to discussions of this research agenda in the Brazilian context, as well as to the academic formation of the first author in Librarianship and Information Science. The opportunity offered by this work, from the point of view of the professional librarian, was the distinct approach to the user, bringing together aspects of the literature on users and uses, with those of the literature on collection development and management, library administration, and observational and statistical surveys of use. The results presented here, by combining this knowledge, can contribute, above all, to more user-centered administrative decision making in a university library.

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