


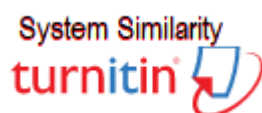
INTERDISCIPLINARITY BETWEEN INFORMATION SCIENCE AND MANAGEMENT SCIENCE IN BRAZIL: A LITERATURE REVIEW

INTERDISCIPLINARIDADE ENTRE CIÊNCIA DA INFORMAÇÃO
E ADMINISTRAÇÃO NO BRASIL: UMA REVISÃO DE LITERATURA

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ABSTRACT

This is a literature review study resulted of a bibliographic survey on the scientific production on the interdisciplinarity between information science and administrative science in Brazil. The goal is to identify aspects of scientific literature on the interdisciplinarity between both scientific fields. The following databases were used for the search: ABCDM, BRAPCI, BDTD, SPELL, ANPAD website, Scielo and Google Scholar, which jointly identified 10 works, namely: two theses, a dissertation, four ENANCIB papers and three articles from distinct journals. The papers analyzed refer to information as the link between the two scientific fields (Information Science and Administrative Science), and competitive intelligence and knowledge management as motivators of interdisciplinarity. The existing literature on the subject is scarce and focused on defining the intersection between Information Science and Administrative Science. The recovered works reveal that the study on interdisciplinary relations is an important tool for understanding Information Science as a science, as well as its characteristics and scope.

KEYWORDS

Literature reviews. Interdisciplinary approach. Information Science. Administrative Science.

RESUMO

Trata-se de revisão de literatura resultante de levantamento bibliográfico da produção científica sobre a interdisciplinaridade entre a Ciência da Informação e a Ciência da Administração no Brasil. O objetivo é identificar aspectos da literatura científica a respeito da interdisciplinaridade estabelecida entre essas duas ciências. Como fontes de pesquisa, foram utilizadas as bases de dados ABCDM, BRAPCI, BDTD, SPELL, o portal da ANPAD e, de forma complementar, a *Scielo* e o Google Acadêmico, que conjuntamente resultaram na identificação de dez trabalhos, a saber: duas dissertações, uma tese, quatro trabalhos de anais do ENANCIB e três artigos de periódicos. Os trabalhos analisados apontam para a informação como elo entre as duas ciências, e a inteligência competitiva e a gestão do conhecimento como motivadores da interdisciplinaridade. A literatura existente sobre o tema é escassa e focada em definir a interseção entre Ciência da Informação e Ciência da Administração. Os trabalhos recuperados revelam que o estudo das relações interdisciplinares constitui importante ferramenta para a compreensão da Ciência da Informação como ciência, assim como suas características e abrangência.

PALAVRAS-CHAVE

Revisão de Literatura. Interdisciplinaridade. Ciência da Informação. Administração.

1 Introduction

Over the past few years, interdisciplinarity has been discussed by several specialists, such as Le Coadic (1996), Saracevic (1996), Pinheiro (1999), Araújo (2014), among others. However, it is noted that there is no consensus on the definition of the term, its categorization and its characterization. In this sense, Pombo (2006) states that arguing about the subject is an ungrateful and almost impossible task, considering that the experts themselves encounter many difficulties. For the author, interdisciplinarity is “a concept invoked whenever we confront the limits of our knowledge territory” and seek in other disciplines the complement or the unfound possibility (POMBO, 2006, p. 15).

Another way to define interdisciplinarity is to present it as a process in which culture, experience, beliefs and needs are involved (FAZENDA, 2008). In another perspective, interdisciplinarity can be classified as the practice in which authors use definitions offered by disciplines other than their own (POMBO, 2005). In 1970, the Center for Research and Innovation in Education (*Centro para Pesquisas e Inovação do Ensino – Ceri/OCDE*) conceptualized interdisciplinarity as follows: “interaction between two or more subjects” (FAZENDA, 2012, p. 10). Such a definition is so broad that it involves factors ranging from the particular experience of each researcher to the “mutual integration of key concepts of epistemology, terminology, procedure, data, and the organization of research and teaching, relating them”. (FAZENDA, 2008, p. 18). Interdisciplinarity is highlighted in a report by the Gulbenkian Commission (1996, pp. 22-23), in which interdisciplinary work is recommended in order to break the artificial barriers of knowledge.

Interdisciplinarity is the embodiment of the evolution of science and humanity itself, sharing its complexity so that “the issue of interdisciplinarity involves a deep reflection on the impasses experienced by science today” (FAZENDA, 2012, p. 14). The present is translated into a situation where a new type of discipline emerges and, consequently, new institutional models. In common with Information Science, there is difficulty and lack of rigorous determination of its concept as an area of research. Pombo (2006) displays two views of interdisciplinarity in which “an instrumental version established by the complexity of the object and a procedural version, a version in which collaboration between researchers from different disciplines is, as said, prior to the emergence of the complex objects themselves and required by the interdisciplinary will that animates the institutions that provide it” (POMBO, 2006, p. 230). In contrast, for Fazenda (2012, p. 116), “interdisciplinary research is distinguished from others by revealing the trademark of the researcher in its approach”. This argument complements that of Japiassu (1976, p. 34), for whom “the interdisciplinary methodology postulates a generalized reformulation for the teaching structures of scientific disciplines”.

As will be demonstrated in this text, there is a growing interest in the study of interdisciplinarity in Information Science. From this perspective, it can be seen that studies about the interdisciplinary relationship between Information Science and Administrative Science have been, albeit timidly, the subject of recent research. This can be demonstrated from the fact that doctoral theses and master's dissertations have been defended, as well as oral presentations made at the Brazil's National Information Science Research Meeting (*Encontro Nacional de Pesquisa em Ciência da Informação – ENANCIB*) and articles in scientific journals in the area are published since 2008.

The following databases were consulted for this research: a) specialized database of the Graduate Program in Information Science from University of Brasília (ABCDM); b) Library of Theses and Dissertations (*Biblioteca de Teses e Dissertações – BDTD*), from the Brazilian Institute of Information, Science and Technology (*Instituto Brasileiro de Informação, Ciência e Tecnologia – IBICT*); c) Information Science Database (*Base de Dados em Ciência da Informação – BRAPCI*); d) Scientific Periodicals Electronic Library (SPELL), an electronic library under management of the National Association of Graduate Studies and Research in Administrative Science (*Associação Nacional de Pós-Graduação e Pesquisa em Administração – ANPAD*); and e) sources cited in the works found. After searching, the studies that investigated the characteristics of interdisciplinarity between Information Science and Administrative Science in Brazil were recovered. Thus, the problem of this literature review lies in the lack of a literature overview regarding the articles of scientific journals, the papers presented in ENANCIB, theses and dissertations on the interdisciplinarity between these sciences.

The objective of this paper is to perform a literature review on the scientific production of the interdisciplinary relationship between Information Science and Administrative Science in Brazil, contemplating the scientific production on the subject. Thus, the intention is to identify contemplated characteristics in the bibliographic production retrieved about the interdisciplinary relationship between the sciences that reveal the channels and the authors who study this thematic, as well as identify the methodologies adopted and the results achieved.

2 Methodological procedures

In mid-2017, searches were held using the terms “*administração*” and “*ciência da informação*” in the “title” and “keywords” fields in the databases. The consulted resources and the obtained results are presented, respectively, as follows: a) ABCDM, which returned seven records; b) BDTD, which returned two records; c) SPELL, which returned a record in common with ABCDM, but unrelated to the subject of this article; d) *Scielo*, which returned an article already identified in ABCDM.

Complementarily, other resources were consulted, presented below with their respective results: a) ANPAD's website, which provides summaries of the events' annals in the area, having returned 13 records unrelated to the studied theme of this article; b) Google Scholar, which returned an article already identified in ABCDM; c) institutional repository of University of Brasilia, which returned ten results related to competitive intelligence and knowledge management, but did not add any results on the relationship established between Information Science and Administrative Science.

After that, the reading and analysis of the recovered works began, adding to the results a doctoral thesis, also analyzed by Alves and Duarte's article (2015).

3 Results

The research results represent a total of ten documents identified, presented in Table 1, which shows the recovered works that deal with the interdisciplinary relationship between Information Science and Administrative Science and were produced between 2008 and 2015. There were no documents related to the subject found in previous years based on the adopted methodology.

Regarding the authorship, 12 authors were identified. Duarte, Oliveira and Pinheiro were responsible for three authorships each. Next, it is noted that Andrade and Moreno are responsible for two authorships, with the other authors contributing only one document each. The highest incidence of works happened in 2010 (three). In 2009 and 2015, four papers were published, two in each year.

Table 1. Scientific papers published in Brazil on the relationship between Information Science and Administrative Science.

AUTHOR(S)	YEAR	TYPE OF DOCUMENT	EDITOR
ALVES, José Alexandre da Costa.	2008	Dissertation	UFF-IBICT
PEREIRA, Fernando Antônio de Sousa; VARELA, Aida Varela.	2009	Work on event	ENANCIB
DUARTE, Emeide Nóbrega; SANTOS, Irma Gracielle S. C.; FERREIRA, Tereza Evâny Lima Renôr; MORENO, Danielle Harlene da Silva	2009	Work on event	ENANCIB
MORENO, Danielle Harlene da Silva	2010	Dissertation	UFPB
OLIVEIRA, Joaquim Francisco Cavalcante de.	2010	Thesis	UFF-IBICT
OLIVEIRA, Joaquim Francisco Cavalcante de; PINHEIRO, Lena Vania Ribeiro; ANDRADE, Antônio Rodrigues de.	2010	Work on event	ENANCIB
OLIVEIRA, Joaquim Francisco Cavalcante de;	2011	Periodic's article	Liinc em

PINHEIRO, Lena Vania Ribeiro; ANDRADE, Antônio Rodrigues de.			Revista
BARRANCOS, Jacqueline Echeverría; DUARTE, Emeide Nóbrega.	2013	Periodic's article	Encontros Bibli
ALVES, Cláudio Augusto; DUARTE, Emeide Nóbrega.	2015	Periodic's article	Transinformação
MARTINS, Carlos José Vieira; PINHEIRO, Lena Vania Ribeiro.	2015	Work on event	ENANCIB

Source: created by the authors.

The first work, published in 2008, is a theoretical research, with epistemological bias, about the phenomenon of information in a perspective of interdisciplinarity that happens between Administrative Science and Information Science. Performed by Alves (2008), it is based mainly on the scope of the information society, which, according to the author, demonstrates that Information Science has its own information as study object and the references of this object with the user. The information epistemology for the Administrative Science reveals focus on the organization (institution, company) and its use is intended to provide sources for its own development (ALVES, 2008, p. 122-123). In addition, a theoretical discussion about the phenomenon of information arises, based on its new roles in organizations. Thus, based on epistemological articulations of Information Science and Administrative Science, the author provides an overview of the concept and use of information for both sciences. He also describes that, for Information Science, information refers to questions about how to provide or deliver responses to the information user about their informational demands, whereas for Administrative Sciences, information refers to how the manager accumulates information for creating a competitive institution. In this sense, he points out that Administrative Science recognizes the role of information in organizations and highlights the existence of research on the approach to information processing, that is, the use of information in the organizational context (ALVES, 2008, p. 123).

In the following year, in 2009, a paper was presented at X ENANCIB, which analyzes the theme of informational competence treated as an interaction factor between Information Science and Administrative Science. This is a case study by Pereira and Varela (2009), with the adoption of participatory research methods. In the light of Gramigna's framework (1993, 2006) and the parameters on informational competence of the American Library Association (ALA) (1989), the authors sought to evaluate the usability results of the informational research developed in the work of simulation, learning, analysis and development of problem-solving competence among Business Administration students. The authors emphasize that the recognition of the strategic importance of information in the globalized world turns relevant the development of competitive intelligence in organizations. They also emphasize that organizations should not be restricted to the application of automated information systems, but that proficient professionals in the research and use of information would be of great contribution. Thus, interaction between professionals would enable the success of strategic management activities (PEREIRA; VARELA 2009, p. 6).

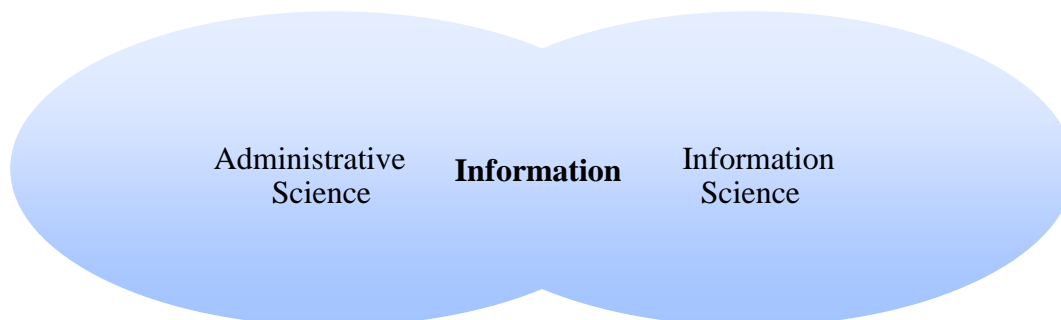
Also in 2009, Duarte, Santos, Ferreira and Moreno presented a paper about the study of scientific production from the following Information Science journals: a) *Ciência da Informação*; b) *Data Grama Zero*; c) *Informação & Sociedade: Estudos*; d) *Encontros Bibli*; e) *Perspectiva em Ciência da Informação*; f) *Informação & Informação*; g) *ACB Magazine*; h) *Transinformação*; i) *Biblionline*. The objective was to verify the way that the authors of scientific articles published in the nine journals approached information management from the perspectives of Administrative Science, Information Science and Technology, from 2004 to 2008. The reading of 61 articles was carried out with data collection with a previously prepared form, which provided the identification of the approaches, presented as follows: a) Business Administration perspective; b) Technology perspective; c) Information Science perspective; d) Information Science and Administrative Science perspective; e) Information Science, Administrative Science and Technology perspective. They concluded that information management approaches in Information Science present five perspectives. They also highlighted information as the main input for decision making and how competitive strategy is associated with the use of Information Technologies.

In 2010, Moreno presented a master's dissertation whose objective was to verify the feasibility of the formation of internal, personal and spontaneous collaborative networks of knowledge among professors of postgraduate programs in the areas of Information Science and Administrative Science at Federal University of Paraíba (UFPB). The author conducted a research based on the Lattes curricula of the professors of the Graduate Programs of Administrative Science (*Programa de Pós-graduação de Administração – PPGA*) and Information Science (*Programa de Pós-graduação de Ciência da Informação – PPGCI*) of UFPB. Subsequently, the professors were divided into categories to define the area of knowledge to which each was linked. It also used a form in which professors pointed out whether or not they were interested in working collaboratively with colleagues of other graduate programs. Among the results, she presented a table that shows that the programs are interdisciplinary because they present professors from different backgrounds; identified that the themes of the master's and doctoral degree completion works are directly related to the areas of expertise in the respective programs; and found that 100% of respondents agreed to the formation and implementation of collaboration networks between PPGA and PPGCI, but, however, some actors had reservations. The author concluded that cooperation between the professors of both programs is feasible, but points out that there is a need for a joint effort to foster such cooperation.

Still in 2010, Oliveira presented two scientific productions. Firstly, in his thesis, he addressed the theme interdisciplinarity in the formation of the administrator, discussing the need for the “duet” between Information Science and Administrative Science for the formation of the professional administrator. He identified the lack of measures that can guarantee the qualification of administrators in facing the informational reality, fruit of the information and knowledge society. The author presented two proposals for solving the problem pointed out. The first refers to a new curriculum for business degrees, and the other

to business, in order to provide an integrated organizational information environment between Administrative Science and Information Science. The author also draws attention to the social essence of the two sciences and presents the information as an intersection between them, as illustrated in Figure 1. The objective of the thesis presented by Oliveira (2010) was to verify the suitability of the current academic formation of the administrator to his own performance in companies, facing new scenarios of science and technology and the contemporary informational reality. The methodology consisted of field research in which questionnaires were distributed over the Internet and applied in two segments: a) Business Administration courses, in order to identify interdisciplinary traits in the formation of the administrator; and b) companies, in order to verify the presence of interdisciplinary concepts in business management models and management training programs. Thus, it presents 20 conceptual categories that make up the interdisciplinary corpus between Information Science and Administrative Science. These conceptual categories are the concurrently studied themes between the two sciences and show the degree of conceptual relationship between them. In this sense, the author points out that, in 1995, Pinheiro and Loureiro conducted a survey that presented “the first interdisciplinary evidence” between Information Science and Administrative Science (OLIVEIRA, 2010, p. 90). This survey consists of a diagram composed of scientific and technological disciplines of the area with their respective interdisciplinary links, to reflect the thinking of a Brazilian study group at the given time. The authors presented a list of topics of interest to Information Science and correlated them to other disciplines such as Archivology, Library Science, Museology, Informatics, Communication, Statistics, History of Science, Anthropology, Philosophy, Sociology, among others. At that time, the Administrative Science was related to the themes “information systems administration” and “information economy”. The 1995 research was updated by Pinheiro (2006), in which the themes “competitive intelligence and knowledge management”, “information management” and “information policies” were added. The new research indicated greater involvement of Administrative Science, as well as the development of Information Science and its very direct relationship with information technology or computing, emphasizing strong characteristics intrinsic to itself, namely interdisciplinarity and information technology, as already highlighted by Borko (1968).

Figure 1. Interdisciplinary representations between Information Science and Administrative Science.



Source: adapted from Oliveira (2010).

In the same year of 2010, Oliveira developed, together with Pinheiro and Andrade, a work at ENANCIB, which presented the description and analysis of the theoretical foundations and methodological procedures for the construction of an interdisciplinary corpus between Information Science and Administrative Science. This research presents the first insights into the conceptual categories described in the article published in the following year.

In 2011, Oliveira, Pinheiro and Andrade published an article with the objective to demonstrate the conception and the theoretical foundations that make up the interdisciplinary corpus between the two sciences. This, in turn, is based on bibliographic research that used the technique of citation analysis in order to find in the journals the authors of Information Science and Administrative Science based on the information. The authors performed citation analysis and content analysis, which were based on the conceptualizations of Moed (2005) and Franco (2008). The research for authors of Information Science took place in the following journals: *Revista de Administração de Empresas da FGV/SP (RAE)*, *Revista de Administração Pública da FGV/EBAPE/RJ (RAP)*, *Revista de Administração Contemporânea da ANPAD (RAC)*, *Revista de Administração da USP (RAUSP)*. The research period was from 1996 to 2008. For the research of the authors of Administrative Science cited by the authors of Information Science, the authors used exclusively IBICT's journal *Ciência da Informação*. The reason for the choice of journals was the fact that the number of citations in only one journal of Administrative Science would be insufficient to carry out the research.

Thus, 58 citations of authorship were found in articles of Administrative Science journals, whose concepts are linked to Information Science, and 220 citations of authorship linked to Administrative Science were found in articles of Information Science journals. After analyzing the concepts presented, a list of conceptual categories was elaborated in which the authors list the main concepts used by the researchers of both sciences. It should be noted that although they consist of conceptual categories, a strong representation of such themes can be established in the Information Science literature. Except for the categories "communication", "information" and "knowledge", because of the generality of these themes, the others can be identified as recurring keywords among articles in information areas in Brazil. Thus, Table 2 presents the conceptual categories that make up "the interdisciplinary corpus" between Information Science and Administrative Science (OLIVEIRA; PINHEIRO; ANDRADE, 2011).

Regarding the 20 conceptual categories represented, it is highlighted that three refer to competitiveness and seven to knowledge, or in other words, they emphasize the interest in competitiveness and knowledge and reveal the treatment given to information and how this can contribute to the organization's competitiveness for its growth. Information and its use has been the subject of investigation for both Information Science and Administrative Science. In this sense, Oliveira, Pinheiro and Andrade warn that "information, more specifically, information management, is the crossroad between Information Science and

Administrative Science” (2011, p. 63). In addition, they credit the interdisciplinarity between the two sciences to market and capital globalization, the interest in increasing competitiveness and the use of information technology. In the research, they highlight the fact that information is “the main element for the interdisciplinary fabric”, whose view is shared by Alves and Duarte (2015), Oliveira (2010) and Alves (2008). The authors also pointed out that specific works on interdisciplinarity have been demonstrating the involvement between Information Science and Administrative Science since the 1990s, which is the case of Pinheiro’s work (1995), who traced the limits of Information Science.

The authors highlight “knowledge management” and “competitive intelligence” as essential disciplines. Although the two sciences have information as a connecting element, their relationship occurs differently. As an example, the Information Science professional works as a mediator, providing information availability, while the Administrative Science professional uses this information for decision making (OLIVEIRA; PINHEIRO; ANDRADE, 2011, p. 63-64).

Table 2. Interdisciplinary Corpus: Conceptual Categories and Concepts.

Conceptual Categories	Concepts
1 - Environmental analysis	Informational environment; market analysis; quantitative and qualitative analysis; bibliometrics; sources of opportunity and challenge; environmental uncertainty; methods of information analysis; information search behavior model.
2 - Organizational learning	Organizational learning; information and knowledge based organizations ; organizations that learn.
3 - Intangible assets	Intangible asset; hidden information assets; intangible value.
4 - Competitiveness	Competitiveness; productivity; competitive advantage .
5 - Communication	Communication; information overload; feedback; information sources; information networks; decision making.
6 - Knowledge	Intellectual capital; competence; essential competence; knowledge; strategic knowledge; objective knowledge; tacit knowledge .
7 - Competitive strategy	Five strategic forces; competitive strategy ; market segmentation.
8 - Administrative tools	Balanced scorecard; statistical quality control; process management.
9 - Information management	Information sharing; information ecology; information economy; information management; information needs.
10 - Knowledge management	Knowledge sharing; knowledge conversion; knowledge creation; knowledge management ; organizational innovation; knowledge workers.
11 - Information	Strategic information; formal and informal information; types of information.

Conceptual Categories	Concepts
12 - Competitive Intelligence	Skills and competencies of competitive intelligence professionals; competitive intelligence ; environmental monitoring.
13 - Marketing	Marketing compound; marketing intelligence ; marketing of relationship; marketing for non-profit organizations; marketing principles.
14 - Organizational changes	Change; changes in power.
15 - Systemic thinking	Systemic thinking; system.
16 - Informational process	Informational food chain; data, information, knowledge and intelligence .
17 - Administrative theories	Contingency theory; behavioral and mechanistic approach.
18 - IT and information systems	Knowledge -based information systems; ERP systems; IT
19 - Types of society	Postmodernity; information and knowledge society; post-industrial society; 3rd wave.
20 - Organizational values	Value chain; value judgment of scientific analysis; value of information; organizational values.

Source: adapted from Oliveira, Pinheiro and Andrade (2011).

Four years later, the theme “competitive intelligence” was analyzed in the scientific article by Barrancos and Duarte (2015), which consisted of a survey conducted together with the main events of Information Science (ENANCIB) and Administrative Science (ENANPAD) in 2010 and 2012, with the objective of verifying “knowledge management” practices presented in the results of the events’ proceedings. The authors identified seven papers presented in the period, three in ENANCIB and four in ENANPAD, which referred to the term “knowledge management” as a tool capable of promoting “best practices” within organizations. These works pointed to the use of a similar theoretical framework in both events, so that the authors believe that the common quotations reinforce the idea of interdisciplinarity between Information Science and Administrative Science regarding competitive intelligence and knowledge management. Finally, they highlighted knowledge management as an integral and interconnected part for the use of individual and corporate knowledge to reflect better decision-making within organizations.

Still in 2015, a research by Alves and Duarte presents a survey of studies conducted between 2006 and 2013 that indicate the link between Information Science and Administrative Science. However, most of the papers do not have interdisciplinarity between the two sciences as their object of study, presented by the authors as being “a conversation with two voices of equal importance, which converge in certain moments, without losing either its identity” (ALVES; DUARTE, 2015, p. 39). However, the authors describe documents that deal with competitive intelligence and knowledge management. Thus, in

accordance with the knowledge established by Oliveira, Pinheiro and Andrade (2011), Alves and Duarte emphasize that the relationship between Administrative Science and Information Science occurs as an exchange of knowledge, whose main link is information. They also consider that the interdisciplinarity between the two areas occurs in a broad way, so that they share various concepts, principles and methodologies developing a “unifying link, because it uses concepts from both sciences effectively” (ALVES; DUARTE, 2015, p. 37). The relationship between the two sciences is established as an “interdisciplinary saga”, in which the connection between the two sciences is consolidated through “studies dealing with the selection, organization, management, dissemination, retrieval and use of information, as well as administration, strategy and information marketing” (ALVES; DUARTE, 2015, p. 45). The survey conducted by the authors resulted in 17 works, among which the works of Alves (2008); Oliveira (2010); Oliveira, Pinheiro and Andrade (2011); and Barrancos and Duarte (2013), which deal specifically with the relationship between Information Science and Administrative Science. The other works address themes such as “competitive intelligence” and “information management”, which are indicated by researchers as factors of interdisciplinarity between the two sciences. It consists of recent literature that shows the growing interest of the scientific community of Information Science on the subject.

In this journey towards the knowledge of Information Science, there is also the work of Martins (2015), who conducted a theoretical study on the epistemic constitution of Information Science and Administrative Science. His work points as confluence factor the “strategic information management”, “environmental monitoring” and “competitive intelligence”. Moreover, it highlights the fact that the theoretical foundations are sustained in both sciences. For him, this support is perceived in the Information Science through studies by researchers that recognize the interdisciplinarity between the two sciences, while, in the case of Administrative Science, by the authors who deal with the importance of information as a reducing element of uncertainty. Also, authors were identified from both sciences who discuss environmental monitoring, with a view to creating and reviewing business strategies for organizations through greater mastery of themselves and the environment in which they operate. This is a bibliographical study that highlights the fact that it is not about the study of interdisciplinarity between the two sciences, but about "interdisciplinary perspectives between these two areas, from the confluence of knowledge of certain disciplines of both". Table 3 is presented by Martins (2015), based on a survey conducted by Pinheiro (2006), in order to verify the frequency of themes of articles published in IBICT's magazine *Ciência da Informação* related to other areas of knowledge. From the study, participation close to 25% of topics related to Administrative Science was found. Thus, the author points out that the study was revealed as another indication of the interdisciplinarity between the sciences. It is noteworthy that the study conducted in 2006 is a research update carried out by Pinheiro and Loureiro (1998), which resulted in the elaboration of a table of disciplines with interdisciplinary links related to Information Science.

Table 3. Common themes between Information Science and Administrative Science in IBICT's Information Science magazine (1972-2004).

Themes	1972-1979 (n = 86)		1980-1989 (n = 109)		1990-1999 (n = 250)		2000-2004 (n = 148)		Total (n = 593)	
	Qty.	%	Qty.	%	Qty.	%	Qty.	%	Qty.	%
Information policies	3	3,49	11	10,09	12	4,80	17	11,48	43	7,25
Information management	2	2,32	7	6,42	25	10,00	7	4,72	41	6,91
Information systems and networks	6	6,98	6	5,51	17	6,80	3	2,02	32	5,39
Competitive intelligence	-		-		8	3,20	5	3,37	13	2,19
Information economy	-		2	1,83	5	2,00	2	1,35	9	1,51
Knowledge management	-		-		-		3	2,02	3	0,50
TOTAL	11	12,79	26	23,85	67	26,80	37	24,96	141	23,75

Source: adapted from Martins (2015), with information from Pinheiro (2006).

4 Final thoughts

It is noted that the works retrieved in this review address, in various aspects, the relationships that occurred between Information Science and Administrative Science. Interest in this theme arises in the second half of the 2000s. The first studies in the 1990s were responsible for pointing out the first indications of the relationship between both sciences (PINHEIRO, 1997). At the end of the first decade of the 2000s, specifically from 2008, seven papers were identified. Recently, in 2015 and 2016, there was the development of three more works, which demonstrates that the theme has once again aroused the interest of researchers.

The survey presented in this research demonstrates the diversity of elaborated documents based on the interdisciplinarity between Information Science and Administrative Science, which range from articles, event presentations and postgraduate coursework. It is not possible to state preference for disclosure channel, considering that the documents are distributed proportionally. It is noteworthy that three articles were published in three different journals, as well as the two theses and dissertations found, which may suggest that there is room for the development of studies in this theme in the future.

Regarding the presented content, the analyzed documents indicate that, in common, the two sciences present epistemological references and essentially interdisciplinary characteristics (OLIVEIRA, 2010; ALVES, 2008; PINHEIRO, 2002). Thus, the authors point out that this attribute contributes to the formation of multidisciplinary professionals who differ from each other by their use of information. For Information Science, information is the object of study, while for Administrative Science professionals, its use serves as a reference for decision making.

Competitive intelligence and knowledge management stand out as topics of great interest and possible motivators for the growth of research and interdisciplinary discussions between researchers from both sciences.

From the readings for this article, there is the perception of information not only as the link between Information Science and Administration Science, but as the core of the process of seeking competitiveness, which involves the management of information and knowledge, in order to provide competitive intelligence and prominence to organizations, whether profitable or not, due to the growth of information flow, market globalization and the need for effective information management. Although studies on the interdisciplinary relationship between the two sciences are at an early stage, the issues of knowledge management and competitive intelligence have been widely addressed, strengthening the links between the two sciences (TARAPANOFF, 2006).

Thus, based on the literature studied, it is believed that the study of the interdisciplinarity between Information Science and Administrative Science is still on its early stages, requiring development. It is important to note that the studies presented address the relationship between the two sciences epistemologically, *id est*, showing the common roots between them. Papers that study the development of scientific production resulting from collaboration between researchers from both sciences have not been found so far.

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