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# Plagiarism in articles published in journals indexed in the Scientific Periodicals Electronic Library (SPELL): a comparative analysis between 2013 and 2018

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## Abstract

This study analyzes the possible occurrence of plagiarism and self-plagiarism in a sample of articles published in the Scientific Periodicals Electronic Library (SPELL), an open database that indexes business journals in Brazil. The author compared one sample obtained in 2013 ( $n = 47$  articles) and another selected from 2018 ( $n = 118$  articles). In both samples, we verified the guidelines that each of the journals provided to authors regarding plagiarism and the adoption of software to detect textual similarities. In the analysis conducted in 2013, it was found that only one journal (2%) mentioned the word "plagiarism" in its policies, although the majority of the directives required guarantees that no type of violation of authors' rights was contained in the manuscript. In the analysis conducted in 2013, it was determined that there were literal reproductions in 31 published articles (65.9%), and no relevant similarities with other publications were encountered in 16 articles (34.1%). In the 2018 analysis, 69 of the publications (58%) included observations and guidelines related to plagiarism and self-plagiarism. In the analysis conducted in 2018, it was found that similarities (plagiarism and self-plagiarism) occurred in 52 articles (44%), and no relevant evidence of plagiarism or self-plagiarism was found in 66 (56%) manuscripts. Although a reduction in the index of the occurrence of plagiarism was observed, as was an increase in the instructions on the prevention of plagiarism by authors, practices directed at guiding authors by means of directives concerning the importance of preventing plagiarism in manuscripts submitted for publication can be recommended.

**Keywords:** Plagiarism, Self-plagiarism, Authors' guidelines, Academic integrity

## Introduction

It has been reported in the literature that studies marred by a lack of scientific integrity due to scientific misconduct such as plagiarism or redundant publication (self-plagiarism) and works containing gift or ghost authorship are a recurring problem, which has intensified as of late (Amos 2014; Associação Nacional de Pesquisa e Pós-Graduação e Pesquisa em Administração (ANPAD) 2017; Committee On Publication Ethics (COPE)



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2011; Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) 2011; Council of Science Editors (CSE) 2018; Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP) 2011; Koocher and Keith-Spiegel 2010; Van Nordeen 2011).

In January, 2011, the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Coordination for the Improvement of Higher Education Graduates - CAPES)<sup>1</sup> recommended that all Brazilian institutions of higher education create “policies of awareness and information concerning intellectual property, adopting specific procedures seeking to limit the practice of plagiarism in the preparation of theses, monographs, articles and other texts on the part of students and other members of their communities” (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior 2011). In the same year, the main of research support agencies in Brazil presented policies aimed at restraining the occurrence of fraud and misconduct in scientific publications, citing the fabrication or invention of data, the falsification of results, and authorship fraud (plagiarism) among the types of fraud and misconduct (Conselho Nacional de Desenvolvimento Científico Tecnológico 2011; Fundação de Amparo à Pesquisa do Estado de São Paulo 2011).

These measures were aligned with those which institutions of higher education around the world were practicing and were in conformity with the codes of research integrity of international organizations, such as the following: the U.S. Department of Health and Human Services (2005), the Australian government (2007), and the Research Councils UK (2017). International entities, including CSE beginning in 1957 and COPE since 1997, have given support to science editors with the goal of creating and implementing a culture of ethics and good practices in scientific research activities.

In Brazil, the Associação Nacional de Pesquisa e Pós-Graduação e Pesquisa em Administração - ANPAD (National Association of Research and Graduate Studies and Research in Administration) had its manual “Boas Práticas da Publicação Científica: um manual para autores, revisores, editores e integrantes de corpos editoriais” (Good Practices in Scientific Publishing: a manual for authors, reviewers, editors and members of editorial committees) approved during the II Fórum de Editores Científicos de Administração e Contabilidade (II Forum of Scientific Editors in Administration and Accounting), held in 2010. In addition, in 2011, the Associação Brasileira dos Editores Científicos - ABEC (Brazilian Association of Scientific Editors - ABEC) held the Encontro Nacional de Editores Científicos (National Meeting of Scientific Editors), with the theme “Integrity and Ethics in Scientific Publishing”. Among its objectives, the association sought “to develop and refine the publication of technical-scientific periodicals and refine the communication and dissemination of information”. In February 2015, ABEC signed an agreement with iThenticate®, a software for detecting plagiarism in articles submitted to periodicals for publication, enabling the employment of this tool by its members. In 2017, ABEC, in partnership with CSE, published the “Diretrizes do CSE para Promover Integridade em Publicações em Periódicos Científicos” (Policies of the CSE for Promoting Integrity in Scientific Journals) in Portuguese.

<sup>1</sup>“CAPES is a public institution, linked to the Ministry of Education, responsible for graduate education in Brazil (Master and PhD courses). Its role includes evaluation of such courses, access and communication of scientific production, investment on preparation of high level human resources (as professors and researchers) and promotion of international and scientific information.” (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior 2009).

All these organizations agree that misconduct in scientific research manifests itself fundamentally via three practices condemned by researchers: fabricating research data; falsifying results; and authorship fraud, that is, the undue appropriation of another author's content without the due attribution of credit. Furthermore, condemnable practices such as redundancy in publications (self-plagiarism) are considered in the same category as the sloppy handling of research subjects or piracy.

Focusing more closely on the object of this study, plagiarism can be defined as "signing or otherwise presenting oneself as the author of an artistic or scholarly work belonging to another person. To imitate someone else's work" (Ferreira 1986, p. 249). According to Brazil's law concerning the rights of an author (Law, 9610/98), the practice, which is considered forgery, is characterized as the unauthorized reproduction of a work, meriting the penalties outlined in Article 184 of the Penal Code. However, in the Brazilian academic environment, the problem is understood to be academic misconduct or dishonest intellectual practice, which can manifest itself through self-plagiarism or the purchase of academic works produced by others. These modalities of the occurrence of plagiarism are extrapolated from the juridical notion related to plagiarism by not including the characteristic of using someone else's work in an incorrect manner. Self-plagiarism, for instance, is not addressed by the law because it is a situation in which authors themselves reuse their own works; i.e., there is no offense in relation to others' rights. Therefore, it falls beyond legal issues and is essentially considered essentially an ethical problem since a redundant publication (self-plagiarism) "disrupts scientific publishing by over-emphasizing results, increasing journal publication costs, and artificially inflating journal impact, among other consequences" (Eaton and Crossman 2018).

Table 1 presents the most common types of plagiarism in the international academic context according to the literature and the practices in some teaching institutions. It is interesting that types 1 and 3 describe some forms of plagiarism that can be considered misappropriation a legislative standpoint. However, types 4 and 7 are kinds of plagiarism that do not harm authorship rights but are considered scientific misconduct and, consequently, ethically unacceptable practices.

Despite the increasing interest in academic plagiarism on the part of institutions involved in teaching and research, the subject can still be considered to have arisen relatively recent in Brazil, and little original work on the topic has been produced; however, it is currently being increasingly studied in the academic community (Demo 2011; Krokoscz 2011; 2012a, b). For example, in a search for the keywords "plagiarism" and "plagio"<sup>2</sup> in the SPEL platform, among 48 thousand documents, only two publications on the topic were found: Veludo-de-Oliveira et al. (2014) and Costa et al. (2017). Nevertheless, beyond these, through other platforms, Brazilian discussions related to business plagiarism can also be found in Andrade (2011), Barbastefano and Souza (2007), Barros and Duque (2015); Fachini and Domingues (2008), Innarelli (2011), Valente et al. (2010), Neumann (2018), Silva and Domingues (2008), and Tomazelli (2011).

In summary, although these studies contribute to deepening the subject, have been only incipient discussions over the last 8 years. Nevertheless, in an article published in the Revista da Associação dos Docentes da USP (Journal of the Association of Professors of the University of São Paulo), researchers Luiz Henrique Lopes dos Santos and Erney Plessmann de Camargo, faculty members at the University of São Paulo University (USP), recognized that the concerns regarding plagiarism are becoming increasingly

**Table 1** Types and descriptions of plagiarism

Types of Plagiarism	Adaptation in Portuguese	Description
1 Word for Word Plagiarism	Plágio direto	Verbatim copy of an original text without the use of quotation marks or margin indentation to indicate a quotation or the identification of the source by means of a reference.
2 Paraphrasing Plagiarism	Plágio Indireto	Reproduction of the ideas of an original source using different words, but without identifying the original's location.
3 Mosaic Plagiarism	Plágio Mosaico	Unidentified reproduction of fragments of different sources that are mixed with words, conjunctions, and prepositions so that the text makes sense.
4 Collusion Plagiarism	Plágio Consentido	Presentation of works as being one's own that were in fact authored by others (friends, colleagues, or relatives, among others) or purchased.
5 Apt Phrase Plagiarism	Plágio de Chavão	Reproduction of expressions, truisms or phrases provoking the effect elaborated by other authors.
6 Plagiarism of Secondary Sources	Plágio de Fontes	Reproduction of bibliographic references encountered in other sources that were never consulted directly by the citing author.
7 Self-plagiarism	Autoplágio	Reproduction of one's own works previously presented in other circumstances without identifying this fact to obtain one or more advantages, such as being cited in the work of others.

Sources: Badge and Scott 2009; Concordia University 2019; Garcia 2013; Georgetown University (2019); Harris 2001; Loui 2002; Martin 1994; Massachusetts Institute of Technology 2018; Roig 2015; Stanford University 2019; Starovoytova 2017; University of Cambridge 2019a, b; Universiteit Ghent 2019; The University of Hong Kong 2019; University of Cape Town 2019; University of Pretoria 2019; and University of Oxford 2019

important and that knowledge about the subject is scant. Luiz Menna-Barreto, another researcher that was interviewed, considered that the climate concerning “productivism” (measurable professorial productivity), which has characterized the academic scenario in recent years, could be a factor related to this (Biondi 2011). In addition, an article published in *Nature* showed that, among researchers, plagiarism was third among the practices of academic dishonesty in the judgment of peer reviewers (Koocher and Keith-Spiegel 2010). Indeed, the problem has attained international importance and has been verified as one of the reasons for the increase in retracted articles (Van Nordean 2011, p. 27). This study revealed that cases of retractions occurring among the articles published in the *Web of Science*, as well as in *PubMed*, 44% correspond to problems of scientific misconduct, including plagiarism and self-plagiarism; and the other 56% were problems associated with research errors and nonreproducible results, among other problems. Carver et al. (2011) also emphasize that plagiarism has significantly contributed to the increase in the number of retractions; and for Masic (2014, p. 145), “the biggest reason for retractions in the last thirty years is plagiarism and self-plagiarism.”

According to the website Retraction Watch, launched in 2010 with the aim of monitoring the indices of the occurrence and motives of the retraction of scientific articles in publications, in the field of life sciences, in 2013, there were 203 retractions related to plagiarism involving text, image, data or articles. In 2018, the database of the website catalogued 182 retractions for the same reasons (Retraction Watch 2019).

<sup>2</sup>“Plágio” is the term in Portuguese that corresponds to “plagiarism” in English. Since the platform contains articles principally in Portuguese and some others also in English, the search was done in both languages using the two key words.

Another study found further evidence of the occurrence of plagiarism in scientific publications in the field of biomedicine found in PubMed for the period from 2008 to 2012. The study found that 35% of the retractions could be attributed to plagiarism or self-plagiarism in the sample studied. In addition, the study identified the 20 countries with the greatest numbers of works retracted as a result of plagiarism and self-plagiarism. Brazil was included among them, with 44.4% of the articles by its authors being retracted due to the same motives (Amos 2014).

Although the proportion, in percentages, of works retracted is low, it must be remembered that there is no standard minimum acceptable index for such practices in the academic world.

In addition, it is still unclear whether the numbers of retractions that have been verified are related to an increase in the frequency of plagiarism-related practices in recent years or result from increasing the identification of such instances because of the rigor in editing and whistle-blowing processes, internet visibility and the use of technological resources such as software that detects textual similarities.

Considering this scenario, the main objective of this study was to analyze the possible occurrence of plagiarism and self-plagiarism in a nonrandom sample of articles published in learned journals in the field of administration indexed in the Scientific Periodicals Electronic Library (SPELL) information database, a repository of scholarly studies that offers free access to technical and scientific information in the area of business ([www.spell.org.br](http://www.spell.org.br)). In addition, the study sought to compare the results obtained with those reported in a similar study in 2013 and to analyze the guidelines that each of the journals composing the sample provided to authors regarding plagiarism.

The study is justified as a consequence of the increasing attention given to the problem of plagiarism by important Brazilian institutions concerned with research, such as the Coordination for the Improvement of Higher Education Graduates (CAPES), the National Council of Scientific and Technological Development (CNPq) and the Foundation for the Support to Research of the State of São Paulo (FAPESP), requiring that this issue be addressed.

The positions held by these institutions regarding the need to disseminate guidelines and take action to address plagiarism and other types of scientific misconduct was first put forth in 2011 when CAPES issued a document containing recommendations for all public and private universities in Brazil to adopt procedures to address academic plagiarism (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior 2011). It is important to note that the initiative taken by CAPES occurred due to a request by the Brazilian Bar Association (OAB) in the state of Ceará that recommended, *inter alia*, that all institutions of higher education in Brazil should “use software to search for similarity in the Internet [...] , adopt policies of awareness and information about intellectual property, aiming at suppressing plagiarism in the academic community” (OAB 2010).<sup>3</sup> Since then, some measures have been implemented to address plagiarism. For instance, since 2013, FAPESP, one of the major public agencies financing research in the state of São Paulo, has kept a “shame page” on its institutional website on which it publishes a list of researchers and projects having revealed scientific misconduct (Fundação de

<sup>3</sup>Free translation of the following passage: “utilizem softwares de busca de similaridade na internet [...] adotem políticas de conscientização e informação sobre a propriedade intelectual, visando coibir o plágio na comunidade acadêmica” (OAB 2010).

Amparo à Pesquisa do Estado de São Paulo 2014). In 2017, FAPESP started to refuse projects from research institutions that did not have an office of academic integrity (Alves 2017).

In addition, despite repercussions from reports of recent cases of plagiarism by Brazilian researchers uncovered in learned journals in the national media, the reduced number of studies conducted and submitted for publication by Brazilian authors has been concentrated on higher education. However, it is known that some of the major obstacles related to the rejection of scholarly articles submitted for publication are the problems of a methodological nature or may be related to a lack of theoretical depth or difficulties in referencing (i.e., the correct identification of the sources consulted), among other issues (Job et al. 2009).

Nevertheless, it is important to learn which measures related to the verification and prevention of plagiarism have been adopted by scientific journal editors in relation to the articles submitted for publication. Likewise, there are no diagnostic evaluations that can provide evidence of the extent to which the submissions of researchers do or do not possess plagiarized sections. Obviously, the scope of this study excludes “exposing” authors or learned journals. It seeks to contribute to the identification and discussion of the question insufficiently addressed in the Brazilian scientific literature. Consequently, it is hoped that the findings of this investigation will contribute to improving the procedures for elaborating and submitting research reports for publication.

## Methodology

The articles analyzed in the study were obtained from the SPELL database, a repository of scholarly articles in the field of business. The main reason to choose this database for the analysis is its free access to full-text technical and scientific information.

In 2013, using the bibliographic search for published articles cited in the SPELL database, 546 articles published in 47 different journals were identified. After 5 years, a new survey of articles published from 08/2013 to 08/2018 was performed. In this period, 121 journals were identified, and three of them were disregarded because they were no longer published (*Desafio: Revista de Economia e Administração* (published until 2010 and then continued as *Desafio Online*) (ISSN 1678–1821); *RAC-Eletrônica* (ISSN 1981–5700), published until January 2009; and *Revista de Estudos de Administração – Rea* (ISSN 1518–3645), published until December 2009), resulting in the identification of 28,259 published articles.

A random sample corresponding to one article from each journal in both periods was selected. This was done by means of attributing an identification number (ID) to each article in the database. The ID of the first article and that of the last one published were verified, and a number was drawn using the website [www.random.org](http://www.random.org). After the number was drawn, the selected article was downloaded and input to the plagiarism detection software iThenticate®. All the articles selected and input to the plagiarism detector were then classified in a control spreadsheet, consisting of the following information: the Qualis/Capes identifier, article title, DOI or permanent link, authors, and publication date.

The articles drawn were input to iThenticate® software in the two phases of the research. The software operates by creating a search for similarities between the submitted text and texts that have been published on the internet, including in publications

with restricted access, such as in the case of publishers (Elsevier, Springer, Nature, Taylor & Francis, and Wiley-Blackwell), indexers, and databases (EBSCOHost; Emerald Journals; Proquest; Pub-Med/Medline, and Cengage Learning), among other scholarly journals, and its own software database, thus consolidating a repertory for comparison with some 142 million documents (IThenticate® 2019).

### **Findings and discussion**

Initially, the analysis was conducted using the policies and instructions for authors and/or submission manuals provided by the journals to authors interested in submitting their work for publication. The intention was to verify the existence or lack of guidelines related to plagiarism or self-plagiarism in publications seeking to clarify these issues for authors beforehand. This guidance is part of the flowchart concerning what to do in cases of the suspicion of plagiarism and redundancy in scholarly manuscripts that can be found in the document elaborated by the Committee On Publication Ethics (COPE) and that is aimed at editors of scholarly journals. The text notes that “the instructions to authors should include a definition of plagiarism and state the journal’s policy on it” (Committee On Publication Ethics 2016; 2018).

In the analysis conducted in 2013 in which data were analyzed but not published, it was found that only one journal (2%) among the 47 analyzed journals mentioned the word “plagiarism” in its policies, although the majority of the directives required guarantees on the part of authors that no type of violation of authors’ rights were contained in the submitted work. However, we also observed that one of the publications studied cited a directive related to redundancy (self-plagiarism) in its submission guidelines, although it utilized a different term to refer to the subject: overlapping of publication (Ebape 2014).

According to Eaton and Crossman (2018), self-plagiarism is a sub-category of plagiarism and is considered to be complex and polemical. The study and debate of self-plagiarism have received growing interest from editors with the objective to establish clear and specific guidelines about the issue to authors during the process of submitting scientific work in social science areas. One of the topics that has demanded attention is defining the percentage of a previously written text that an author can reuse, considering that some parts of the work, such as the description of the methods, do not usually vary substantially, which justifies their reproduction. Several authors have considered that up to 30% of a previous text could be reused, but this does not serve as a fixed rule since it depends on the area of study and the guidelines of each periodical (Bird and Sivilotti 2008; Roig 2015; Samuelson 1994).

Usually, the publication of two articles with considerable overlap is not acceptable, even if they are published in different academic periodicals. Various publications that have a unique data collection should only be permitted under the following guidelines: (a) if it is impossible to write a single article within the maximum number of 30 pages, and (b) if the articles present distinct approaches and purposes. The editor should be advised of a submission when the article has, in some form, already been published online.

Periodicals were also found that established directives in relation to the originality of the work, whether in Brazil or abroad, clarifying that they considered work that had been presented in preliminary versions in scholarly events acceptable for publication.

Some journals encouraged and authorized authors to publish and disseminate their work in online vehicles such as institutional repositories or on personal pages, considering that this could have a positive effect on the visibility and increased probability of the work being cited. For example, “Authors have permission and are encouraged to publish and disseminate their work online (e.g. in institutional repositories or on their own personal pages) at any time before or during the editorial process, since this could generate productive alterations, as well as increase the impact and the citing of the published work [...]” (Revista de Gestão, Finanças e Contabilidade 2014).

In relation to what was learned about plagiarism and self-plagiarism in the analyses conducted in 2013, it was determined that there was word-for-word plagiarism (copying verbatim from a source without any acknowledgement) in 31 published articles (65.9%), and no relevant similarities with other publications were encountered in 16 articles (34.1%).

Table 2 presents the list of the periodicals analyzed with the numbers of articles that were published by the time the similarity analysis was conducted. In this stage of the investigation, we only identified whether there were instances of plagiarism and self-plagiarism.

The column “Qualis” refers to a scale established by the Brazilian Ministry of Education that is used to classify the level of qualification of periodicals that publish scientific work in postgraduate programs in Brazil. During the time of this study, the evaluation strata adopted by this program varied from the highest quality, A1, to A2, B1, B2, B3, B4, B5, and C (zero). (BRASIL 2016). As can be seen in the data in Table 2, it is possible to notice that there are occurrences of plagiarism/self-plagiarism in both more qualified (A2) and less qualified periodicals (B5).

The types of plagiarism mostly found were those copying the sentences of a source or paragraphs of other sources verbatim without the use of quotation marks or indenting the text and lacking any indication of the original document or source. Furthermore, we discovered cases of self-plagiarism (redundancy), that is, works by the same author that had already been published in other periodicals or event annals.

The present work did not analyze the extension of occurrences of self-plagiarism. The observations conducted identified the following: the copy of entire articles the same authors had previously presented in scientific events and published in conference proceedings, and parts of texts published in other studies and reused without proper citation.

The software did not allow us to identify the occurrence of indirect plagiarism (paraphrasing; i.e., when the original source is rewritten but no source is credited through an indirect quote (indication of authorship within the text), and no reference given to the source in the form of detailed identification at the end of the work. The use of a reference to the source and quoting the author are two essential conditions for avoiding the inappropriate use of a reproduced source.

In the 2018 analyses, the website of each of the 118 journals selected for this research and indexed in the database was visited. Initially, we identified the existence of directions or guidelines related to ethics or good research practices on the principal page. Then, a second step was searching for information connected to these topics in the section “about the journal.” In these sections, we searched for “plágio or plagiarism.” If this

**Table 2** Journals indexed in the SPEL L from January to June 2013

ORDER	JOURNAL	QUALIS	PAPERS 2013	PLAGIARISM	SELF- PLAGIARISM
1	BRAZILIAN ADMINISTRATION REVIEW	A2	12	YES	NO
2	REVISTA DE ADMINISTRAÇÃO CONTEMPORÂNEA	A2	18	NO	NO
3	RAP - REVISTA DE ADMINISTRAÇÃO PÚBLICA	A2	33	YES	YES
4	RAE - REVISTA DE ADMINISTRAÇÃO DE EMPRESAS	A2	19	NO	NO
5	ADMINISTRAÇÃO PÚBLICA E GESTÃO SOCIAL	B3	10	YES	NO
6	REVISTA DE ADMINISTRAÇÃO MACKENZIE	B1	25	YES	NO
7	BASE - REVISTA DE ADMINISTRAÇÃO E CONTABILIDADE DA UNISINOS	B2	13	NO	YES
8	ORGANIZAÇÕES & SOCIEDADE	A2	8	NO	NO
9	RAU USP - REVISTA DE ADMINISTRAÇÃO	A2	24	YES	YES
10	BRAZILIAN BUSINESS REVIEW	A2	11	YES	NO
11	CADERNOS EBAPE.BR	B3	18	YES	NO
12	READ. REVISTA ELETRÔNICA DE ADMINISTRAÇÃO	B1	10	YES	NO
13	DESENVOLVIMENTO EM QUESTÃO	B1	8	YES	NO
14	INTERNEXT - REVISTA ELETRÔNICA DE NEGÓCIOS INTERNACIONAIS DA ESPM	B5	5	YES	NO
15	REVISTA DE ADMINISTRAÇÃO E INOVAÇÃO	B1	24	YES	NO
16	REVISTA DE NEGÓCIOS	B3	11	NO	NO
17	REVISTA DE CIÊNCIAS DA ADMINISTRAÇÃO	B1	15	YES	NO
18	REVISTA ELETRÔNICA DE CIÊNCIAS ADMINISTRATIVA	B2	8	NO	NO
19	REVISTA GESTÃO & TECNOLOGIA	B2	10	YES	YES
20	JOURNAL OF INFORMATION SYSTEMS AND TECHNOLOGY MANAGEMENT	B1	9	NO	NO
21	REVISTA BRASILEIRA DE GESTÃO DE NEGÓCIOS	B1	15	YES	YES
22	CONTABILIDADE, GESTÃO E GOVERNANÇAS	B2	8	YES	NO
23	REVISTA DE ADMINISTRAÇÃO DA UNIMEP	B1	8	YES	NO
24	GESTÃO & REGIONALIDADE	B1	7	NO	NO
25	REVISTA BRASILEIRA DE MARKETING	B2	10	NO	NO
26	REVISTA ALCANCE	B2	13	NO	NO
27	PENSAR CONTÁBIL	B3	6	NO	NO
28	REVISTA PRETEXTO	B2	7	NO	NO
29	REVISTA BRASILEIRA DE FINANÇAS	B1	10	YES	NO
30	REVISTA BRASILEIRA DE INOVAÇÃO	B2	8	NO	NO
31	REVISTA IBERO-AMERICANA DE ESTRATÉGIA	B2	10	NO	NO
32	REVISTA DE GESTÃO E PROJETOS	B3	9	YES	NO
33	REVISTA DA MICRO E PEQUENA EMPRESA	B3	7	YES	NO
34	DESAFIO ONLINE	B5	16	YES	NO
35	REVISTA DE GESTÃO	B2	16	YES	NO
36	CADERNO DE GESTÃO PÚBLICA E CIDADANIA	B3	4	NO	NO
37	PERSPECTIVAS EM GESTÃO & CONHECIMENTO	B3	10	YES	NO
38	REVISTA DE ADMINISTRAÇÃO DA UFSM	B2	10	YES	NO
39	REVISTA DE GESTÃO & PLANEJAMENTO	B2	10	NO	NO
40	JOURNAL OF OPERATIONS AND SUPPLY CHAIN MANAGEMENT	B3	8	NO	YES
41	REA - REVISTA DE ECONOMIA E ADMINISTRAÇÃO	B3	12	NO	NO
42	REVISTA ORGANIZAÇÕES EM CONTEXTO	B4	14	YES	NO
43	GESTÃO E SOCIEDADE	B3	6	YES	NO
44	REVISTA ELETRÔNICA DE SISTEMAS DE INFORMAÇÃO	B3	7	YES	NO
45	FUTURE STUDIES RESEARCH JOURNAL	B3	7	YES	NO
46	ORGANIZAÇÕES RURAIS E AGROINDUSTRIAS	B1	9	YES	NO
47	REVISTA ELETRÔNICA DE GESTÃO ORGANIZACIONAL	B3	8	YES	YES

Source: Prepared by the author using information from SPEL and from iThenticate®

information was not encountered on these pages, analysis of the sections containing information, directives or instructions to authors followed.

It was found that on the websites of the 118 periodicals analyzed, 69 of them (58%) have on some page or document observations and instructions related to plagiarism and self-plagiarism, which corresponds to a significant increase in relation to what was observed in the study conducted in 2013. However, it was ascertained that some journals, such as Revista de Gestão – REGE (ISSN 2177–8736), recommended that authors follow the directives of scientific integrity such as those established by COPE, though no description of those directives concerning plagiarism was offered. Other journals, such as the International Journal of Professional Business Review (e-ISSN: 2525–3654), opted for a single page concerning good conduct or policies regarding ethics in research, clearly stating the following: “Originality and Plagiarism: The authors should insure that they have written entirely original works, and if the authors have used the work and/or words of others that this has been appropriately cited or quoted. Plagiarism in all its forms constitutes unethical publishing behavior and is unacceptable.” Still, other journals, such as the Revista de Administração IMED – RAIMED (ISSN 2237–7956), Revista de Ciências da Administração – RCA (ISSN 1516–3865) and the Revista Pensamento Contemporâneo em Administração (ISSN 1982–2596), provided a link to the document “Boas Práticas da Publicação Científica: um manual para autores, revisores, editores e integrantes de corpos editoriais” (Good Practices of Scientific Publishing: a handbook for authors, reviewers, editors and members of editorial councils) on their websites (Associação Nacional de Pesquisa e Pós-Graduação e Pesquisa em Administração (ANPAD) 2017).

To clarify the interpretation of the reports of the software used, it is important that sections of text with similarities are highlighted in color. Here, each color corresponds to a different source, and there is a superscript number in each section that permits direct access to the source with similar text. This in turn allows more precise analysis, such as the examination of whether the text comes from the same author, if it was published before or after the manuscript under examination, the type of document, and other information.

From this type of analysis, by including additional documents, it is possible to affirm the occurrence of plagiarism or self-plagiarism. It is for this reason that the software detection service is offered as a verifier of similarities and not of plagiarism because not every similarity corresponds to an author's fraud. The following are three examples extracted from similarity reports generated by the iThenticate® software. The examples were classified in three categories: low, medium and high incidences of plagiarism. The parameter used for each category represents the portion of paragraphs copied in relation to the manuscript.

Although there are no defined guidelines establishing the level of seriousness of plagiarism regarding the amount reproduced, in the guidelines provided by Committee On Publication Ethics (2018) about “What to do if you suspect plagiarism”, it is recommended that one consider reporting it in the following cases: “a) Unattributed use of large portions of text and/or data; b) Minor copying of short phrases only (e.g. in discussion of research paper from non-native language speaker). No misattribution of data.” When large portions of text are identified, COPE recommends that editors contact the corresponding author and document the evidence of plagiarism. In the case of

Several theoretical approaches may be useful to study the different dimensions of PPP and their impacts on costs and managerial innovations that might lead to productive efficiency in prison services. One obvious and important dimension to consider is the distribution of property rights. One of the most prominent contributions to an understanding of the public versus private dilemma is the seminal paper of Hart, Shleifer and Vishny (1997), which focuses on the comparison between public and private participation in the provision of prison services. The authors adopted an incomplete contract view, where the private operator's residual control rights would reduce production costs at the expense of the quality of the services provided. In order to improve quality, the private operator must incur both the costs of quality provision and the costs of influencing the government to accept changes (the government must agree to pay for improvements through a Nash bargaining process). Consequently, the private operators have incentives to under-provide quality and to over-reduce costs (Hart *et al.*, 1997). Therefore, a public mode of provision is preferred when the adverse effects of cost reductions have a significant impact on quality levels or where there is limited room for quality innovations by private actors. The impact of the distribution of property rights is linked to the incompleteness of contractual agreements between the government and the private operators, which generate residual rights of control over the assets (Hart, 2003). Since it would be very difficult to contractually delineate certain tasks, such as the use of force to be employed by the private operator or the exact capabilities of the workers, Hart *et al.* (1997), are skeptical about privately run prisons because of the important adverse effect reduced cost strategies have on quality (*i.e.* under-skilled workers would lead to a higher rate of escapes).

**Fig. 1** Low incidence/reviewed with QUALIS A2/2013. Source: iThenticate®

a satisfactory reply addressing an honest error, unclear journal instructions or a very junior researcher, the editor can reject the manuscript or ask for a revision in the hope of obtaining improvements. Conversely, if the author's explanation is unsatisfactory, the manuscript must be rejected without the option of requesting a revision.

The first case (Fig. 1) was considered of "low incidence" because the similarities without attribution of credit appear only sporadically in some passages of the manuscript.

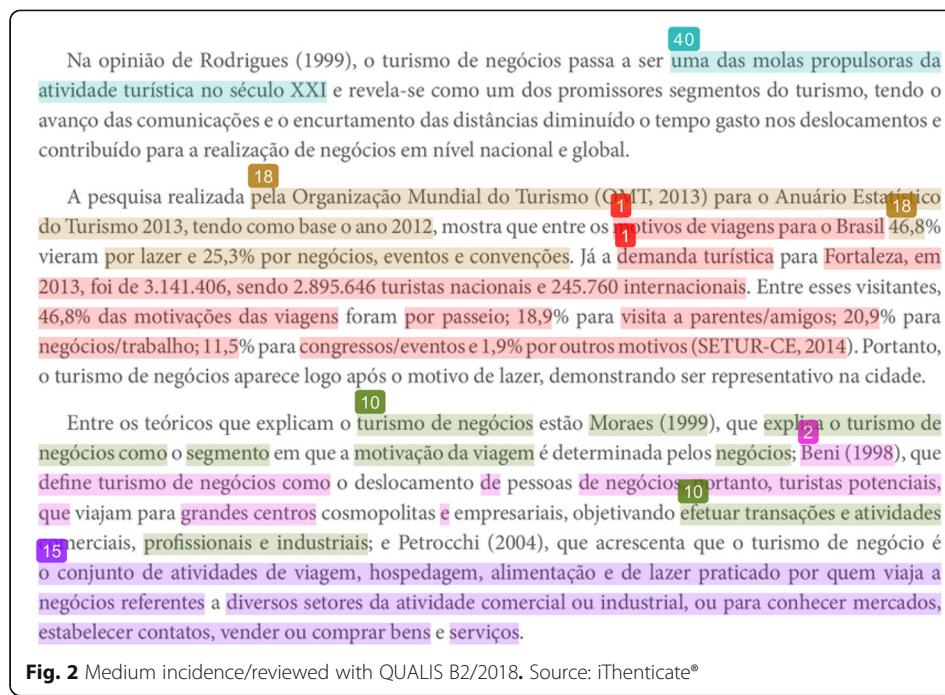
Figure 2 presents a case of "medium incidence" because the text reveals sections reproduced inadequately in different parts of the manuscript, but only on some pages of the entire manuscript.

The third example (Fig. 3) was considered a case of "high incidence" because it is possible to observe textual reproductions without the attribution of credit in different paragraphs on various pages, as well as differences in the provenance of the original sources copied (different colors).

A repeated observation refers to the quantity of identical terms in the same sequence of a sentence, which could indicate plagiarism. It is important to mention that the identification of patterns of similarity by software may not indicate plagiarism if the reproduced texts were correctly quoted and referenced. Therefore, it is not possible to categorically affirm that there is a predetermined amount of identical words between texts that determines plagiarism since this conclusion depends on analysis.

Some authors support the criterion of beginning a sequence with seven identical words as a parameter for judging the sequence as a verbatim copy (Saraiva and Carrieri 2009). This principle was adopted considering that "the chances of a human creating a sentence identical to another already created diminishes exponentially in relation to the number of words the sentence contains."<sup>4</sup> The authors demonstrated this evidence by conducting the following experiment: they used the sentence between quotation marks to search for similarity on Google ([www.google.com.br](http://www.google.com.br)) with the equivalent terms in Portuguese. The results found are presented in Table 3.

<sup>4</sup>Free translation of the following quote: "chance de um ser humano criar uma frase idêntica a outra já criada diminui exponencialmente com o número de palavras que a frase contém"



**Table 3** Parameter for judging whether a phrase is a verbatim copy

Sentence fragment	Number of pages found with the given fragment found by Google
"A chance de um ser humano criar" <sup>a</sup>	0
"A chance de um ser humano"	7
"A chance de um ser"	35
"A chance de um"	19,3000
"A chance de"	956,000
"A chance"	259,000,000

Source: Saraiva and Carrieri (2009, p. 162)

<sup>a</sup>Since the search was conducted in Portuguese, the words in Portuguese were kept according to the original source. The sentence refers to the first part of the quote: "the chances of a human creating..."

This experiment makes sense from the perspective of "the 'uniqueness of utterance principle', supported in linguistics, which states that when we produce a text (spoken or written) we make lexico-grammatical choices that create a sequence which is not repeated identically in other situations." (Abreu 2016, p. 5). Also, Wager (2014) have summarized some ideas regarding the extent of copy and attribution of plagiarism:

The most blatant forms of plagiarism involve the copying of entire papers or chapters which are republished as the work of the plagiarist. Such cases usually involve not only plagiarism but also breach of copyright. Whole articles or chapters may also be plagiarized in translation." (Wager 2014, p. 35) Nevertheless, these criteria cannot be considered inflexible because, first, it is acceptable to literally reproduce any quantity of text as long as the source is cited; and, second, in the specific case of plagiarism called "apt phrase," even fewer than six words can characterize plagiarism (Wager, 2014).

Nevertheless, these criteria cannot be considered inflexible because, first, it is acceptable to literally reproduce any quantity of text as long as the source is cited; and, second, in the specific case of plagiarism called "apt phrase," even two words can characterize plagiarism. That is the case of expressions created by authors to designate specific theoretical discoveries or statements in their area of research, such as the following: "I think, therefore I exist" (René Descartes), "somatic marker" (Antonio Damásio), and "knowledge conversion" (Ikugiro Nonaka & Hirotaka Takeuchi). However, according to Committee On Publication Ethics (2009), rather than a retraction, in the case of small plagiarized parts of a text, the editor may consider, with respect to the readers and the plagiarized author, that the text be corrected.

In the analyses conducted in 2018, it was found that similarities (plagiarism and self-plagiarism) occurred in 52 articles (44%), and there was no relevant evidence of plagiarism or self-plagiarism found in 66 (56%) manuscripts (Table 4).

Comparing the results of the similarity reports in the two periods studied (2013 versus 2018), it is possible to confirm a reduction of 21.9% in the index of the occurrence of plagiarism and self-plagiarism. This is a relevant volume for a five-year period, although 44% is an elevated index for fraud by authors when taking into account the parameters appearing in the literature (Amos 2014). When weighing the fact that the SPELL database included a total of 28,259 articles published in the 2013–2018 period,

**Table 4** Journals indexed in the SPEL L from August 2013 to August 2018 with manuscripts containing plagiarism

ORDER	JOURNAL	QUALIS	PAPERS 2013 - 2018	PLAGIARISM	INCIDENCE	SELF- PLAGIARISM
1	Administração: Ensino e Pesquisa - RAEP(ISSN 2177-6083)	B2	121	NO		NO
2	Administração Pública e Gestão Social - APGS(ISSN 2175-5787)	B1	146	NO		NO
3	Advances in Scientific and Applied Accounting - ASAA(ISSN 1983-8611)	B1	93	YES	HIGH	NO
4	Amazônia, Organizações e Sustentabilidade - AOS(ISSN 2238-8893)	B3	89	YES	LOW	NO
5	BASE - Revista de Administração e Contabilidade da UNISINOS(ISSN 1984-8196)	B1	130	NO		NO
6	Brazilian Administration Review - BAR(ISSN 1807-7692)	A2	128	NO		NO
7	Revista Contabilidade Gestão e Governança	B1	180	YES	LOW	YES
8	Brazilian Business Review - BBR(ISSN 1808-2386)	B4	67	YES	HIGH	NO
9	Cadernos EBAPE.BR - CEBAPE(ISSN 1679-3951)	A2	265	NO		NO
10	Cadernos Gestão Pública e Cidadania - CGPC(ISSN 2236-5710)	B1	86	NO		NO
11	Caderno Virtual de Turismo(ISSN 1677-6976)	B1	154	YES	HIGH	NO
12	Contabilidade, Gestão e Governança - CGG(ISSN 1984-3925)	B1	127	NO		NO
13	Contabilidade Vista & Revista - CVT(ISSN 0103-734X)	A2	105	NO		NO
14	Contexto - Revista do Programa de Pós-Graduação em Controladoria e Contabilidade da UFRGS(ISSN 2175-8751)	B4	95	NO		NO
15	Contextus - Revista Contemporânea de Economia e Gestão(ISSN 2178-9258)	B1	119	NO		NO
16	Desafio Online(ISSN 2317-949X)	B3	118	YES	LOW	NO
17	Desenvolvimento em Questão(ISSN 1678-4855)	B2	297	NO		NO
18	Enfoque Reflexão Contábil(ISSN 1984-882X)	B1	131	NO		NO
19	Farol - Revista de Estudos Organizacionais e Sociedade(ISSN 2358-6311)	B4	151	NO		NO
20	Future Studies Research Journal: Trends and Strategies	B3	102	YES	LOW	NO
21	Gestão & Conexões(ISSN 2317-5087)	B4	3554	YES	HIGH	NO
22	Gestão e Sociedade - GES(ISSN 1980-5756)	B3	126	YES	LOW	NO
23	Gestão & Regionalidade(ISSN 2176-5308)	B2	3568	YES	HIGH	YES
24	GESTÃO.Org - Revista Eletrônica de Gestão Organizacional	B3	132	NO		NO
25	Interface - Revista do Centro de Ciências Sociais Aplicadas(ISSN 1806-9037)	B3	98	YES	MEDIUM	NO
26	International Journal of Innovation - IJI(ISSN 2318-9975)	B3	68	NO		NO
27	International Journal of Professional Business Review - JPBRReview(ISSN 2545-3654)	B5	20	NO		YES
28	InternexT - Revista Eletrônica de Negócios Internacionais da ESPM(ISSN 1980-4865)	B3	87	YES	MEDIUM	YES
29	Journal of Information Systems and Technology Management - JISTEM(ISSN 1807-1775)	B1	140	YES	HIGH	NO
30	Journal of Operations and Supply Chain Management - JOSCM(ISSN 1984-3046)	B3	65	NO		NO
31	Marketing & Tourism Review(ISSN 2525-8176)	B5	322	YES	MEDIUM	NO
32	NAVUS - Revista de Gestão e Tecnologia(ISSN 2237-4558)	B3	194	YES	LOW	NO

**Table 4** Journals indexed in the SPEL L from August 2013 to August 2018 with manuscripts containing plagiarism (*Continued*)

ORDER	JOURNAL	QUALIS	PAPERS 2013 - 2018	PLAGIARISM	INCIDENCE	SELF- PLAGIARISM
33	Organizações Rurais & Agroindustriais(ISSN 1517-3879)	B2	134	YES	LOW	NO
34	Organizações & Sociedade - O&S(ISSN 1984-9230)	A2	657	NO		NO
35	Pensamento & Realidade(ISSN 2237-4418)	B3	354	NO		NO
36	Pensar Contábil(ISSN 1519-0412)	B2	95	YES	MEDIUM	NO
37	Perspectivas em Gestão & Conhecimento - PG&C(ISSN 2236-417X)	B3	217	NO		NO
38	PODIUM Sport, Leisure and Tourism Review(ISSN 2316-932X)	B3	125	NO		NO
39	RACE: Revista de Administração, Contabilidade e Economia(ISSN 2179-4936)	B3	244	NO		NO
40	RAUUnP - Revista Eletrônica do Mestrado Profissional em Administração da Universidade Potiguar(ISSN 1984-4204)	B3	77	NO		NO
41	REAd. Revista Eletrônica de Administração(ISSN 1413-2311)	B1	164	NO		NO
42	Reuna(ISSN 2179-8834)	B2	128	NO		NO
43	Reunir: Revista de Administração, Contabilidade e Sustentabilidade(ISSN 2239-3667)	B2	126	NO		NO
44	Revista Acadêmica do Observatório de Inovação do Turismo - OIT(ISSN 1980-6965)	B2	47	NO		NO
45	Revista Administração em Diálogo - RAD(ISSN 2178-0080)	B3	133	YES	HIGH	NO
46	Revista ADM.MADE(ISSN 1518-9929)	B2	84	NO		NO
47	Revista Alcance(ISSN 1983-716X)	B2	171	NO		NO
48	Revista Brasileira de Estratégia - REBRAE(ISSN 1983-8484)	B4	115	NO		NO
49	Revista Brasileira de Finanças - RBFin(ISSN 1679-0731)	B1	98	YES	LOW	NO
50	Revista Brasileira de Gestão de Negócios - RBGN(ISSN 1806-4892)	A2	167	NO		YES
51	Revista Brasileira de Gestão e Inovação(ISSN 2319-0639)	B3	115	NO		YES
52	Revista Brasileira de Inovação - RBI(ISSN 1677-2504)	B1	99	NO		NO
53	Revista Brasileira de Marketing - REMark(ISSN 2177-5184)	B2	223	NO		NO
54	Revista Brasileira de Pesquisa em Turismo - RBTur(ISSN 1982-6125)	B1	146	NO		NO
55	Revista Capital Científico - Eletrônica - RCCe(ISSN 1679-1991)	B3	171	NO		NO
56	Revista Catarinense da Ciência Contábil - RCCC(ISSN 1808-3781)	B2	108	YES	HIGH	NO
57	Revista Ciências Administrativas - RCA(ISSN 1414-0896)	B3	127	NO		NO
58	Revista Contabilidade & Finanças - USP - RC&F(ISSN 1808-057X)	A2	155	NO		NO
59	Revista Contemporânea de Contabilidade(ISSN 2175-8069)	B2	114	NO		NO
60	Revista da Micro e Pequena Empresa - RMPE(ISSN 1982-2537)	B3	112	NO		NO
61	Revista de Administração - RAUSP(ISSN 0080-2107)	A2	3161	NO		NO
62	Revista de Administração, Contabilidade e Economia da FUNDACE - RACEF(ISSN 2178-7638)	B3	100	NO		NO
63	Revista de Administração Contemporânea -	A2	280	NO		NO

**Table 4** Journals indexed in the SPEL L from August 2013 to August 2018 with manuscripts containing plagiarism (*Continued*)

ORDER	JOURNAL	QUALIS	PAPERS 2013 - 2018	PLAGIARISM	INCIDENCE	SELF- PLAGIARISM
	RAC(ISSN 1982-7849)					
64	Revista de Administração da UFSM - ReA UFSM(ISSN 1983-4659)	B2	307	YES	LOW	NO
65	Revista de Administração da Unimep - RAU(ISSN 1679-5350)	B2	141	YES	HIGH	NO
66	Revista de Administração de Empresas - RAE(ISSN 0034-7590)	A2	342	NO		NO
67	Revista de Administração e Inovação - RAI(ISSN 1809-2039)	B1	223	NO		NO
68	Revista de Administração FACES Journal - FACES(ISSN 1984-6975)	B2	152	NO		NO
69	Revista de Administração Hospitalar e Inovação em Saúde - RAHIS(ISSN 1983-5205)	B3	140	YES	HIGH	NO
70	Revista de Administração IMED - RAIMED(ISSN 2237-7956)	B3	118	NO		NO
71	Revista de Administração Mackenzie - RAM(ISSN 1678-6971)	B1	264	NO		NO
72	Revista de Administração Pública - RAP(ISSN 0034-7612)	A2	318	NO		NO
73	Revista de Administração, Sociedade e Inovação - RASI(ISSN 2447-8156)	B3	40	YES	HIGH	NO
74	Revista de Carreiras e Pessoas - RECAPE(ISSN 2237-1427)	B4	129	NO		NO
75	Revista de Ciências da Administração - RCA(ISSN 1516-3865)	B1	165	NO		NO
76	Revista de Contabilidade do Mestrado em Ciências Contábeis da UERJ(ISSN 1984-3291)	B1	80	NO		YES
77	Revista de Contabilidade e Organizações - RCO(ISSN 1982-6486)	A2	85	NO		YES
78	Revista de Economia e Administração - REA(ISSN 1676-6760)		27	NO		NO
79	Revista de Educação e Pesquisa em Contabilidade - REPeC(ISSN 1981-8610)	B1	143	NO		NO
80	Revista de Empreendedorismo e Gestão de Pequenas Empresas - REGEP(E(ISSN 2316-2058)	B1	119	YES	MEDIUM	YES
81	Revista de Finanças Aplicadas - RFA(ISSN 2176-8854)	B3	52	YES	LOW	NO
82	Revista de Gestão e Secretariado - REGE(ISSN 2177-8736)	B1	1122	YES	LOW	NO
83	Revista de Gestão Ambiental e Sustentabilidade - GEAS(ISSN 2316-9834)	B3	146	YES	MEDIUM	NO
84	Revista de Gestão em Sistemas de Saúde - RGSS(ISSN 2316-3712)	B3	97	NO		NO
85	Revista de Gestão e Projetos - GeP(ISSN 2236-0972)	B3	105	NO		NO
86	Revista de Gestão e Secretariado - Gesec(ISSN 2178-9010)	B2	143	YES	MEDIUM	NO
87	Revista de Gestão, Finanças e Contabilidade(ISSN 2238-5320)	B2	164	NO		NO
88	Revista de Gestão Social e Ambiental - RGSA(ISSN 1981-982X)	B1	107	YES	LOW	NO
89	Revista de Negócios(ISSN 1980-4431)	B2	80	YES	HIGH	NO
90	Revista de Tecnologia Aplicada - RTA(ISSN 2237-3713)	B3	69	NO		NO
91	Revista do Serviço Público - RSP(ISSN 2357-8017)	B4	160	NO		NO
92	Revista Economia & Gestão - E&G(ISSN 1984-6606)	B2	158	YES	HIGH	NO

**Table 4** Journals indexed in the SPEL L from August 2013 to August 2018 with manuscripts containing plagiarism (Continued)

ORDER	JOURNAL	QUALIS	PAPERS 2013 - 2018	PLAGIARISM	INCIDENCE	SELF- PLAGIARISM
93	Revista Eletrônica Científica do CRA-PR - RECC(ISSN 2358-7083)	B3	55	YES	HIGH	YES
94	Revista Eletrônica de Ciência Administrativa - RECADM(ISSN 1677-7387)	B1	94	NO		YES
95	Revista Eletrônica de Estratégia & Negócios - REEN(ISSN 1984-3372)	B2	152	NO		NO
96	Revista Eletrônica de Sistemas de Informação - RESI(ISSN 1677-3071)	B3	57	NO		NO
97	Revista Eletrônica Gestão e Serviços - REGS(ISSN 2177-7284)	B3	82	NO		NO
98	Revista Evidenciação Contábil & Finanças - RECFin(ISSN 2318-1001)	B3	119	NO		NO
99	Revista Gestão Organizacional - RGO(ISSN 1983-6635)	B4	88	NO		YES
100	Revista Gestão & Planejamento - G&P(ISSN 2178-8030)	B2	424	NO		NO
101	Revista Gestão & Tecnologia(ISSN 1677-9479)	B3	238	YES	HIGH	NO
102	Revista Gestão & Tecnologia ISSN 2177-6652	B3	458	NO		NO
103	Revista Hospitalidade(ISSN 2179-9164)	B2	114	NO		NO
104	Revista Ibero-Americana de Estratégia - RIAE(ISSN 2176-0756)	B2	189	NO		NO
105	Revista Interdisciplinar de Gestão Social - RIGS(ISSN 2317-2428)	B4	144	YES	HIGH	YES
106	Revista Interdisciplinar de Marketing - RIMAR(ISSN 1676-9783)	B4	63	NO		YES
107	Revista Mineira de Contabilidade - RMC(ISSN 2446-9114)	B3	99	YES	MEDIUM	NO
108	Revista Organizações em Contexto - ROC(ISSN 1982-8756)	B1	173	NO		NO
109	Revista Pensamento Contemporâneo em Administração(ISSN 1982-2596)	B2	217	YES	HIGH	NO
110	Revista Pretexto(ISSN 1517-672X)	B3	160	YES	LOW	NO
111	Revista Universo Contábil - RUC(ISSN 1809-3337)	A2	163	NO		YES
112	Rosa dos Ventos - Turismo e Hospitalidade(ISSN 2178-9061)	B2	218	YES	HIGH	NO
113	SINERGIA - Revista do Instituto de Ciências Econômicas, Administrativas e Contábeis (ICEAC)	B4	72	YES	HIGH	NO
114	Sociedade, Contabilidade e Gestão(ISSN 1982-7342)	B2	113	NO		YES
115	Tecnologias de Administração e Contabilidade - TAC(ISSN 2236-0263)		38	NO		NO
116	Teoria e Prática em Administração - TPA(ISSN 2238-104X)	B2	104	YES	MEDIUM	NO
117	Turismo em Análise - RTA(ISSN 1984-4867)	B1	161	NO		NO
118	Turismo: Visão e Ação - RTVA(ISSN 1415-6393)	B1	143	YES	LOW	NO

Source: Prepared by the author with information from SPEL and from iThenticate®

the percentage of observed fraud by authors was 0.18%, which represents a highly noteworthy number compared to the study conducted by Amos (2014). From a sample of 0.02% of the retracted articles in the PubMed database in the period from 2008 to 2012, that study deemed 35% included plagiarism or self-plagiarism.

Notably, 16 articles (14%) were determined to have evidence of self-plagiarism, or rather they were manuscripts that had been published in the form of theses. They were

indexed in open-access repositories, had been presented at scientific events and appeared in their proceedings, or even were published in other journals. Self-plagiarism, or redundancy, is considered a fraudulent practice in the international and Brazilian contexts. COPE warns that published articles should be retracted if, among other reasons, “they have clear evidence that the findings are unreliable, either as a result of misconduct (e.g., data fabrication) or honest error (e.g. miscalculation or experimental error); the findings have previously been published elsewhere without proper cross-referencing, permission or justification (i.e. cases of redundant publication); it constitutes plagiarism; it reports unethical research” (Committee On Publication Ethics 2009).

Still, it is necessary to recognize that there is a certain degree of controversy related to self-plagiarism. First, definitions concerning the undue appropriation of published works refer to the presentation as one’s own of someone else’s work. Therefore, considering the copying of one’s own work (self-plagiarism) as fraud cannot be accepted either conceptually or juridically. Regarding the system for attributing scientific credibility that considers the number of publications as a form of ascertaining scientific productivity, it might make sense to characterize self-plagiarism as redundancy. Thus, decreasing self-reproduction can be a way of preventing a single work from being presented as several works, giving a false notion of productivity.

It is fitting to discuss at what point plagiarism is considered a problem by editors and researchers because if it is not a concern, then its absence in the mechanisms of control and punishment is not warranted. Nevertheless, the directives of COPE for editors clearly recommend that mechanisms for the detection of plagiarism be adopted and that reviewers be supported and encouraged to verify the occurrence of plagiarism (Committee On Publication Ethics 2011).

Although the occurrence of plagiarism and self-plagiarism is not well known, it can be questioned whether the absence of editorial guidelines concerning these issues in the policy directives given to authors influences the numerical results. The fact that observation reveals that only one periodical sets forth specific directives concerning plagiarism appears to suggest that this problem apparently does not concern editors in relation to the requirements that must be met by authors. Nevertheless, plagiarism is a problem that exists in the academic world, and its occurrence has been measured among researchers in different fields and countries, with clear indications that its frequency is increasing.

COPE itself offers two flowcharts showing possible actions when plagiarism is suspected in manuscripts and in articles already published to help editors. These guidelines vary depending on the seriousness of the plagiarism, the degree of intentionality, and the extent of the responsibility of the author because there are works that contain a few sentences or many segments of literally and improperly reproduced material, cases in which the sources used were not correctly identified due to the researcher’s technical failure, and differences between the plagiarism occurring in a manuscript by a novice researcher and that of a senior investigator.

It is well known that the objective of research work is to contribute to human development; therefore, the greater the visibility a scientific discovery has, the greater the number of people that are able to obtain the resulting benefits. Thus, it is possible to note in the publication directives that it is considered acceptable to publish work previously presented at conferences or divulged in repositories.

## Conclusion

The results obtained in this study contribute to the understanding of plagiarism in the context of scientific publications in the area of business in Brazil. Although a reduction in the indices of the occurrence of plagiarism was observed in published articles, as was an increase in the support regarding the prevention of plagiarism by authors in the editorial requirements of periodicals, evidence of the problem continues to remain a concern due to its impact on the reputations of researchers and journals. Nevertheless, it is possible to argue that these indices result from bad faith on the part of researchers less than might be thought. Indeed, it is often found that plagiarism can occur accidentally due to technical difficulties or ignorance of the practices involved in attributing sources. This thinking supports the idea that no scientist should risk having his name and reputation exposed publicly due to a manuscript with fraudulent textual segments since it is currently extremely easy to determine textual similarity using specialized software. Hence, the verification of such occurrences generally reveals carelessness, a lack of concern, or unpreparedness in relation to the matter. Similarly, just as it is not a question of simply attributing the responsibility of plagiarism to the researcher, one must consider the portion of responsibility of others involved in the process of the production and publication of scientific knowledge, such as the editors and the financing agencies.

Consequently, it can be recommended that the editors of the periodicals studied adopt practices directed at informing authors of the importance of preventing plagiarism in the manuscripts submitted for publication via directives. In addition, this action has been recommended by diverse institutions related to scientific production and should be increased by augmenting the capacity of reviewers such that they evaluate the articles submitted for publication, verify the occurrence of plagiarism, and adopt the use of plagiarism detection software as a standard procedure for periodicals. In this way, many works that are published today and are accused of plagiarism can be identified in the submission process, and their authors can be advised to make appropriate preventive corrections.

In conclusion, plagiarism is a problem that must be considered not from the perspective of finding culprits, but rather as a challenge to be overcome that requires collective and committed work on the part of all those involved in the research process, including researchers, editors, research institutions, and financing agencies, among others. However, the first and most fundamental step is the recognition that the problem exists and requires a response and a position from all those involved. This was clearly demonstrated in the present study.

It is recommended that similar studies be conducted using other databases with indices or other types of scientific publications and in different areas of study. It is additionally recommended that the results of these studies be compared with those of similar studies conducted in other contexts, always with the essential objective of contributing to the improvement of the actions for combating plagiarism and consequently strengthening the credibility of science in Brazil and other countries.

## Abbreviations

ABEC: Brazilian Association of Scientific Editors; ANPAD: National Association of Research and Graduate Studies and Research in Administration; CAPES: Coordination for the Improvement of Higher Education Graduates; CNPq: National Council of Scientific and Technological Development; COPE: Committee on Publication Ethics; CSE: Council of Science

Editors; FAPESP: Foundation for the Support to Research of the State of São Paulo; OAB: Brazilian Bar Association; SPEL L: Scientific Periodicals Electronic Library; USP: São Paulo University

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#### Code availability

Not applicable.

#### Author's contributions

The research was done by a single author. Collaborators were thanked in the corresponding section. The author(s) read and approved the final manuscript.

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#### Availability of data and materials

The data and materials are not available to readers because they are sensitive content that may embarrass the authors of the manuscripts in which plagiarism and or self-plagiarism were found. However, they can be made available for controlled access by editors and reviewers. Despite the unavailability of data and materials from the selected sample, the reproducibility of the study results can be performed because access to the material is open-access in the Scientific Periodicals Electronic Library (SPELL).

#### Competing interests

Although the data analysis was developed using the iThenticate®, a commercial software to detect similarities in the text, the author declare that he has no conflict of interest.

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