



The information professional and the co-creation of value in information services: theoretical contributions

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ABSTRACT

Introduction: The co-creation of value is a relevant factor for the development of better informational services provided by libraries. These services require reassessments of processes that involve their various participants. The co-creation of value offers opportunities for better integration between provider and user of information services. In this aspect, the question is how to understand the participation of the participants in this process.

Objective: The objective of this study is to build a theoretical framework that allows the investigation of the processes of co-creation of value in informational services from the perspective of the service provider (information professionals/library). It is justified by the lack and lack of understanding of how the co-creation of value in libraries occurs, mainly on the aspects of providing informational services.

Methodology: It is a theoretical essay, of a conceptual and analytical nature. **Results:** As a result, through national and international literature reviews, it was possible to delimit the study scenario, which resulted in a structure of connections, which enabled the construction of the frame of reference. **Conclusion:** It is concluded that the frame of reference can contribute to the theoretical advance and development of studies that allow the investigation of the processes/elements of co-creation of value of the users, and perhaps the construction of models and the management of these elements.

KEYWORDS

Co-creation of value. Information services. Information professionals.

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O profissional da informação e a co-criação de valor em serviços informacionais: contribuições teóricas

RESUMO

Introdução: A co-criação de valor é fator relevante para o desenvolvimento de melhores serviços informacionais prestados por bibliotecas. Estes serviços carecem de reavaliações de processos que envolvem seus diversos participantes. A co-criação de valor oferece oportunidades para uma melhor integração entre prestador e utilizador dos serviços informacionais. Neste aspecto, questiona-se o como entender o envolvimento dos

participantes neste processo. **Objetivo:** Construir um quadro teórico de referência que permita a investigação acerca dos processos de co-criação de valor em serviços informacionais sob a perspectiva do provedor de serviços (profissionais da informação/biblioteca). Justifica-se pela carência e insipiência no entendimento de como ocorre a co-criação de valor em bibliotecas, principalmente sobre os aspectos da prestação de serviços informacionais. **Metodologia:** Trata-se de um ensaio teórico, de natureza conceitual e analítica. **Resultados:** Por meio de revisões de literatura nacional e internacional foi possível delimitar o cenário do estudo, que resultou em uma estrutura de conexões, que possibilitou a construção do quadro de referência. **Conclusão:** Conclui-se que o quadro de referência possa contribuir para o avanço teórico e desenvolvimento de estudos que permitam a investigação dos processos/elementos de co-criação de valor dos usuários, e quiçá a construção de modelos e a gestão destes elementos.

PALAVRAS-CHAVE

Co-criação de valor. Serviços informacionais. Profissionais da informação.

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1 INTRODUCTION

The collaborative universe, the new technological, social, and economic dynamics have shaped the information users. Simultaneity, agility, availability, accessibility, etc., are relevant factors for their satisfaction while using information services.

The theory of value co-creation has been highlighted as a tool to understand and improve this scenario, in order to allow, through its processes, a better interaction and to promote the mutual creation of value between the service provider and its user.

In his study on the application of a model to investigate the effectiveness of value co-creation practices in digital libraries, Golooba (2017) describes that, we need to understand the various factors that can affect value co-creation in libraries, but that, unfortunately, there is still a scarcity of research focusing on the notion of value co-creation.

In the literature there are few studies that focus research on the effects of value co-creation in libraries. The research is fragmented and directed towards a broad view of value creation processes, not considering the elements that can promote value co-creation from the point of view of both participants (library and users).

In view of this gap, the research problem that we intend to analyze denotes the relevance of understanding the participation of the service provider (information professionals/library) in the process of co-creation of value in information services. The research question aims to analyze the participation of the information professional/library in the processes of co-creation of value in informational services. To this end, the aim of this study is to build a framework about the co-creation of value in information services from the perspective of the service provider.

Through the research on which this study is based, no evidence has been found on how to analyze the processes of value co-creation on the part of the service provider, specifically in information services.

Zaninelli, Nogueira, and Peres (2019) believe that it is necessary to think about the changes in informational service delivery in relation to new dynamics and the need for advances in the literature of the field. Libraries have already realized the need to invest in innovative and dynamic informational services. Their professionals must be able to act efficiently and effectively, and to make better use of their competencies in thinking about a dynamic library that meets the needs of its users in terms of co-creation of value.

This research aims to observe only the participation of the service provider as a participant in the process of co-creation of value in information services, in order to understand how he (the information professional/library) can contribute with his resources. The framework is the instrument that will enable the investigation of the elements/processes of co-creation from the perspective of this participant.

This study is characterized as a theoretical essay, conceptual and analytical in nature. It is qualitative as to its approach. According to Richardson (2017), this perspective allows the researcher to make interpretations of the data, which includes developing a description of a scenario, analyzing data to identify themes or categories, and finally interpreting or drawing conclusions about its theoretical meaning. As a result, theoretical grounding is expected for the development of research on the investigation of value co-creation in information services.

2 INFORMATION PROFESSIONALS, INFORMATION SERVICES, AND VALUE CO-CREATION

A relevant point in the provision of information services and the co-creation of value refers to the information professional. This professional is the one who has specialized occupation in dealing with information.

Oliveira and Rodrigues (2020) describe a problem in conceptualizing the term "information professionals", according to the authors, in a review of international literature, there is no generalized consensus on its definition. That is, the term has many definitions, their differences in terms of this professional relate mainly to the distinct professions that make up the term, such as librarians, knowledge managers, information directors, web developers and information consultants. Epistemologically, this study focuses on the librarian.

In the context of libraries, he/she is inserted in the managerial aspects of services (planning, organization, control, etc.), as well as, linked to service execution (customer service, back office, teaching, etc.), and that, in a certain way, directly participates in the processes of co-creation of value.

From the point of view of the co-creation of value in libraries, the information professional represents the service provider. Thus, he or she is responsible for the provision of information services and the aspects related to their management.

Studies have portrayed the influence of this professional in the provision of information services. For Nascimento, Trompieri Filho and Barros (2005), the information professional must know how to manage an Information Unit (IU), have a global vision of the unit, know the tools and concepts that help in the development of activities, in order to ensure the best use of resources involved in the organization.

In her study Pinto (2012, p. 147), researched on the issue of quality and competence of information professionals in university libraries. For the author, the competencies of this professional gain prominence as instruments for competitiveness in organizations, with a bias towards improving and maintaining the quality of services. Librarians are the main actors in the provision of information services, whose activities are directly aimed at the user.

User satisfaction is one of the key points in the provision of information services, and the information professional is the instrument for success. Oliveira and Rodrigues (2016) state that the presence of a professional able to work in an IU is essential, because according to the conditions required, the librarian is able to use resources and strategies to ensure satisfaction regarding the services provided to users.

Information services have changed throughout history and so has the professional. Anna (2015) states that the professional must be aware of the changes. For the author, in fact, one also learns that the librarian's profile has changed over time, broadly speaking, ceasing to be a janitor of information, to metamorphose into an information disseminator, mediating access to different audiences.

In this context, Rozados (2006) describes that an information service needs to have specialized staff to search for information, with a useful consultation collection, whether it is within the physical limits of the organization it is linked to or available beyond these limits, in addition to developing initiatives, procedures, and policies it deems necessary to facilitate user access to information.

2.1 Attributes and challenges of information professionals

In addition to specialized technical knowledge, another attribution linked to this professional is the competence for the type of service. Rossi, Costa, and Pinto (2014) state that for librarians to provide an adequate information service, meeting the institutional objectives and the expectations of its users, they must have, or develop specific skills for each type of service provided in order to meet the user efficiently and effectively.

The study by Oliveira and Rodrigues (2020) demonstrated the main attributes of an information professional. For the authors, Knowledge, Skills, Competence and Aptitudes (KSCA) are intrinsic requirements to exercise the profession in a changing scenario.

Many are the challenges to be faced in this context, services are now dynamic, they require immediacy, urgency, availability. The information professional must be prepared for this complex universe. Borges (2007) describes that, in the face of all these issues, it is evident that, in order to fulfill its functions, the management of information services and products must rely on specialized personnel in the search for information, on relevant sources and on policies that facilitate user access to information. Given the variety of activities involved in handling information, professionals must be prepared to face the challenges they face.

Creativity, entrepreneurship, and innovation may be the way out to better meet these demands for better services. For Victorino and Schiessl (2018), the automation of UIs becomes fundamental to meet a growing demand for automated information services. Also, according to the authors, in this context, the question arises about how the so-called information professional is being prepared to deal with the current scenario of extensive technological diversity. Moreover, it is also worth questioning what characteristics are required of these professionals to meet the new demand from information users, whether individuals or organizations.

Victorino and Schiessl (2018), state that information services need to use creative and innovative ways to meet the diverse information needs of their users. This is particularly important with the increasingly complex and competitive work environment, with companies needing to react immediately to changes happening in their external environments. It is therefore crucial to have quick access to high-quality, accurate, up-to-date, and reliable information to make accurate and timely decisions. Information professionals, in addition to providing traditional library services, need to use non-traditional and innovative methods to meet the specialized information needs of their users (PASSOS et al. 2016).

2.2 The information professionals: competences in information and knowledge

The informational context has brought great challenges for information professionals. Coupled with the use of new technologies, as well as the way users consume information, a new perspective in the provision of information services has emerged. Users are increasingly dynamic, urgent, and in need of individualized services.

In this regard, Venkatesh and Kalpavalli (2014) state that all library professionals must revamp and reshape traditional library management tools and apply Knowledge Management (KM) concepts and practices for the delivery of better services

in libraries.

Organizational learning allows its professionals, to learn, raise awareness, and transfer knowledge to the institution, however, the higher their competencies in knowledge and information, the better the results of KM.

For Serrat (2010), competency is the state or quality of adequately or qualitatively deliver a specific task, action, or function successfully. Therefore, the concept is linked to the idea of better meeting organizational needs. The author states that knowledge competence is a specific range of knowledge and skills used to improve organizational performance. Sustainable competitive advantage occurs through great efforts to identify, cultivate, and exploit an organization's core competencies, the tangible fruits of which are packages composed of products and services that anticipate and meet market demands.

Still according to Serrat (2010, p. 296), knowledge competence is made before, during and after an event. It takes competencies to have "knowledge solutions". These competencies are related to areas such as: strategy development, management techniques, collaboration mechanisms, knowledge sharing and learning, and knowledge capture and storage.

For Fidelis and Barbosa (2012), information competence is defined as a continuous process of internalization of conceptual and attitudinal foundations and skills necessary for the understanding and permanent interaction with the informational universe. Zucari and Belluzzi (2016) emphasize that for people to remain in constant learning they need to be competent in information, which means knowing how to recognize when information is necessary for their lives, for this they must be able to locate, evaluate and effectively use the information, that is, know how they should learn.

In their look at informational competence in the organizational context, Fidelis, and Barbosa (2012) state that despite being an abstract and intangible phenomenon, information has become a primary resource for the development of any organization. Having the competence to deal with this resource and thus provide a better organizational performance is the skill that every professional must seek nowadays. Understanding the contexts of action and using information to determine the path to be followed are necessary skills that will define the success or not of the organization.

In light of the above, a cooperation between the "competencies" for organizational development can be observed, especially with regard to learning.

From the point of view of KM, Serrat (2010) delimits the areas of competence and their respective knowledge solutions. One of the areas addressed refers to "knowledge sharing", "learning" and, "strategy for organizational learning". In this context, the author brings questions about the use of information in Knowledge Management, when addressing the problem of information overload and the need to demonstrate knowledge, as well as the dynamics of information storage about knowledge, skills, experiences, and interests of people.

From the point of view of Information Management (IM), Melo and Araújo (2007) state that the concept of informational competence is related to the attitudes that facilitate the creation and sharing of knowledge, that is, learning. They consider informational competence to be a subset of learning.

Considering the relationship between informational competence and knowledge competence, it is believed that one is the foundation of the other, because they are constantly interrelated. The responsibilities of KM are based on skills to deal with information, that is, informational competence (MELO; ARAÚJO, 2007).

Therefore, to understand the processes of co-creation of value in information

services, it is necessary to recognize this professional in terms of skills, competencies, and challenges in the provision of services. This is because in order to understand the co-creation of value, it is necessary to understand both participants in this process, the user, and the information professional/library. The professional represents the service provider. However, little is known about their participation and resources regarding the processes of co-creation of value, as well as how to investigate the elements of co-creation of value from the perspective of this participant.

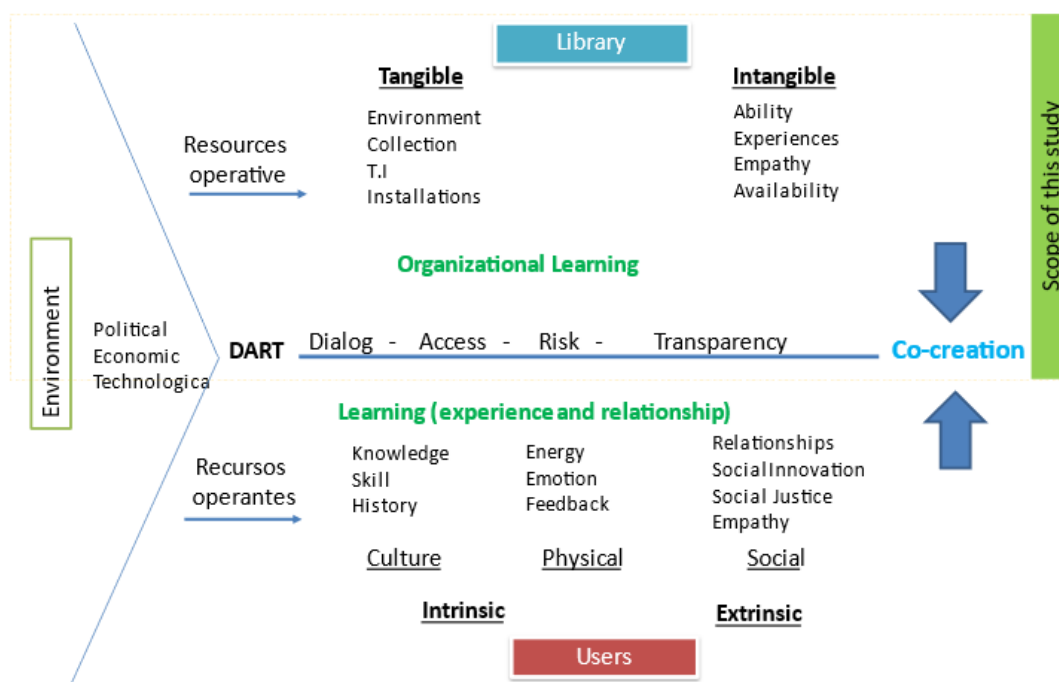
3 FORMULATIONS OF THE THEORETICAL AND REFERENCE FRAMEWORK

The structuring of the reference chart, included a detailed mapping of the theoretical knowledge concerning the co-creation of value in information services. A literature search was carried out between October 9 and 10, 2021. The search command ("co-creation of value" and "information servic*") OR ("co-creation of value" and "librar*") was used. Articles published after the year 2000 were searched for (titles, keywords and abstracts) in the Scopus, Web of Science and Lisa databases.

From this investigation, 12 articles were validated for their relevance and alignment with the theme of the study.

Figure 1 represents a collection of these studies, in order to widely observe the study scenario and the scope of this research.

Figure 1. Scenario/Scope of the study



Source: Prepared by the authors.

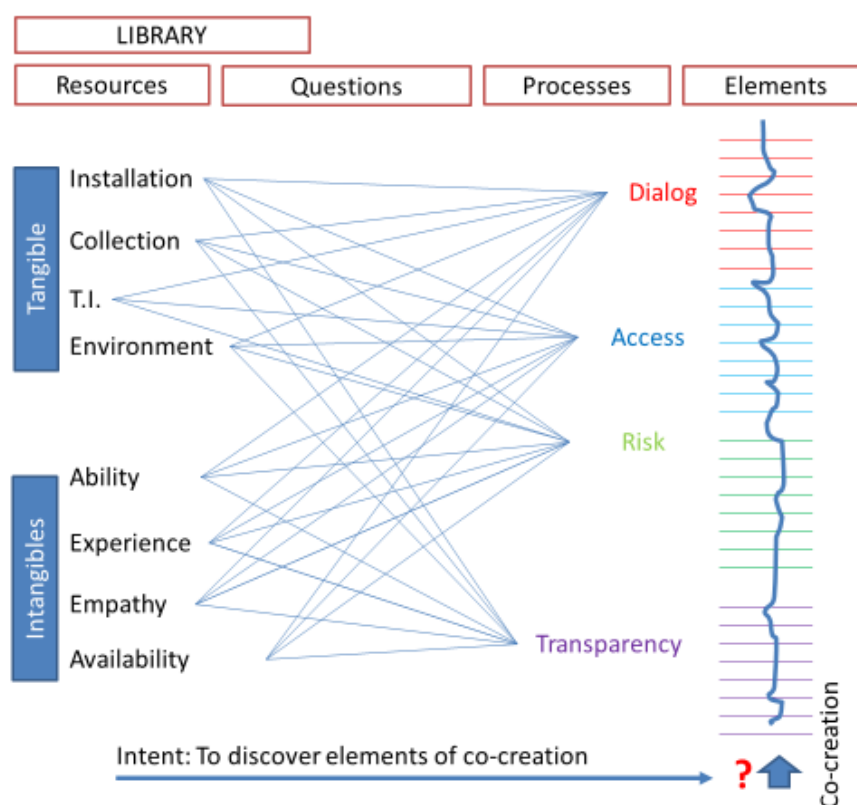
Based on the literature, the structure in Figure 1 represents a broad view of the processes of value co-creation, that is, the structure of encounter between user and provider proposed by Payne, Storbacka, Frow (2008), as well as the encounter processes:

Dialogue, Access, Risk and Transparency (DART), proposed by Prahalad and Ramaswamy (2004).

In the specific context, they are related to the operating resources of the participants, and the environment where value co-creation occurs. The operant resources of libraries were described by Baron and Warnaby (2010); Golooba (2017); Islam, Argawal and Ikeda (2015); Koda (2014) and Siddike, Unemoto. Features referring to the user, on the other hand, were found in the studies by Baron and Warnaby (2010); Golooba (2017); Koda (2014) and Siddike, Unemoto. Baron and Warnaby (2010) believe that the environment (political, economic, and technological) is a relevant factor when analyzing value co-creation processes.

Once the resources and the meeting processes were structured, a way to meet the proposed objective was sought. Figure 2 shows a structure that directs the theory to meet the objectives proposed by this research, that is, a strategy for the investigation and understanding of the elements of co-creation of value by the library, that is, the information professionals who provide information services.

Figure 2. Cross-fertilizations between resources and processes for library value co-creation.



Source: Prepared by the authors.

Figure 2 presents the research strategy as to the identification of the processes of co-creation of value from the library's point of view.

Once the study scenario was followed, the theoretical framework was built, and the strategy to obtain data regarding the proposed objectives was planned, it was formulated from the crossings shown in the figure above, the reference framework in view of these aspects already analyzed and structured in relation to the library.

The framework of reference (Table 1) includes the studies and theoretical outlines, the formulation of the theoretical structure and the strategy for data analysis of the library

(its professionals) as a participant in the co-creation of value in information services. Its structure is divided into four sections (dialogue, access, risk, and transparency) which are the DART elements. In each section the aspects (tangible and intangible) of the library were distinguished, and in each of them the operating resources consistent with the aspect were delimited.

For each operating resource, we sought to describe it (what?), the reason why the resource is part of the research (why?), the justification of the need for it to be relevant in the context of information services (importance), the formulation of the question for understanding and obtaining data regarding the elements/processes of co-creation of value, and finally, the theoretical basis that supports the question.

Table 1. Provider frame of reference

Service Provider Reference Framework					
Dialog - How do you engage the user in a two-way dialog?					
Resources	What?	Why?	Importance?	Question	Theoretical Principles
Tangibles					
Installation	Library Physical Resources	A deep dialogue between library and user is needed, for this, this organization must foster the interaction between user and library through its resources.	Improve library facilities by getting to know the views of the user and librarian. The joint dialogue allows co-creation of value between the benefits to the user, and the return to the library.	How does the dialogue about the condition of the library facilities take place?	The customer is encouraged to communicate with the provider about any and all aspects of the service experience. (ALBINSSON; PERERA; SAUTTER, 2016).
Collection	Information resources available to users (books, magazines, e-books, etc.)	Recognize the co-created value in user-librarian interaction about library resources	Determining collection advancement and development based on user interests requires a two-way dialogue to understand what the user needs in terms of information requirements and the librarian needs in terms of the stock of information in the library.	What communication strategy does the library use to understand the user's information needs regarding collection building?	There is interest from the company to communicate with me about the best ways to craft and deliver a quality service experience. (BECKER et al., 2016).
Information Technology (IT)	Technological resources	Technologies are volatile and the library must share and absorb knowledge about technological advances that benefit both.	The dialogue between user and library regarding technologies enables the library to recognize, develop, and provide the tools that users need (usability).	How does the library interact to be able to identify the IT resource needs of its users?	
Environment	Organizational scope	A good environment enables a dynamic that users can co-create value.	Improving the relationship between the user and the library requires a context that is open to dialogue, to allow for progress and development. It is important to know what the user observes about bureaucracies, obstacles, dynamics, etc., that do not allow co-creation.	How does the library ensure that its environment enables a two-way dialogue for value co-creation?	Does the customer have many opportunities to share their ideas with the provider about adding value to the service experience? (ALBINSSON; PERERA; SAUTTER, 2016).
Intangibles					
					Do the provider and the customer have active dialogue about how to add value in the service

Service Provider Reference Framework					
					experience? (ALBINSSON; PERERA; SAUTTER, 2016).
Ability	Tendency and willingness of employees to serve or solve your users' problems as quickly as possible	Responsiveness, adaptability, and flexibility are inherent to librarians' abilities in service delivery.	Co-creating value between the user's perception of the librarian's skills is a pre-requisite for the library to identify what professional skills are needed to provide services. The dialogue between user and librarian is necessary to understand what skills are needed to best provide information services.	What interlocution strategy does the library use to identify the skills needed by information professionals and the interests of the user?	
Experience	Knowledge gained through previous experiences.	Experience is part of the professional load in terms of service delivery practices. It is about assurance, confidence in reducing errors.	Users need quality services, so the expertise of the professionals is important. The dialogue between the parties, benefits the library in terms of recognizing what experiences are needed to improve the service. The user benefits from more accurate service, with reduced errors.	How does the library facilitate dialogue to recognize librarians' experiences in service delivery?	
Empathy	Ability of the staff to show that they understand the needs and show the users total affection.	Understanding the needs of users and the resources of professionals allows both to benefit in the process of co-creation of value.	Empathy is important so that users and librarians can find solutions for as many of their needs as possible. This requires a willingness to put oneself in the other's shoes and a sense of affection in helping.	In what ways does the library have feedback channels that allow for closer dialogue with the user?	In-depth dialogue with customers' demands a lot of time. How can my company interact intensively with each consumer and maintain operational efficiency? (PRAHALAD; RAMASWAMY, 2004).
Availability	Staff always available to whoever needs them in the course of their duties.	Being available in terms of time and willingness allows the user to better utilize the service and co-create value in the adequacy of the library's functioning.	The dynamics of pre-established time for user service is problematic, time is increasingly volatile, needs are diverse, and the library must be available for this new context. Dialog allows us to understand which availability is appropriate for both.	How does the library interact with the user to act on the availability of hours and resources for service delivery	Dialogue with me is promoted by the company to learn more about my reaction towards the service experience. (BECKER; SANTOS; NAGEL, 2016).
Access - How do you allow users to access library information?					
Resources	What?	Why?	Importance?	Question	Principles

Service Provider Reference Framework					
Tangible					
Installation	Physical resources of the library	Access to information that deals with changes, adaptations, resources, allows the services to be better evaluated, to the point that co-creation is based on the user's participation in decision-making in this area.	The facilities are relevant to the user and librarians, providing access to planning, control of this resource benefits both the library in terms of direction, economy to better serve the user, as well as, the user, who benefits in meeting their needs in terms of adequate physical resources.	How does the library allow user participation in the adequacy of the facilities?	The provider allows the customer to decide how to receive the service offering. (ALBINSSON; PERERA; SAUTTER, 2016).
Collection	Information resources available to users (books, journals, e-books, etc.)	Access to information about the creation and development of collection formation policies allows the user to recognize the dynamics in the formation of the collection and to contribute to a better adaptation.	The co-creation of value by both allows the formation of a more dynamic and useful collection as to the informational needs of the users, and economy on the part of the library	How does the library provide access to users regarding the formation of collection development policies?	Transparency allows customers to interact with the company in potentially intrusive ways. How much access in the supply chain do I allow customers to participate? (PRAHALAD; RAMASWAMY, 2004).
IT	Technological resources	The access to information that permeates the use of technologies in the library environment allows the library to build a technological environment focused on the interest and use of users in terms of usability.	Allow the user to have access to information about the application of technologies in the library, so that he or she can understand the services provided and the technologies available, as well as contribute to their improvement.	How does the library provide access to information regarding the use of technology for the delivery of information services?	The customer has many options to choose how they experience/live the service offering. (ALBINSSON; PERERA; SAUTTER, 2016).
Environment	Organizational scope	The formation of a suitable environment requires the participation of the user in the formulation of strategies to improve the organizational environment.	The asymmetry of information between user and library when forming the organizational environment is important for the organization to create value in the user's perception of the organizational environment, the user also creates value in perceiving dynamics that benefit them in terms of a better environment in meeting their information needs.	How does the library ensure that its users participate in creating an improved environment appropriate to their information needs?	The company provides many options for me to choose how I experience and live the service offering. (BECKER; SANTOS; NAGEL, 2016).
Intangibles					
Ability	Staff's tendency	Access to the processes of	Co-creating value between the user's	How does the library	According to Prahalad and

Service Provider Reference Framework					
	and willingness to serve or solve its users' problems as quickly as possible	professional training of librarians allows the library and users to contribute to the choices of courses/training they believe are necessary to better serve their needs and those of librarians.	perception of the librarian's skills is a pre-requisite for the library to identify what courses, training is needed to better serve their information services. Access between user and librarian is necessary to understand what skills are needed to co-create value.	provide information about the skills and professional development of librarians?	Ramaswamy (2004), access can take place with respect to information, as well as access to tools, lifestyles, among others, to co-create value
Availability	Staff always available for whoever needs them in the course of their duties.	Access to the availability of information professionals in the provision of information services allows the user to create value in understanding the interest of the professional in serving them, in terms of time.	Information about the availability of librarians in terms of time is important so that the user knows the limitations of human resources in providing services and can better adapt. The library benefits from understanding the user's needs in terms of time.	How does the library provide access to information about the availability of its staff?	It is easy for the customer to receive the service offering when, where and how the customer wants (ALBINSSON; PERERA; SAUTTER, 2016).
Risk: How does the library assess risks that could cause harm to users?					
Resources	What?	Why?	Importance?	Question	Principles
Tangible					
Installation	Physical resources of the library	The recognition of physical risks (ergonomics, unhealthy, hazardous) in using the library, allows the manager to adapt to the most latent interests for improvements in its physical structure.	The users' values in this regard allow the allocation of resources to minimize risks and co-create value for both.	What potential risks does the library have in allowing user participation in the co-creation of value regarding the appearance of the facilities?	Discussing options openly gives clients some control over the risks they take, but not necessarily the liabilities. Where do I delineate acceptable risks, and where do my legal responsibilities begin and end? (PRAHALAD; RAMASWAMY, 2004).
Collection	Information resources available to users (books, journals, e-books, etc.)	The assessment of the risks pertinent to the formation of the collection together with the users may incur in problems in the development of the collection because the users do not have technical knowledge.	It is important to assess the risks of developing a collection that is inadequate to the users' needs. The user must participate in the collection evaluation and adequacy processes to minimize risks.	How does the library allow users to participate in shaping evaluation about collection development?	The provider provides the tools and support necessary for the customer to make fully informed decisions about whether to participate in the service experience. (ALBINSSON; PERERA;

Service Provider Reference Framework					
					SAUTTER, 2016).
IT	Technological resources	There are risks in not adapting IT resources and making them obsolete when users do not know the implications of the use of technologies.	It is important to evaluate if the users understand the technological resources offered and if the evaluation methodology is adequate.	How does the library evaluate the use of IT resources to reduce the risk of obsolescence?	The customer receives comprehensive information regarding the risks and benefits of the service experience. (ALBINSSON; PERERA; SAUTTER, 2016).
Environment	Organizational scope	There may be risks in providing an inappropriate environment for users. Co-create value in this aspect can minimize risks regarding the user's perception in the provision of inadequate services, inflexible to change, bureaucratic, etc.	To evaluate the risks regarding environmental aspects allows the library to improve its services in environments that are more adequate to the users' interests. The user, in turn, better benefits from a better environment.	How does the library assess the risks involved in developing the right organizational environment for value co-creation?	The provider provides the customer with comprehensive information regarding how risks and benefits have been assessed for service experience. (ALBINSSON; PERERA; SAUTTER, 2016).
Intangibles					
Ability	Staff's tendency and willingness to serve or solve its users' problems more quickly.	There are risks through managers not knowing the skills and learning of employees. Assessing the skills enables one to recognize professional limitations and propose improvements.	There is a risk in not knowing how to assess the skills of the staff, to the extent that the user may be harmed by poor service delivery. Co-creation occurs when the user participates in the skills assessment process.	How does the library assess the skills of librarians and allow the user to participate in the assessment tool?	The provider is very clear and factual about both the negative and positive factors associated with the service offering. (ALBINSSON; PERERA; SAUTTER, 2016).
Availability	Staff always available for those who need them in the course of their duties.	There may be risks through the user not knowing about the library's availability to provide its services (hours, disclosure, specification).	It is important to improve the communication between the user and the availability of professionals to better assist in information services. Co-creation of value can allow the library to better communicate by understanding how users are informed about the availability of professionals	How does the library evaluate the communication processes between the availability of the professionals in serving the users?	
Transparency: How the library makes information available to users					
Resources	What?	Why?	Importance?	Question	Principles
Tangible Resources					
Installation	Physical resources of the	Transparency in the information provided about the library facility	It is important that the user has knowledge about the physical resources	How transparent is the library in providing	The customer is given free access to information that can

Service Provider Reference Framework					
	library	allows the institution to offer physical resources appropriate to the users' needs. Users benefit from the knowledge and use of the resources offered.	available to better use them, co-create value in this aspect benefits the library regarding the adequacy of the facilities to the user, and the user benefits in knowing the resources and propose improvements.	information about the physical resources offered and how the user participates in this process.	be useful in improving the overall design and delivery of the service experience. (ALBINSSON; PERERA; SAUTTER, 2016).
Collection	Information resources available to users (books, journals, etc.)	Being transparent about the processes surrounding the collection allows both parties to co-create value to improve the collection and its use.	It is relevant that both visualize the processes that involve the development of the collection, because the library directs the efforts (financial, staff,) to improve the collection, and the user benefits from the information resources that are more adequate to his/her reality	How does the library transparently communicate information about user needs to form the collection?	The customer and the provider are treated as equal partners in sharing information that is needed to achieve a successful service experience. (ALBINSSON; PERERA; SAUTTER, 2016).
IT	Technological resources	IT resources should be made available so that users are aware of the tools that may be useful	Transparency of information about IT resources is important for better information services, since technologies are increasingly changeable and renewable.	How does the library update and make available information in terms of IT resources in the value co-creation process?	I have free access to information that can be useful in improving the delivery of the service experience.
Environment	Organizational scope	The organizational environment can serve as a reason for choosing to use the library and develop the co-creation of value. Making information about the environment transparent enables more users to be reached.	It is important to know and be transparent about the organizational environment so that the user knows the institutional limits and does not harm his expectations about the provision of services.	How does the library inform its users regarding transparency of information in relation to the organizational environment.	(BECKER; SANTOS; NAGEL, 2016).
Intangibles					The provider fully discloses to the customer information that can be useful in improving the service experience outcomes. (ALBINSSON; PERERA; SAUTTER, 2016).
Skill	Staff's tendency and willingness	The library can benefit from knowing the processes of value	The processes of co-creation of value between user and professional as to the	How to enable the user to know the training	

Service Provider Reference Framework					
	to serve or solve their users' problems as quickly as possible.	co-creation in terms of transparency of the information collected in the employee learning process.	skills of the professionals must be clear so that both recognize the needs for improvement in order to provide qualified information services.	processes of information professionals?	
Experience	Knowledge gained through previous experiences.	Experiences are necessary to better serve. Being transparent about the experiences of the staff is effective so that users can recognize experiences that can help them in their search for information, and also so that the library can direct its services based on the experiences of the staff.	It is important to inform the experience of the professionals (areas of thematic interest, languages, techniques, etc.) so that the user can be better served.	How does the library present the experiences of its professionals?	Information is disclosed to me that can be useful to improve service experience outcomes. (BECKER; SANTOS; NAGEL, 2016).
Empathy	Ability of the staff to show that they understand the needs and show the user total affection.	Co-create value in terms of empathy is to put yourself in the other's shoes. Being transparent in this aspect allows each one to understand the context experienced. On the library side, understanding the diversity of the users, and on the user side, understanding the dynamics of the library.	It is important to be transparent in the processes of meeting users' needs. To be empathetic is to provide services that are best suited to each individual user, and at the same time, to realize how much they can benefit from being transparent about their needs.	How does the library identify and publish information needs according to the diversity of its users.	I have free access to information that can be useful in improving the delivery of the service experience. (BECKER; SANTOS; NAGEL, 2016).
Availability	Staff always available to whoever needs them in the course of their duties.	Transparency in terms of availability allows the co-creation of value as to the best direction of services in terms of adaptation of services to users. Services must fit the availability of both (library resources) and the interests of the users.	It is important to be transparent about the availability of the library staff, because it avoids false expectations and worse evaluation.	How does the library make known the availability of its staff in terms of time, costs, and efforts (techniques, tools) to meet your needs.	The provider fully discloses to the customer detailed information about the costs and prices associated with the development and delivery of the service experience. (ALBINSSON; PERERA; SAUTTER, 2016).

Source: Prepared by the authors.

Through the framework, it is possible to observe the possibility of investigating the co-creation of value in libraries, specifically about information services. The four dimensions (encounter processes) of DART direct the operative resources to think about the co-creation of value from the perspective of the professionals who work in the IU, and on the other hand, their perception about the participation of the user in this process.

In this context, it was observed that **Dialog** is seen as essential to understand the users' needs, but also, to understand how information professionals can improve themselves to better serve the user. To have dialog is to build bridges of interaction with the user, to the point that communication can be better understood and understood by both parties.

Access enables both the user and the library to participate in the different contexts in which the information services are inserted, and that, through the availability of information or the active participation of both, they can improve the services. This provision of information is necessary for both to recognize what is offered, the limitations, and propositions that the library offers in terms of information services.

Through the **Risk** dimension it is possible to understand how they can be detrimental in the value co-creation process. However, it is necessary to evaluate them so that the co-creation occurs without hindrance or damage to both parties. Understanding the risks is to recognize the possibility of improvement on the part of the service server in not allowing it to become a detriment to the user. The user in turn also recognizes the risks in participating in the value co-creation process, which improves his perception and expectations regarding his participation.

As for **Transparency**, one notices that there are several means to promote it. It is observed that information professionals (service provider) must be clear and objective in offering relevant information to their users, who in turn, enjoy dynamic and transparent channels as to the intentions of the IU to better provide services and allow them to participate in the co-creation of value.

4 CONCLUSIONS

This study sought to build a frame of reference about the co-creation of value in information services from the perspective of the service provider. By means of national and international literature reviews it was possible to delimit the scenario of the study, which resulted in a structure of connections that allowed the construction of the frame of reference. The gaps observed in the literature consider that information services can be better addressed in complex contexts if we adopt new models of service delivery and focus on dynamics that challenge the status quo and permeate technological, social, and political advances, increasingly including the interaction between the service provider (information professionals/library) and the user in thinking about information services.

From a theoretical point of view, this research provides a conceptual framework for the co-creation of value in information services, and it is possible to observe that the co-creation of value is a relevant factor for libraries that need to adapt to the reality of their users. Information professionals need to observe the co-creation of value as a relevant action to increase the perspective of value among the co-participants of the process, and thus better provide their services, consistent with the real needs and expectations of users.

It is believed that the framework can be a guiding element for the discovery of value co-creation processes in libraries, and especially according to the aspects of information service delivery from the perspective of the service provider. The questions proposed in this study observed the library's operating resources (environment, collection, skill, empathy, and willingness), in counterpoint, the DART encounter processes, in order to enable the extraction of the elements/processes of value co-creation.

The analysis of these elements related to the service provider, together with the user's perspective, should result in a better service, matching the users' needs, however, both need to recognize and propose value. The co-creation of value allows not only to observe the value proposed by the library, but also that proposed by the user. To consider the value by both parties is to have in its fullness, the processes that will direct a better service provided and used.

The studies on the co-creation of value in libraries denote advances for Librarianship and Information Science, to the extent that the literature is insipient on this theme, even more so in thinking about their informational services. The co-creation of value from the point of view of the service provider (information professionals/library) has been studied, however, in a generic way in its models and not directional in its intentions and, mainly, do not present inputs for the discovery of the elements of co-creation of value.

The framework of reference is an instrument for the identification of these elements and perhaps the delineation of a structure (model) capable of supporting the management of the value co-creation processes, by both players.

As future research, we suggest the investigation of the other participant of value co-creation, the user, as well as the empirical application of the analysis of the elements of value co-creation and the structuring of a model for managing these processes.

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