

## RESEARCH ARTICLE

## Information and reference services in hybrid libraries

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## ABSTRACT

**Introduction:** To make relevant information available to its users, the library provides reference and information service, which helps, in a personalized way, users satisfy their information needs. To achieve their purposes, the library and the reference and information service need to keep up with the changes presented by the environment where they operate, which has led to the emergence, among other things, of hybrid libraries. **Method:** In order to verify the needs of reference and information services to be offered in hybrid libraries, a qualitative and exploratory study was carried out. A literature review was developed in specific theoretical references of both themes - reference and information service and hybrid libraries - in the scope of Information Science. **Results:** As results, it is pointed out that there is a need for adjustments in the reference and information service for libraries to be configured as hybrids. **Conclusion:** It is stated that the reference and information service is directly affected by the concept of hybrid library, which brings the need to rethink its scope and vision.

## KEYWORDS

Reference and information service. Hybridity. Libraries. Hybrid library.

Serviço de referência e informação no contexto da  
hibridez em bibliotecas

## RESUMO

**Introdução:** Para disponibilizar informações relevantes aos seus usuários, a biblioteca disponibiliza o serviço de referência e informação, que auxilia, de maneira personalizada, os usuários a satisfazerem suas necessidades informacionais. Para atingirem seus propósitos, a biblioteca e o serviço de referência e informação precisam acompanhar as mudanças apresentadas pelo ambiente onde atuam, o que fez surgir, entre outras coisas, as bibliotecas híbridas. **Método:** Com o objetivo de verificar as necessidades de adequações do serviço de referência e informação para serem ofertados em bibliotecas híbridas, foi realizado um estudo de natureza qualitativa e do tipo exploratória. Foi desenvolvida uma revisão de literatura em referenciais teóricos específicos das duas temáticas – serviço de referência e informação e bibliotecas híbridas - no âmbito da Ciência da Informação. **Resultados:** Como resultados, destaca-se que existe necessidade de adequações do serviço de referência e informação para que as bibliotecas se configurem como híbridas. **Conclusão:** Afirma-se que o serviço de referência e informação é diretamente afetado pelo conceito de biblioteca híbrida, o que traz a necessidade de repensar seu escopo e visão.

## PALAVRAS-CHAVE

Serviço de referência e informação. Hibridez. Bibliotecas. Biblioteca híbrida.



JITA: IJ. Reference work.

## 1 INTRODUCTION

One of the libraries' missions is to make relevant information available to their users to carry out their research, in order to facilitate their access and location of the required bibliographic material (FUNARO; CARVALHO; RAMOS, 2000) and, also, the information, research data, multimedia resources and documents in several supports. In order for libraries to fulfill their mission, the Reference and Information Service (SRI) occupies a strategic position among the services offered, because it is based on it that libraries have the opportunity to contact their users (in person or remotely) and help them meet their information needs. SRI, according to Macedo (1990), involves the direct and correct assistance that the librarian offers to the user, according to reference practices, without that user leaving without response or direction. According to the author, this service is influenced by the characteristics of the library, such as size, administrative structure, institutional goals, country, state or municipality where it is located.

The characteristics of libraries change over time, being influenced by the needs and characteristics of the community they serve, which also change frequently. Some changes are very relevant and are reflected, even, in the nomenclature used to refer to libraries with certain characteristics, such as traditional libraries and hybrid libraries.

Hybrid libraries reflect a transactional state, where the library is neither totally printed, nor totally digital, but it uses Information and Communication Technologies (ICT) as strategic tools to favor the access to information and the production of knowledge in society. In view of this scenario and taking into account that the NIS is influenced by the characteristics of libraries, this article aims to verify the needs of adjustments of the reference and information service to be offered in hybrid libraries, from the five distinct lines of action of this service, more specifically those highlighted by Belluzzo and Macedo (1993), that is, reference and information service itself, user education, alert and dissemination of information, visual communication / dissemination of the library and administration / supervision of the reference sector.

The study is characterized as being of a qualitative nature and of the exploratory type. For this purpose, a bibliographic research was developed in specific theoretical references of the two themes - reference and information service and hybrid libraries - in the scope of Information Science, relating them, later, in the results of this article. Thus, this introduction is followed by the theoretical review, methodological procedures, presentation and discussion of results, and final considerations.

## 2 LIBRARIES AND THEIR DEVELOPMENT IN SOCIETY

Traditional libraries are those that make bibliographic resources available in an analogical way, that is, they are environments located in specific spaces, geographically delimited and that have finite and tangible collections (OPPENHEIM; SMITHSON, 1999). Authors such as Tammaro and Salarelli (2008), Araújo and Oliveira (2005), Braga (2002), Marcial (2006) and Milanesi (2002) understand that the concept of traditional library goes through the initial idea of libraries, that is, organizations that aim to provide access to information in its different media.

Silva (2017) highlights that libraries can be delimited in times and epochs, due to the way society is changing in relation to the context of institutions. In the course of his studies, Silva (2017) created a figure (Figure 1), which divides the eras of libraries into Traditional Era,



Serra (2016)<sup>1</sup> describes six main differences between traditional libraries and what she calls digital and hybrid libraries, namely: 1. While in traditional libraries users are face-to-face, hybrid libraries encompass both face-to-face and virtual users; 2. Traditional libraries have textual and printed holdings, while hybrid libraries work with holdings in a variety of media and formats; 3. The traditional library collection is limited, while the hybrid library also allows access to digital content; 4. Access to traditional libraries' content occurs only during their opening hours, while hybrid libraries allow access to their content 24 hours a day, seven days a week; 5. Traditional libraries use descriptive metadata, with no or little use of images, which differs from hybrid libraries, which include image content in their metadata; and 6. User service in traditional libraries occurs to those linked to the institution, and hybrid libraries open up other possibilities for communicating with users.

The changes in library practices are about keeping items in the library collection, but also about items that the library provides access to that are not in the collection. This requires cooperation between metadata and databases, as well as the establishment of consortia between libraries. It also involves the transformations between languages and formats of technologies, influencing the acquisition and/or licensing of documents that, in turn, affect the policies of access to content, demanding different forms of management for analog, electronic and digital information.

### 3 HYBRID LIBRARIES

The term 'hybrid library' was first published in the book "The roles of reference librarians, today and tomorrow" by Sutton (1996), as a path through which the traditional library would travel until it became fully digital. "The idea behind the hybrid library label is not new and was expressed by researchers who recognized the need to bring together all available types of information resources in order to arrive at a fully connected information environment" (BREAKS, 2002, p. 100).

For Oppenheim and Smithson (1999), the development of the hybrid library concept depends more on cultural changes than on technological development, since it is necessary for people to understand the need of technologies for its implementation. Thus, "the term 'hybrid library' is a label to help construct thinking about how libraries are developing" (BREAKS, 2002, p. 107). It is understood, therefore, that the change would take place more in relation to the culture of librarians and managers than in relation to the services and products offered. Libraries are composed by professionals and users from different generations, and each one of them has specific characteristics that do not always dialog and converge in the organizational context of libraries. Thus, for some professionals it is still a challenge, but necessary, to deal with ICT in the library environment.

[...] "hybrid library", one that contains not only print and magnetic material, but also digital information (in multiple formats: on and off-line optical media such as CD-ROMs and DVDs, terminals for accessing catalogs, databases, and some of the many types of digital documents). More and more, most libraries need to include, voluntarily or not, these types of documents in their collections. Such libraries may also have computers for their users to access the Internet. The professionals they serve there need, at the very least, to acquire some knowledge of computer operation and

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<sup>1</sup> Talk given in Hangout by Sophia Systems Information Professional Liliana Giusti Serra, on March 14, 2016, at 11:00 am (Brasília time). SophiA Channel: Software for school and library management, from the website youtube.com. Available at: <https://www.youtube.com/watch?v=ksdmYYDnUT0>. Accessed on: 05 Oct. 2020.

develop strategies for instructing their users in this knowledge. (LEVACOV, 2005, p. 210).

It can be said that "the challenge associated with hybrid library management is to encourage the discovery of resources and the use of information to the end user, in a variety of formats and from various local and remote sources, in a seamlessly integrated manner" (PINFIELD et al., 1998, p. 1). Therefore, the concept of hybrid libraries refers to the junction between the tasks of traditional, electronic and digital libraries, seeking greater access to information.

That said, the role of hybrid libraries is "[...] to identify small groups of users and offer more specialized value-added services, with great flexibility and creativity in its realization and form, through the diagnosis of what the user wants" (GARCEZ; RADOS, 2002, p. 46). From this perspective, it is understood that hybrid libraries aggregate different technologies and information sources, adapting to various contexts and converging products and services. Through the use of technologies, seen as strategic tools to unite printed and digital resources, work is done to meet the informational demands of users.

Therefore, it is inferred that the "[...] informational diversity contained in the hybrid library is translated into the creation of an interface capable of integrating the different formats that the traditional library has, added to the new digital formats" (MONTEIRO et al., 2006, p. 6). Thus, it can be said that hybrid libraries are prior to digital libraries, designating themselves as mediators between analog and digital libraries, which favors the diversity of services, offered both in a physical environment (in-person performance) and in a digital environment (remote performance).

For Guy (2000, p. 46), it is important to consider "the infrastructure, the forms of acquisition of material, the forms of access to information, the forms of retention of material, and the forms of preservation of information in internal and external scopes". It is therefore understood that the hybrid library is a useful model of how all libraries will one day transform to other types of libraries and NIS.

As Prakasan, Swarna, and Kumar (2000, p. 293) point out, "[...] a hybrid library integrates both functions of traditional libraries and digital libraries [...] augments the functions of a traditional library, rather than replacing them." That said, according to Russell, Gardner, and Miller (1999), the basic requirements of a hybrid library are: 1) provision of services for discovering, locating, requesting, shipping/delivering, and using resources; 2) provision of consistent services for local or remote resources, regardless of the type of their support; 3) flexible organizational structure; and 4) systems based on international standards.

The concept of hybrid libraries "[...] starts from an extensionist vision of the concept of libraries, in which, through the knowledge built, the exercise of citizenship is required" (SILVA et al., 2018, p. 406). The exercise of citizenship occurs, above all, when the library subsidizes services that enable the user to develop his ability as a thinking being, who interprets the information he receives critically, not accepting everything as true. By mediating experiences for the formation of a critical sense, the library enables the individual to generate knowledge and, thus, to participate more actively in society, sharing knowledge. Thus, the structure of the hybrid library "[...] interweaves all concepts into a single thought, and creates a new version of library, which uses technologies and enjoys a digital collection, but also maintains the traditional format by providing a physical collection" (CAVALCANTE; BRITO; VLAXIO, 2016, p. 48). The focus of this article, in turn, is to raise discussions within the NIS of hybrid libraries, as discussed in the following section.

## 4 REFERENCE AND INFORMATION SERVICE

Reference and information service, according to the Reference and User Services Association (RUSA, 2020), consists of information consultations that the librarian recommends, interprets, evaluates and/or uses information resources to help users find information and satisfy their informational needs, which involves activities related to the creation, management and evaluation of information or the investigation of resources, tools and services.

The NIS is, according to Martins and Ribeiro (1972), the only service capable of directly carrying out the purpose of the library, that is, to serve the community by means of the user, informing him or providing him with assistance capable of enriching his culture and knowledge. Pereira and Brenha (2011) also emphasize the role of the NIS due to the fact that it is one of the main library services that works directly with the public. For these reasons, among the services/physical spaces of a library, the most remembered or recognized by users is the NIS, where the physical or remote meeting between the user and the reference librarian takes place, which is essential for the reference process to occur.

According to Accart (2012), the SRI offers a comprehensive answer or the means to answer a query, which allows instructing the user on the use of the search tools available (physically or remotely), so that the answer sought can be found by the user himself, making him an autonomous researcher.

One of the essential aspects in the composition of a NIS, for Mangas (2007), is to define its objectives: it is up to the NIS to indicate what it proposes to offer in terms of services and products, to whom and under what conditions users should have access to a given document. The main functions performed by NIS, still according to the author, are (i) welcome: to receive users with friendliness and professionalism, since the first impressions of a service or an institution depend a lot on this first contact, moreover, the quality of the welcome is decisive for the attraction of new users, as well as for the loyalty of those who already use the service; (ii) inform: to solve the questions and research of users; (iii) train: to teach users in the use of the services and resources of the library; (iv) guide: to advise users in the selection of a work, source or information resource.

Accart (2012) highlights three goals that should be considered when designing the NIS: (1) to present a positive image of the institution through the care given as to the physical place, organization of the space, to count on qualified staff, giving the SRI an identity of its own; (2) to achieve excellence in the reception, guidance, and information search; and (3) to be intermediary between an information need and the information sources, making use of all available resources to better meet the information needs.

In this perspective, Belluzzo and Macedo (1993) defined five lines of action for SRI:

1. Reference and information service itself: it is the direct assistance to the user, responding to various types of questions and referrals;
2. User education: line in which the concern with the user stands out, determining the attributions of the reference librarian to observe issues of use, abilities and needs of the user;
3. Alert and dissemination of information: it involves the activities that alert the user to what is new and current in his/her line of interest, intervening in his/her updating and increasing his/her productivity;
4. Visual communication / library publicity: activity related to the user's interaction issues to the library's physical environment;

5. Administration / supervision of the reference sector: focused on the planning of the sector's structure and on several studies aiming at identifying the users' information needs.

For NIS to be properly executed, it is necessary to highlight the role of the reference librarian who, according to Arellano (2001), is not only to provide answers, but mainly to prepare users at all levels to effectively solve their information needs and help them form a critical thinking of their research sources. For Rostirolla (2006), the reference librarian is the facilitator of access to information sources, who provides users with shortcuts to obtain the informational resources that enable the creation of new knowledge and the satisfaction of their informational needs. The figure of the mediator in this context is fundamental, since the reference librarian is the one who will support the user's autonomy. Thus, it is understood that the term mediator is more appropriate and comprehensive than the term facilitator, in view of the complexity and subjectivity present in the reference process.

Still in relation to the adequate execution of the NIS, we emphasize the need for this service to be frequently evaluated. The only effective way to evaluate this service is through user satisfaction (FIGUEIREDO, 1992). For Carvalho and Lucas (2005), the satisfaction of the NIS users' information needs occurs through the anticipation of responses by means of the timeliness and variety of products and services offered, requiring, for this purpose, a prior user study to identify the information needs of the group in question.

For Rostirolla (2006), the early identification of services that meet the needs of NIS users is the most appropriate way to improve NIS processes and routines and, thus, offer quality service to users. Users' perceptions and needs are, according to RUSA (2020), important quality measures that impact NIS.

The main reasons for NIS to be evaluated regularly, according to Mangas (2007), are: to ensure and check quantitatively and qualitatively the quality of services provided and user satisfaction; to get the most out of the service, both in relation to the institution and to users; and to justify, from an administrative point of view, the existence of the service. Since the library is a third sector institution - services - a continuous and systematic evaluation of the products and services offered is necessary, whether they take place in the physical space or in the digital environment. The user and his satisfaction are understood as the ultimate reason for the librarians' service, and it is from this perspective that the services and products must also be evaluated.

As the NIS should be organized according to the real users whom the library serves (MANGAS, 2007), it is necessary to identify the users served by hybrid libraries in order to effectively adapt the available NIS. However, when the performance of the RIS in the hybrid scenario is envisioned, it is up to the libraries to meet the potential users, that is, those who do not know and do not consume the library's products and services yet. ICTs are an important ally in this meeting, as will be discussed further on.

## 5 METHODOLOGICAL PROCEDURES

The present study focuses on questions of basic nature and exploratory typology, which "[...] is performed in an area in which there is little accumulated and systematized knowledge [...]" (MORESI, 2003, p.9). The research was developed from the literature review, for being a method developed and structured as a theoretical study, prepared from the reading and careful analysis of materials such as scientific articles, dissertations, theses, papers published in event annals and books (MARCONI; LAKATOS, 2008).

The search was carried out in the Integrated Catalog and Discovery Service of Unesp libraries, which covers both the physical collection and different electronic scientific databases. The choice of this source was due to the comprehensiveness of the materials and the period covered. The type of material, database or language was not delimited, but the search was restricted to the Library and Information Science areas.

The choice of a qualitative approach was based on the research objective, that is, on the relationships between NIS and hybrid libraries, which can be observed in reality and compared to theory, as argued by Marschall and Rossman (1989).

We emphasize that studies of this nature are necessary for the grounding of NIS actions in libraries, given the need to involve the services of these institutions to the hybridity context.

## 6 ANALYSIS AND DISCUSSION OF THE RESULTS

Based on the readings and evidences identified in the bibliographic research, the similarities and differences of the services between traditional libraries and hybrid libraries are highlighted. As to similarities, it is highlighted that in both libraries the user is the focus of services and products; users and professionals of different generations coexist, which may cause conflicts among them; and there are difficulties as to access, retrieval, use and appropriation of information by users, due to the significant amount of available content (printed and digital).

Regarding the differences, a Chart one was prepared to highlight such elements.

Table 1. Difference in services between traditional and hybrid libraries

| LIBRARIES  | TRADITIONAL   | HYBRIDES   |
|------------|---|--|
| DIFERENCES | Make bibliographic resources available in analog mode<br>Are limited to physical space<br>Focus is on the print collection and its custody<br>Services are offered and consumed face-to-face<br>Borrowing is limited to the local collection<br>Access is limited to opening hours and days<br>Bibliographic description is limited to the written text<br>Standard services<br>Rigid organizational structure and management<br>Allocation of physical space to the print collection<br>Limited use of technology and its resources<br>Working without the intent to innovate<br>Concern with keeping users real<br><br>Standard services<br>Rigid organizational structure and management | Make bibliographic resources available in analog and digital form<br>Not limited to physical space<br>The focus is on access to information and to available resources<br>Services are offered and consumed in person and remotely<br>Interlibrary loan (partner or not)<br><br>Access for unlimited time and period<br>Bibliographic description mixes written text and images<br>Personalized and customized services<br>Flexible organizational structure and management<br>Physical space designed for users to stay<br><br>Advanced use of technology and its resources<br>Works with innovation<br><br>Concern about keeping real users, but also winning over potential users<br>Personalized and customized services<br>Flexible organizational structure and management |

|  |   |  |
|--|---|--|
|  | Limited use of technology and its resources | Advanced use of technology and its resources |
|--|---|--|

Source: Prepared by the authors.

It is understood that, besides the differences listed in the previous table, there are others not presented here. Those that were included in the table refer to several aspects, from the physical structure, building architecture, information processes, management models, collection development, user service, among others. As evidenced, the use of ICT and innovation, especially in the NIS, is effective and explored in hybrid libraries. Chart 2 goes deeper into the existing elements in the NIS of traditional and hybrid libraries, and proposes suggestions for adjustments.

**Table 2.** Aspects of NIS in traditional and hybrid libraries

| SRI ASPECTS (BELLUZZO; MACEDO, 1993) | SRI IN TRADITIONAL LIBRARIES  | SRI IN HYBRID LIBRARIES   |
|--------------------------------------|---|---|
| Existing Services                    | Face-to-face service<br><br>Individual attendance and limited to the printed collection<br><br>Face-to-face tutorials, training and capacity building<br><br>General alert services (by major areas)<br>Guide of new acquisitions in traditional format | Attendance in person and remotely (synchronous and asynchronous)<br>Shared service with unlimited access to the digital collection, databases, institutional repositories, research data repositories, etc.;<br>Tutorials, training and capacity building in person and online (synchronous) or available on the Library's website or YouTube<br><br>Content and resource curation  |
| Service Suggestions                  | Implementation of ICT in the services offered, so that the library can record its training courses, making them available for later access<br><br>Development of services via the Internet  | Tutorials, training and online training (asynchronous), are available on the Library's site or on YouTube<br><br>Digital literacy in research data (deposit, sharing, (re)use) and data repositories<br>Empowerment of users in the Digital Humanities branch<br>More personalized alert services (by course and specific subject area)<br>Guide to new acquisitions/subscriptions digitally and with hyperlink to the record (when available online) |

Source: Prepared by the authors.

Regarding the lines of action of NIS proposed by Belluzzo and Macedo (1993), when adapted to the hybrid context, there is a scenario of greater information accessibility, as well as a proximity of the library to its users, communities and, more broadly, society. This thought is in line with the perspective of Damian and Santos (2017, p. 121) when they state that NIS goes beyond "the physical space of the library, and can, in many cases, be offered in digital environments. It is the availability of services in digital environments, through the use of technology that allows online interaction between librarian and user". Table 3 shows in detail a

proposal for each line of action, according to Belluzzo and Macedo (1993), of NIS and its perspective when worked in the context of hybridity in libraries.

**Table 3.** Lines of action of the reference and information service in the hybrid scenario.

| LINES OF ACTION SRI                      | HYBRIDITY IN LIBRARIES   |
|--|--|
| Reference and Information Service itself | <p>The sector will work more with access to digital information than with the printed reference collection (use of digital bibliographic and documentary resources);</p> <p>Virtual reference service (user service via chat, e-mail, chatbot).</p>  |
| User Education                           | <p>Lectures, courses, individual instruction and guidance, trainings, guided tours, preparation of instructional and informational guides (in this case, the library records these actions and makes them available on the YouTube channel).</p> <p>Research support to the community (librarians go beyond assistance on research sources and normalization, but instruct users on the issues of research copyright, creative commons, making research data available, choosing a journal to publish in).</p>   |
| Alert and dissemination of information   | <p>Personalized services and the possibility of the user himself customizing his experience in the catalog (selecting options he would like to see more of, just like in the e-commerce sites of publishers and bookstores);</p> <p>Sending targeted alerts based on the user's profile and history (many times the alerts and newsletters are not very attractive and do not meet the user's real needs);</p> <p>Use of attractive bulletins, based on the use of colors and information design and information architecture strategies;</p> <p>Bulletins directed according to the information searched by users in the catalog and/or loans made (data encryption).</p>   |
| Visual communication / library promotion | <p>Internal communication (physical and digital space) and external communication (in the library environment);</p> <p>Instructional communication (gives the location of products and services in the physical and digital space);</p> <p>Directional communication (informs what the library offers); Alert communication (instructs users in the handling of printed items regarding conversation and prevention);</p> <p>Normative communication (presents the rules and regulations in a clear and objective way);</p> <p>Special communications (which do not fit into the types listed above).</p> <p>Library branding (involves the visual identity - choice of colors, fonts, etc.) that must be strategically positioned throughout the library's communication - requires a visual communication project prepared by a graphic designer, who works, besides the library's physical structure, with online services and cloud computing;</p> |

|   |   |
|---|---|
|   | Creation and maintenance of digital networks and social media (Facebook, Instagram, YouTube).   |
| Reference sector administration / supervision | Evaluation of the products and services offered, as well as the facility, equipment, sources and resources, human resources, and location of the library itself in the institution/city/neighborhood and its internal structure;<br>Innovation in offering services and products typical of a hybrid library and digital resources;<br>Evaluation of the website, catalog, digital networks and social media. |

Source: Based on Belluzzo and Macedo (1993).

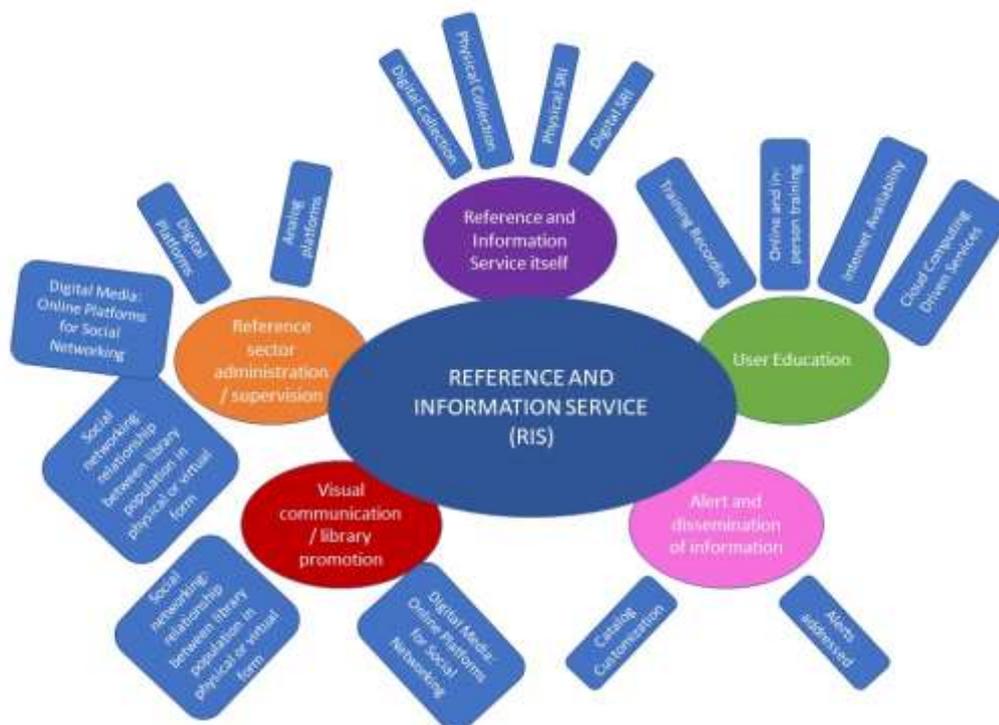
From the above, it is possible to identify that the main change in Belluzzo and Macedo's (1993) line of action refers to the emphasis given by SRI to digital informational access. With regard to user education (action line two), we highlight the recording of training services for later dissemination of these recordings via the Internet and support for research. Moreover, it is essential that this line focuses on the development of digital information competencies, which permeate the process of production, search, use, and appropriation of information. Still under the optics of this line of action, it is understood that the visits and training, during the pandemic caused by the new coronavirus, were suspended in person (due to social distancing measures). When conducted remotely, recorded and made available on the library's digital channels, more users will be able to access and learn what the library represents to them and what services and products are available both in person and remotely.

In addition, this pandemic scenario has caused the hybrid library movement to intensify, due not only to a trend in the library context but to a pressing need. This has caused many services and products offered face-to-face to be rethought by libraries, making them even more hybrid organizations. As far as line of action three (information alert and dissemination) is concerned, we highlight the possibility of the user customizing his or her navigation in the catalog, which ensures greater usability. In addition, alert programs directed according to the individual's history should be highlighted. This action can be done in two ways: either by analyzing the algorithms collected by the system or by the content curation performed by librarians. In the first, the system monitors users' browsing and history, clicks, readings, downloads, and suggests options of similar titles or titles by the same author, for example. In the second, in turn, the librarian monitors the insights of their social media and identifies what has most attracted the attention of users, either from likes, comments or shares.

In relation to visual communication / library publicity (line of action four), communications need to extend to digital networks and media, aiming at greater dissemination of information. In this same perspective, the administration/supervision of the reference sector (action line five) emphasizes the evaluation of platforms and resources via the Internet.

Figure 2 illustrates Belluzzo and Macedo's (1993) lines of action for NIS in the hybrid scenario and its characteristics:

Figura 2 NIS in the hybrid scenario and its characteristic elements



Source: Prepared by the authors.

Figure 2 highlights the use of ICTs as strategic tools for NIS, placing the library in a scenario of increasing hybridity. Thus, it is understood that the goal is to enable greater access to information, including digital information resources on different platforms, including the Internet, and emphasizing the role of the user in the library, the ultimate goal of the librarians' work

## 7 FINAL CONSIDERATIONS

Hybridity may be present in different types of libraries: public, school, university, specialized, community, popular, etc. What will give the library its designation and recognition as a "hybrid library" is not only the way the institution acquires, treats, organizes, manages, disseminates and mediates the information supports (available in the physical space or not), but also other fundamental elements, such as the organizational culture that should be aligned with the hybrid vision of the library; the management that needs to be shared and conducted in a holistic way, taking into account the whole of the library; the services and products need to meet the social aspects of the community it serves; the norms that govern the institution need to conform to international standards, in order to promote greater possibilities for access to information; and ICTs need to be used as strategic tools to meet organizational goals.

It is concluded, as expected, that there are needs for adaptations of the reference and information service for libraries to be configured as hybrids. The NIS is directly affected by the hybrid library concept, which brings the need to (re)think about its entire scope and vision.

Hybridity aspects should involve all the lines of action of the NIS, that is, 1. the reference and information service, 2. user education, 3. information alert and dissemination, 4. visual communication / library outreach, and 5. administration / supervision of the reference

sector. The main changes concern working with digital information resources and offering services via the Internet.

It was possible to identify that in the present context - pandemic COVID 19 - many libraries, especially university libraries, have been providing remote services, with professionals working from their own homes. Moreover, the need to restrict access to such spaces has made many users (re)aware of the services and products offered by libraries, even the more traditional ones, such as online lending and renewal. On the other hand, the pandemic led the library, from its hybrid dimension, to get even closer to its community, reinforcing its essential role in society.

## CRediT

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## REFERENCES

ACCART, J-P. **Serviço de referência: do presencial ao virtual.** Brasília: Briquet de Lemos, 2012.

ARAÚJO, E. A.; OLIVEIRA, M. de. A produção de conhecimentos e a origem das bibliotecas. In: OLIVEIRA, M. de (coord.). **Ciência da informação e biblioteconomia: novos conteúdos e espaços de atuação.** Belo Horizonte: Editora UFMG, 2005. Available at: <https://bit.ly/3vdtMnX>. Access on: 25 Sept. 2019.

ARELLANO, M. A. M. Serviços de Referência Virtual, **Ciência da Informação**, Brasília, v. 30, n. 2, p. 7-15, May/Aug. 2001.

BELLUZZO, R. C. B.; MACEDO, N. D. de. A gestão da qualidade em serviços de informação: contribuição para uma base teórica. **Ciência da informação**, Brasília, v. 22, n. 2, p. 124-131, 1993.

BRAGA, M. de F. A. Meios e modos de apropriação da informação e do conhecimento. In: CASTRO, C. A. (org.). **Ciência da informação e biblioteconomia: múltiplos discursos.** São Luís: EDUFMA; EDFAMA, 2002.

BREAKS, M. Building the hybrid library: a review of UK activities. **Learned publishing**, Hertfordshire, v. 15, n. 2, p. 99-107, 2002.

CARVALHO, L. S.; LUCAS, E. R. O. Serviço de Referência e Informação: do tradicional ao on-line. *In: CINFORM – Encontro Nacional de Ciência da Informação*, 6.: 2005: Salvador. **Anais do ...** Salvador: [s.n.], 2005.

CAVALCANTE, K. V.; BRITO, Y. R.; VLAXIO, F. As metamorfoses da biblioteca para a Geração Z: proposta de implementação para o Espaço Cultural Bezerra de Menezes. **Revista Analisando em Ciência da Informação**, v. 4, n. 2, p. A03, 2016. Available at: <http://www.brapci.inf.br/v/a/28284>. Access on: 18 Jul. 2019.

DAMIAN, I. P. M.; SILVA, M. R. Serviço de referência virtual: uma análise estratégica por meio da aplicação da matriz SWOT. **InCID: Revista de Ciência da Informação e Documentação**, v. 7, n. 2, p. 118-135, 2016. Available at: <https://www.revistas.usp.br/incid/article/view/106227>. Access on: 20 Jan. 2020.

FIGUEIREDO, N. M. **Serviços de referência & informação**. São Paulo; Polis, 1992.

FUNARO, V. M. B. O.; CARVALHO, T. de; COSTA, L. M. S. V. **Inserindo a disseminação seletiva da informação na era eletrônica**. São Paulo: Serviço de Documentação Odontológica da Faculdade de Odontologia da USP, 2000.

GARCEZ, E. M. S.; RADOS, G. J. V. Biblioteca híbrida: um novo enfoque no suporte à educação a distância. **Ciência da Informação**, Brasília, v. 31, n. 2, 2002. Available at: <https://bit.ly/3dIzKXX>. Access on: 14 Jul. 2019.

GIL, A.C. **Métodos e técnicas de pesquisa social**. 6. ed. São Paulo: Atlas, 2012.

GUY, R. F. Developing the hybrid library: progress to date in the national library of Scotland. **Electronic Library**, v. 18, n. 1, p. 40-50, 2000. Available at: <https://search.proquest.com/docview/57500478?accountid=8112>. Access on: 01 May 2020.

MACEDO, N. D. Princípios e reflexões sobre o SRI. **Revista Brasileira de Biblioteconomia e Documentação**, Brasília, v. 23, n. 1/4, p. 9-37, Jan./Dec. 1990.

MANGAS, S. F. A. Como planificar e gerir um serviço de referência, **Biblios**, Pittsburg, n. 28, 2007. Available at: <http://eprints.relis.org/12155/1/smangas1.pdf>. Access on: 16 Jan. 2020.

MARCIAL, V. F. La biblioteca, espacios culturales em desuso: análisis crítico de las estrategias de promoción. **Revista Biblios**, Madrid, v. 7, n. 25-26, p. 1-9, jul. 2006. Available at: <http://www.redalyc.org/articulo.oa?id=16172510>. Aceso em: 16 Jan. 2020.

MARCONI, M. A.; LAKATOS, E.M. **Técnicas de pesquisa: planejamento e execução de pesquisas, amostras e técnicas de pesquisa, elaboração, análise e interpretação de dados**. 7.ed. São Paulo: Atlas, 2008.

MARSHALL, C.; ROSSMAN, G. B. **Designing qualitative research**. Newbury Park, CA: Sage, 1989.

MARTINS, M. G. de; RIBEIRO, M. L. G. **Serviço de referência e assistência aos leitores**. Porto Alegre; UFRGS, 1972.

MILANESI, L. **Biblioteca**. Cotia: Ateliê Editorial, 2002. Available at: <https://bit.ly/2RSyYPH>. Access on: 25 Sept. 2019.

MONTEIRO, A. I. V.; MEDEIROS, M. N. de; FERNANDES, M. C. P.; CAVALCANTE, M. de S. Estratégias para a implantação de bibliotecas híbridas como apoio à aprendizagem semipresencial de cursos a distância. **Informação & Informação**, Londrina, v. 11, n. 2, p. 1-13, 2006. Available at: <http://www.brapci.inf.br/v/a/4367>. Access on: 18 Jul. 2019.

MORESI, E. **Metodologia da pesquisa**. Brasília: Programa de Pós-Graduação stricto sensu em Gestão do Conhecimento e Tecnologia da Informação, 2003. Available at: <https://bit.ly/3xjCtz2>. Access on: 09 Jan. 2021.

OPPENHEIM, C.; SMITHSON, D. What is the hybrid library? **Journal of Information Science**, Reino Unido, v. 25, n. 2, p. 97-112, out./nov. 1999. Available at: <http://jis.sagepub.com/content/25/2/97.full.pdf+html>. Access on: 17 Jan. 2020.

PEREIRA, M. R. S.; BRENHA, T. C. P. Serviço de Referência em bibliotecas: reflexões. *In*: CONGRESSO BRASILEIRO DE BIBLIOTECONOMIA, DOCUMENTAÇÃO E CIÊNCIA DA INFORMAÇÃO SISTEMAS DE INFORMAÇÃO, MULTICULTURALIDADE E INCLUSÃO SOCIAL, 24. **Anais...** Maceió, 2011.

PINFIELD, S.; EATON, J.; EDWARDS, C.; RUSSELL, R.; WISSENBURG, A.; WYNNE, P. Realising the hybrid library. **New Review of Information Networking**, v. 4, p. 3-21, 1998. Available at: <https://search.proquest.com/docview/57469110?accountid=8112>. Access on: 19 May 2019.

PRAKASAN, E. R.; SWARNA, T.; KUMAR, V. Human resource development in hybrid libraries. *In*: NATIONAL CONVENTION ON LIBRARY AND INFORMATION NETWORKING, 2., 2000, Madras, Chennai. **Anais...** Madras, Chennai: India, 2000. p. 292-299. Available at: <http://eprints.rclis.org/5864/1/pdf.pdf>. Access on: 18 Jan. 2020.

ROSTIROLLA, G. **Gestão do conhecimento no serviço de referência em bibliotecas universitárias**: uma análise com foco no processo de referência. Dissertação – (Mestrado) Universidade Federal de Santa Catarina, Programa de Pós-Graduação em Ciência da Informação, 2006.

RUSA. **Measuring and Assessing Reference Services and Resources**: a guide. Available at: <http://www.ala.org/rusa/sections/rss/rsssection/rsscomm/evaluationofref/measrefguide>. Access on: 05 May 2020.

RUSSELL, R.; GARDNER, T.; MILLER, P. **Hybrid information environments**: overview and requirements. 1999. Available at: <http://www.ukoln.ac.uk/dlis/models/requirements/overview/>. Access on: 20 Jan. 2020.

SARACEVIC, T. Ciência da Informação: origem, evolução e relações. **Perspectivas em Ciência da Informação**, Belo Horizonte, v. 1, n. 1, p. 41-62, jan./jun. 1996. Available at:

[http://www.brapci.inf.br/repositorio/2010/08/pdf\\_fd9fd572cc\\_0011621.pdf](http://www.brapci.inf.br/repositorio/2010/08/pdf_fd9fd572cc_0011621.pdf). Access on: 11 Feb. 2020.

SILVA, R. C. da. **Gestão de bibliotecas públicas no contexto híbrido**: um estudo comparativo de bibliotecas híbridas no âmbito nacional e internacional em prol do desenvolvimento de comunidades. 2017. 288 f. Dissertação (Mestrado em Ciência da Informação) – Universidade Estadual Paulista, Faculdade de Filosofia e Ciências, Marília. 2017. Available at: <https://repositorio.unesp.br/handle/11449/150798>. Access on: 31 Jul. 2019.

SILVA, R. C. da *et al.* A competência em informação e o comportamento informacional dos usuários de bibliotecas híbridas: um estudo comparativo no Brasil e na Escócia. **Informação & Informação**, Londrina, v. 23, n. 1, p. 398-423, jan./abr. 2018. Available at: <http://www.uel.br/revistas/uel/index.php/informacao/article/view/30906>. Access on: 15 Jul. 2019.

SUTTON, S. Future service models and the convergence of functions: the reference librarian as technician, author and consultant. In: LOW, K. (ed.). **The roles of reference librarians, today and tomorrow**. Nova Iorque: Haworth Press, 1996, p. 125-143.

TAMMARO, A. M.; SALARELLI, A. **A biblioteca digital**. Brasília: Briquet de Lemos, 2008.



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