

Benchmark entre revistas científicas da área de administração

Benchmark between scientific journals of the management area

Benchmark entre revistas científicas del área de gestión.

André Luís Janzkovski Cardoso ¹

Jennifer Nogueira Feitosa Silva ²

Resumo: O objetivo desta pesquisa foi apresentar as principais características distintivas entre os 100 periódicos da área de administração disponíveis na *Scientific Journals Electronic Library* (SPELL). A pesquisa tem abordagem quantitativa e qualitativa, tendo coletado os dados por meio de uma pesquisa no site das revistas, seguida de uma filtragem em cerca de 200 parâmetros, e a análise de cada periódico, com base na classificação Qualis/Capes 2013-2016 e com análises discriminantes. Os resultados permitiram identificar 25 características distintivas que caracterizam cada estrato Qualis/Capes e forneceu um "mapa de etapas" a seguir para atingir cada uma das classificações A2, B1, B2 e B3 no cenário editorial científico da Área de Administração, Contabilidade e Turismo. Cabe ressaltar que os periódicos dos diferentes estratos diferem quanto aos aspectos que visam estimular a qualidade, técnicas de atração de mecanismos de pesquisa e indexação de impacto, elementos que contribuem para o desenvolvimento dos atores envolvidos no processo editorial. Para enriquecer os achados, sugere-se como futuras pesquisas, além de aplicar o modelo aqui apresentado na próxima classificação Qualis/Capes 2017-2020, verificando a assertividade da análise discriminante, e aplicando também as 25 variáveis apresentadas neste estudo em nova pesquisa com periódicos internacionais classificados como A1 para identificar as características desse grupo, considerando a falta desse estrato em periódicos nacionais da área de Administração, Contabilidade e Turismo.

Palavras-Chave: Qualis/Capes; Análise discriminante; Características distintivas; Indexação e Impacto; Modelagem.

Abstract: The purpose of this research was to present the main distinguishing features among the 100 journals in the area of management available at the Scientific Journals Electronic Library (SPELL). The research has a quantitative and qualitative approach, having collected the data through a survey on the journals site, followed by a filtering in about 200 parameters, and the analysis of each periodical, based on Qualis/Capes 2013-2016 classification and with discriminant analyses. The results allowed to identify 25 distinctive characteristics that characterize each stratum Qualis/Capes and also provided a "map of steps" to follow to achieve each of the A2, B1, B2 and B3 classifications in the scientific editorial setting of the Management, Accounting and Tourism Areas. It should be emphasized that the journals of the different strata differ as to the aspects aimed at stimulating quality, techniques for attracting impact research and indexing mechanisms, elements that contribute to the development of the actors involved in the editorial process. To enrich the findings, it is suggested as future researches, besides applying the model presented here in the next classification Qualis/Capes 2017-2020, verifying the assertiveness of the discriminant analysis, and also applying the 25 variables presented in this study in a new research with international journals classified as A1 to identify the characteristics of this group, considering the lack of this stratum in national journals in the Management, Accounting and Tourism Areas.

Key words: Qualis/Capes; Discriminant Analysis; Distinctive Characteristics; Indexing and Impact; Modeling.

¹ Doutor em Administração pela Pontifícia Universidade Católica do Paraná. Professor de Mestrado em Gestão e Tecnologia Ambiental. Professor de Administração da Universidade Federal de Mato Grosso - Campus Universitário de Rondonópolis.. E-mail: cardoso9778@gmail.com.

² Graduanda em Administração na Universidade Federal de Mato Grosso - Campus Universitário de Rondonópolis. E-mail: jennifer.silva@yara.com.

Resumen: El propósito de esta investigación fue presentar las principales características distintivas entre las 100 revistas en el área de gestión disponibles en la Biblioteca Electrónica de Revistas Científicas (SPELL). La investigación tiene un enfoque cuantitativo y cualitativo, después de haber recopilado los datos a través de una encuesta en el sitio de las revistas, seguido de un filtrado en aproximadamente 200 parámetros, y el análisis de cada publicación periódica, basado en la clasificación Qualis/Capes 2013-2016 y con análisis discriminantes. Los resultados permitieron identificar 25 características distintivas que caracterizan cada estrato Qualis/Capes y también proporcionaron un "mapa de pasos" a seguir para lograr cada una de las clasificaciones A2, B1, B2 y B3 en el entorno editorial científico de la Gestión, Contabilidad y Áreas de turismo. Cabe destacar que las revistas de los diferentes estratos difieren en cuanto a los aspectos destinados a estimular la calidad, las técnicas para atraer la investigación de impacto y los mecanismos de indexación, elementos que contribuyen al desarrollo de los actores involucrados en el proceso editorial. Para enriquecer los hallazgos, se sugiere como investigaciones futuras, además de aplicar el modelo presentado aquí en la próxima clasificación Qualis/Capes 2017-2020, verificar el asertividad del análisis discriminante y también aplicar las 25 variables presentadas en este estudio en un nuevo estudio. investigación con revistas internacionales clasificadas como A1 para identificar las características de este grupo, considerando la falta de este estrato en las revistas nacionales en las áreas de gestión, contabilidad y turismo.

Palabras clave: Qualis/Capes; Análisis discriminante; Características distintivas; Indexación e impacto; Modelado.

1 Initial Considerations

Qualis is a parameter of analysis performed by the Coordination of Improvement of Higher Education Personnel (CAPES), whose purpose is to evaluate the quality of intellectual production of national graduate projects and the repercussion of their respective periodicals. After evaluation, the journals are organized in strata, according to criteria used (Soares and Casa Nova, 2016).

In this sense, during the development of this study, three articles from distinct areas of research were found that contributed to the research design (Serra, Fiates and Ferreira, 2008; Frigeri and Monteiro, 2012). The first authors identified the main reasons for the refusal of Brazilian management papers in international journals, and in the end they suggest how to improve the effectiveness of Brazilian authors. Frigeri and Monteiro (2012) sought to analyze how Qualis and its criteria are experienced in the editorial routine of scientific journals in the area of Education, while Soares and Casa Nova (2016) analyzed how much the classification in strata of the Brazilian accounting journals reflects in the impact of the surveys carried out by them.

This relevant research is judged because, when considering the practices of other journals, it is possible to provide existing journals with an understanding of the similarities and dissimilarities that make up the editorial groups, in addition to providing the opportunity to include specificities that meet the regional characteristics of studies and research in management. It is also emphasized that this research can provide an overview to the researchers about the

context of the Brazilian scientific journals of management. Then there is the research problem: What are the main distinguishing characteristics of the scientific journals in the management area with a Qualis classification higher than B3? To respond to the problem raised, it is a general objective to identify the main distinctive features among the scientific journals of the management area with a Qualis classification higher than B3.

To this end, the following specific objectives have been identified: I) carry out a survey of scientific journals in the management area with a Qualis classification higher than B3; II) classify journals by type of publications (digital, physical, articles, reviews, teaching and technological cases); III) to identify differences and similarities between journal sites and IV) To present distinctive features of Journals as a possible benchmarking.

The results permeated by this study allow to discern and consider the following aspects: the distinctive features between periodicals; overview of existing editorials; and provide a "step map" to follow to achieve every aspect of the Qualis classification in the scientific editorial setting of the areas of Management, Accounting and Tourism.

This work is structured with this brief introduction, with a section that addresses the theoretical reference with the appropriate propositions around which the problem was formulated and made the objective to be reached. The third section presents the methodological procedures adopted by this study, later, they are willing to discuss and analyze the data. Finally, the final considerations are presented with a brief reflection on the Brazilian scientific editorial context in Management, Accounting and Tourism.

2 Theoretical reference

The literature review on the subject of this research is constituted of four sections: the first presents the history and importance of scientific journals; the second shows the context of the scientific production in management; in the third section, we explain the criteria adopted by CAPES for stratification of periodicals; and lastly, there is a reflection on "Academic Productivism" and its consequences for the development of science in management.

2.1 Past and future of scientific journals

Scientific journals, also popularly known as scientific journals, date back to the beginning of the century XVII, being made up of brief articles, with specific contents and summarized research processes (Stumpf, 1996). So, set up publishing mechanisms “by means of which the results of meticulous researches can be published in part may have been the decisive step towards the development of the Scientific Method” (Ziman, 1979, p. 117). Therefore, the scientific journal was created to help the need for dissemination of research by the scientific community (Le Coadic, 1996).

Currently, scientific journals are the formally accepted means that the scientific community disseminates and aggregates new knowledge of a given area, which provide forums for debate, databases for information conservation and even means of certification, attracting and bringing together specific communities (Ferreira, 2015).

As for the format of Journals, it remained unchanged for three centuries (Ziman, 1979), but there were certain peculiarities that distinguished them as the publication of the same work in other Journals for wide dissemination and the use of Latin, language known by a large public at the time (Meadows, 1974; Stumpf, 1996).

The advancement of technology cooperated significantly in the progress of communication and reshaping of newspaper, as it allows for higher quality, agility and cost reduction in the publishing of journals (Stumpf, 1996; Beuren and Souza, 2008), consequently, this change has provided greater propagation and access to scientific knowledge. An obvious feature of this new editorial model is the indexers who "provide information from the original articles to the reader to facilitate the location of the material of interest without having to look minutely at all journals in the area in question" (Indexadores, 2015, p. 6).

With this new context of connection, there is also a significant increase in the number of scientific newspaper, which ends up contributing to the advancement of science, but must be evaluated for quality and relevance of their publications (Beuren and Souza, 2008). Even with this limitation, scientific journals still play an important role in the knowledge dissemination and communication system, especially in electronic journals that follow normal procedures (Stumpf, 1996).

Because of the advances related to access to scientific communication, there was a significant stimulus to scientific production in all areas of science, a subject that will be mentioned in the next topic, but with a focus on the Management.

2.2 Scientific production in management

Knowledge is a relevant aspect both for the academy and for the organizations and, for that reason, must be disseminated (Nonaka and Takeuchi, 1997; Davenport, 2002; Choo, 2003). Publishing is essential for researchers in the same way as for universities, and publication in peer-reviewed, international journals is the growing ambition of Brazilian researchers in management (Ferreira, 2015), being a determining factor in the career of these researchers (Bedeian, 2003).

Thus, the production of knowledge is based on scientific research that can be evaluated, used and, consequently, shared by the scientific community when published in annals, periodicals, among others. (Rego, 2014). Sharing, as far as it is concerned, can be described as the optional act related to the willingness to make knowledge available (Davenport, 2002) and when done in a precise and deliberate way, this knowledge is in the improvement of learning, being used and appropriated by other people, enabling the generation of innovation (Ipe, 2003; Riege, 2005).

In the last decades, public policies that seek to guarantee scientific development and productivity have been instituted in a more incisive way (Liu et al., 2014 apud Falaster et al., 2015). Consequently, it is that academic production is fundamental to the teachers of programs *stricto sensu* (Ferreira, 2015; Serra and Ferreira, 2016), besides the fact that CAPES imposes institutional rules that require a certain level of scientific production of these (Maccari et al., 2009; Crespi et al., 2017), so academic production is “[...]a key factor in a successful academic career, and evaluators have influence over who gets the promotion, who gets the funding and even about who gets invited to academic conferences ” (Campanário, 1996, p. 184).

Finally, with creation of mechanisms for scientific development to leverage the production of knowledge, it is pertinent to examine the quality and quantity (Falaster et al., 2015) and therefore, we establish metrics that allow us to evaluate the production, as will be presented in the next topic.

2.3 Classification of journals

The need for a parameter for the categorization of journals appeared with American librarians, who needed to distinguish which journals were to be added to the collections (Archambault and Lariviere, 2009).

Currently, the classification method examines the relevance of articles published according to the quality of the journals where they were published (Pfeffer and Fong, 2004), considering aspects such as the prestige of the journal, notoriety of authors and organizations of origin, as well as the counts of publications (Seglen, 1997), so, "better ranking means better journal" (Ferreira, 2015, p. 3). However, these criteria may induce the alienation of scientific knowledge (Tourinho and Palha, 2014).

There are a variety of metrics used to rank the quality of journals (Ferreira, 2015). In Brazil, the Qualis method has been used since 1998 (Frigeri and Monteiro, 2012), as a condition for the legitimation of Journals (Trzesniak et al., 2012), and whose classification of strata is linear (A1, A2, B1, B2, B3, B4, B5 e C). Qualis periodically examines aspects such as organization, database indexing, and the impact factor of journals, and such criteria can be reviewed annually, as needed by each area (Capes, 2015). The CAPES evaluation is relevant, since the better the indicators, the more viable is the collection of public resources (Maccari et al., 2009).

In reference to the management, the first evaluation of the periodicals of the area was carried out in 2002, being classified according to the scope of circulation and scientific recognition, extending this method of evaluation until 2007. However, with the significant growth of journals, it was necessary to establish the Qualis strata and to determine the discriminating criteria, such as the impact factor (JCR) and the H index - *Scopus* (Sandes-Guimarães and Diniz, 2014), according to Frame 1.

Frame 1. Qualis Criteria 2013-2016 (Management, Accounting and Tourism Areas)

Stratum	Criterion to be classified in the stratum
A1	<ul style="list-style-type: none"> • ISSN • Minimum 2 edition / year • JCR >1,4 (67%) • H-Scopus > 24 (75%) • Journals in the above limits, which were not listed as of the area, according to the calculation bases of Impact Factor, were classified in stratum A2
A2	<ul style="list-style-type: none"> • ISSN • Minimum 2 edition / year • 1,4 >= JCR > 0,7 (33%)

	<ul style="list-style-type: none"> • 24 >= H-Scopus > 9 (50%) • Journals in the above limits, which were not listed as area, according to the Impact Factor calculation bases, were classified in stratum B1
B1	<ul style="list-style-type: none"> • ISSN • Minimum 2 edition / year • Scielo com FI > 0,01 and listed as of the area, according to the calculation bases or • 0,7 >= JCR > 0 • 9 >= H-Scopus > 0 • Journals in the above limits, which were not listed as area, according to the calculation bases of Impact Factor, were classified in stratum B2
B2	<ul style="list-style-type: none"> • ISSN • Minimum 2 edition / year • Be at Redalyc or be edited by publishers described in the document of area 2
B3	<ul style="list-style-type: none"> • ISSN • Minimum 2 edition / year • Maximum delay rate equal to 0.5 • 3 or more years of existence • Have at least one of the indicators defined in the area 3 document
B4	<ul style="list-style-type: none"> • ISSN • Minimum 2 edition / year • Maximum delay rate equal to 0.5 • 2 or more years of existence
B5	<ul style="list-style-type: none"> • ISSN • Minimum 2 edition / year • Maximum one year late

Source: Adapted from Capes (2015)

When examining Frame 1, it is possible to notice that up to level B3 are relevant aspects related to organization, editorial transparency and periodicity. but for level B2 it is relevant to be in Redalyc or to be edited by publishers described in the area document, while level B1 considers, in addition to the previous aspects, the measurement of three different impact factors. For the other strata the impact factor is determinant, distinguishing only in their respective representative scales.

In order to assess the qualification of journals, the impact factor parameter is commonly used (Garfield, 2006) published annually in Thomson Reuters, or the alternative metrics of Scimago / Scopus (Elsevier Publishing Company) and, in some cases, Scielo (Crespi et al., 2017). of the impact of journals use the citations of the articles they publish to quantify their influence and to infer relative quality [...]” (Crespi et al., 2017, p. 133). And the evaluation carried out by CAPES allowed the generation of a clear and direct connection between performance and success, so, “The better the evaluation achieved by the program, the greater its chances and those of its researchers to achieve support, both in scholarships and in research and infrastructure resources” (Balbachevsky, 2005, p. 282).

Although it is a system with the purpose of legitimizing the journals, Qualis, with its analysis parameters, does not evaluate the quality of the published content (Trzesniak et al., 2012). Previous studies evaluated the quality and inconsistencies of Brazilian publications in the management area (Cardoso, 2016), even because it wouldn't be feasible to define a single instrument that could objectively evaluate the content of all published articles.

2.4 Attention to Brazilian scientific production

As presented previously, it has been significant the growth of the Brazilian scientific production in the scope of the management (Miranda et al., 2016). There are about 180,262 researchers registered in the country, 34,584 research groups and 536 institutions involved (Cnpq, 2014). Thus, this scientific conjecture already begins to appear in the international scientific scenario (Miranda et al., 2016) and, according to Falaster et al. (2015, p.2), scientific production in volume and quality is concentrated in a small number of doctoral "stars" in the programs in management by the most productive Brazilian universities, the FEA / USP program being the researchers of greater and better scientific production".

Scientific production is one of the pillars that determines the reputation and peer recognition of a researcher (Bedeian, 2003). A Lattes Curriculum with quality publications, indexed and well qualified journals, and even citations is essential to the career, clearly materializing the expression publish or perish (Serra et al., 2008).

According to Oliveira Jr. (2018), in the 1990s, it was already evident that the sphere of management was in a stage of growing maturity in Brazil and the publications in congresses counted points in the evaluations of teachers and research programs carried out by the development agencies. However, this reality in the new century translated into the stimulus to cumulative publication in national and international journals, leading to a change in the questions of the area (Oliveira Jr, 2018), according to Frame 2.

Frame 2. Questions about the publication process in the management area

	1990s	2000s
Representative Questions	<ul style="list-style-type: none"> - Did you approve how many works in congresses? - Are you going to be at EnANPAD? - Are you going to present any work at the Academy of Management?" 	<ul style="list-style-type: none"> - How many articles in indexed journals did you publish this year? - What is the impact factor of the Journals you publish? What about Qualis? - How many quotes did your articles have?

	<p>- Are you going to the Strategic Management Society?" - Are you going to the Academy of International Business?"</p>	<p>- What is the impact of your research on society? And for the productive sector?</p>
--	--	---

Source: Adapted from Oliveira Jr (2018)

In the new century, submissions at congresses are no longer significant in the opinions of development agencies, which leads to the risk of weakening the discussions that are fundamental to the development of science and, consequently, its impact on future publications in newspapers (Oliveira Jr., 2018).

Involved by the overvaluation of scientific productivity, "academic productivism" predominates, in which matter the quantity that the quality of the articles matters (Alcadipani, 2011), that is, there is greater concern "with the number of publications than the standard of research excellence" (Miranda et al., 2016, p. 585). This has reflected in the congresses and academic journals that have the average duration of review and publication increasing (Serra et al., 2008; Miranda et al., 2016), in addition, undeniably, they find submissions of articles with fragile contents, with little conceptual and methodological innovation and less rigorous and pertinent arguments (Alcadipani, 2011), both in stratified Journals such as A and in journals B and C (Serra et al., 2008).

According to Serra and Ferreira (2016), the main reasons for rejection in the journals are: I) not respecting the focus of the journal and its respective guidelines; II) cases of double submission and plagiarism; III) revision of the unbalanced literature, sometimes inadequate or not constructive; IV) lack of contribution and relevance to science; V) methodological process with procedural failures, data quality and lack of effective triangulation; VI) results and discussion presented in a single topic, the best thing is that each section should be worked with its due depth (Serra and Ferreira, 2016).

Among some editorial aspects, the problems mentioned above are not far from the results presented previously by Machado-da-Silva et al. (1990) e Bertero et al. (2005). Peer review is considered a mechanism for quality assurance of publications (Shugan, 2007; Lewin, (2014), however it is insufficient (Roth, 2002; Frey, 2003). The fact is that "academic productivism" has been sustained by the continuity of repetition of subjects exhaustively studied, but organized according to the opinion of the evaluators (Miranda et al, 2016).

Currently, there is significant effort and space in the ANPAD events and similar initiatives in SINGEP and Semead for the debate with editors and reviewers, in order to change this reality, seeking the construction of proposals of significant value for an increase in the impact on society (Serra and Ferreira, 2016; Oliveira Jr, 2018). A summary of the main theoretical contributions used in this research is presented in Frame 3.

Frame 3. Synthesis of the Theoretical Framework

Thematic	Authors	Main contributions
Scientific Journals	Stumpf (1996) Beuren and Souza (2008) Meadows (1974)	- They date from the beginning in century XVII - Formally accepted means by which the scientific community disseminates and aggregates new knowledge of a particular area
Classification of Journals	Archambault and Lariviere (2009) Pfeffer and Fong (2004) Seglen (1997) Ferreira (2015) Tourinho and Palha (2014) Frigeri and Monteiro (2012) Capes (2015)	- In Brazil, the Qualis method has been used since 1998; - Classification of strata is linear, A1, A2, B1, B2, B3, B4, B5 and C - periodically examines aspects such as organization, database indexing and the impact factor of journals
Attention to Brazilian scientific production	Bedeian (2003) Alcadipani (2011) Serra et al. (2008) Miranda et al. (2016) Serra and Ferreira (2016) Oliveira Jr. (2018)	- 1990s vs. New century - A Lattes Curriculum with quality publications, indexed and well qualified journals, and even with peer citations is essential to the career; publish or perish - Academic productivism - There is a significant effort (ANPAD, SINGEP and Semead) with editors and reviewers, in order to change this reality, seeking the construct of a proposal of significant value and contribution to the academy

Source: Prepared by authors

In the next topic are presented the methodological procedures, outlining the methods used for data collection and analysis.

3 Methodological procedures

The delimitation of research proposal and definition of the problem, objectives and hypotheses occurred, concurrently, with the development of several readings on the subject, in order to refine the scope of the research and the respective methodological procedures adequate to reach the objective of the research. Qualitative and quantitative methods were used. Firstly, a survey of the scientific journals available in the Scientific Periodical Electronic Library (SPELL) database and its respective Qualis/Capes classification in the areas of management, accounting and economics, according to Table 1, totaling 100 journals or periodicals was carried out.

Table 1. Classification, Quantitative and Percentage of Periodicals in the areas of management, accounting and economics according to the quadrennial evaluation 2013-2016.

Classification	Qualis CAPES	Journals	%
A2		16	16%
B1		22	22%
B2		36	36%
B3		26	26%

Source: Research Data

This study made use of secondary data collected between November 2017 and April 2018 and, a priori, the websites of the selected journals were searched, collect data related to the processes of communication, submission, evaluation, publishing, publication and indexing. In addition, the research identified characteristics associated with the editorial body, the types and characteristics of the publications and impact indicators, looking to categorize each characteristic with the methodology of content analysis (Bardin, 2002). To classify the information present in the websites, macro categories were used: (1) Structure; (2) Editorial information; (3) Review Process; (4) Indexers; (5) Workflow; (6) Information contained in the articles; (6) Type of file accepted, and finally, (7) Possible criteria to be adopted in the next CAPES evaluation.

In order to obtain an analysis that would guarantee the efficiency in the categorization of the journals, an accurate analysis was carried out on the websites of the 100 previously selected journals in the light of the theory studied, in order to verify the distinctive characteristics among the scientific journals of the management area with Qualis classification higher than B3, presenting those evidenced in the corpus of this investigation. It is noteworthy that the data collection was handmade and demanded sagacity, patience and analytical perception, in accordance with theoretical framework, in order that the analysis had relevance, homogeneity

and synchrony, within the specific thematic focus (Bauer and Aarts, 2002). After filling in 200 component items from the seven macro categories started the statistical treatment.

Regarding treatment of the data, it was based on the discriminant analysis using SPSS software, since the groups are already known (strata of Journals A2, B1, B2 e B3) and sought to verify, predict and explain the particularities of each group, identifying the most important variables in the discrimination of these groups, as well as being justified, since the quantitative of more than 200 variables (that is, 100 journals with 200 variables, totaling 20,000 response fields) provides the use of the discriminant analysis technique, which "finds the linear combinations of the dependent variables that best separates (or discriminates) the groups" (Field, 2009, pp. 531-532). To enrich this research, several test arrangements were made in order to identify a significant percentage of original cases grouped correctly classified. In relation to the reliability criteria, the Anova test was performed to identify the variables with a level of statistical significance.

Discriminant modeling correlates the Qualis Capes stratum of the journals as a dependent variable and all other variables as independent. So, each group of strata (A2, B1, B2 and B3) must have characteristics that allow the discrimination of the data from the statistical technique discriminant analysis presented below.

4 Presentation and processing of data

For the discriminant analysis, initially, the sample was randomly selected, the first analysis with the first 26 subcategories explored, the second with the 200 variables examined and finally all subcategories whose Sig. <0.05 (level of statistical significance). The results for the first holding are shown below. In order to achieve a better result in the classifications, we performed the analysis with all the factors of the sample, as presented in Table 2.

Table 2 - Results of classification with overall data

Qualis		Group membership				Total
		A2	B1	B2	B3	
Original	A2	16	0	0	0	16
	B1	0	22	0	0	22
	B2	1	0	28	0	29
	B3	0	0	0	25	25

%	A2	100,0	0,0	0,0	0,0	100,0
	B1	0,0	100,0	0,0	0,0	100,0
	B2	3,4	0,0	96,6	0,0	100,0
	B3	0,0	0,0	0,0	100,0	100,0

Source: Research Data

From the classification matrix with all the variables, it is identified that the percentage of hits from Group 1 totaled 100%; Group 2 reached 100% and Group 3 reached 96.6%, and Group 4 also totaled 100%. Overall, the Discriminant Analysis for this sample had 98.9% of original cases grouped correctly classified. Despite the high discrimination rate, the field of analysis was very broad and, therefore, we tried to run with smaller sets of variables. In the second test, the categories of Structure, Editorial Information and Review Process (26 subcategories or variables) were used. Table 3 presents the results of the classification of the data for each group, being very informative about the success or otherwise of the discriminant analysis.

Table 3 - Results of classification with 26 variables

Qualis		Group membership				Total	
		A2	B1	B2	B3		
Original	Score	A2	7	6	2	1	16
		B1	0	16	4	3	23
		B2	0	6	24	6	36
		B3	1	5	6	12	24
	%	A2	43,8	37,5	12,5	6,3	100,0
		B1	0,0	69,6	17,4	13,0	100,0
		B2	0,0	16,7	66,7	16,7	100,0
		B3	4,2	20,8	25,0	50,0	100,0

Source: Research Data

After analysis of Table 3 it is evident that only 59.6% (in average) of the original clustered cases were correctly classified, while the others had an error in the prediction, being incorrectly classified in the other Qualis. The interesting thing is that a higher classification can be presented (59.6%) with lower indexes of errors in selection. Due to the result obtained, new discriminant analyzes were performed, including and excluding variables, but no significant changes in the percentages of the classification results were obtained.

After some simulations, we selected only the variables with Sig < 0.05 for the test of equality of means group (Anova), since these are the best discriminants of the levels of quality, that is, significant (FIELD, 2009). With further filtering, it was possible to state that Group 3 (stratum B2) presented a higher percentage of correct classifications (94.1%), when compared to the others. However, with these new parameters 83.3% of original cases were correctly classified (Table 4).

Table 4 – Results of classification with variables which were statistically significant

Qualis		Group membership				Total	
		A2	B1	B2	B3		
Original	Score	A2	13	3	0	0	16
		B1	1	16	6	0	23
		B2	0	1	32	1	34
		B3	0	2	3	22	27
	%	A2	81,3	18,8	0,0	0,0	100,0
		B1	4,3	69,6	26,1	0,0	100,0
		B2	0,0	2,9	94,1	2,9	100,0
		B3	0,0	7,4	11,1	81,5	100,0

Source: Research data.

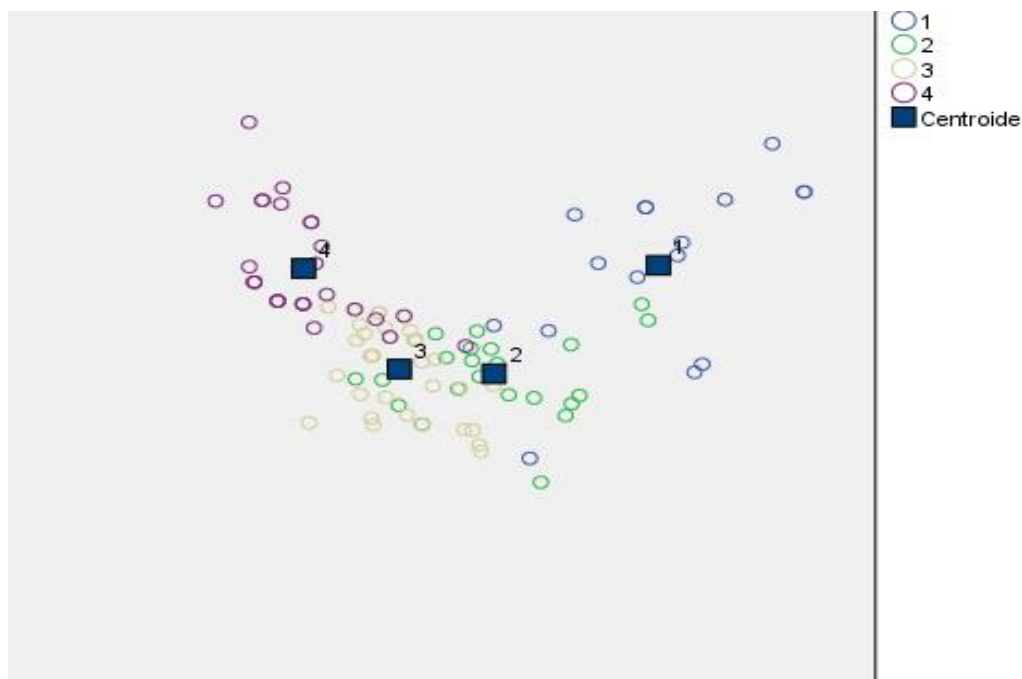
In this way, it is understood that when a variable is classified in Group 3, there is a greater possibility that the discrimination is correct, according to the results of the percentages in Table 4. As to the percentage of correctly classified clustered cases, 83.3% were obtained in general, a percentage considered acceptable / good to proceed with the analyzes (Field, 2009).

For a visualization of the discriminant function resulting from the analyzes, Figure 1 was generated showing the centroids that are parameters that show where a new element can arise (FIELD, 2009). With the classification of the 4 Groups and their respective centroids, it is possible to visualize the behavior of the groups and the territorial map and the dispersion of the distribution.

It is clarified that the centroids of the clusters provide the value of the discriminant function that is calculated by the average of the groups, however the Group 1 (A2) is significantly separated from the other groups according to the setting location. Differently from the previous group, Groups 2, 3 and 4 are significantly approximate, with some elements approaching the

centroid of Group 1. Such evidence allows us to understand that Groups 2 (B1), 3 (B2) and 4 (B3) share some main characteristics, only Group 1 with more distinctive features.

Figure 1 - Dispersion of group elements in relation to discriminant functions



Source: Research data.

According to this data collection, only 25 variables (from 200 analyzed) distinguish the journals in Qualis A2, B1, B2 and B3, These are: Portuguese, H Scimago Scopus; articles in third party repositories; H Spell; (indexers) Scimago Scopus, Scielo, Redalyc, Clase, Hapi, IBSS, Academic Keys, Science Channel, Dialnet, LatAM Studios, OASISBR, Open J Gate, ProQuest, REPEC, Road, SCINLI, Directory of Reserach Journals Indexing DJRI, ICAP, Electronic Publishing System (SEER), Ulrichs Periodicals Directory, and WorldWideScience Org.

Within these main characteristics, Group 1, stratum A2 Appendix A (supplementary file) is distinguished from the others by having Scopus impact factor ($0,11 \geq H \leq 0,24$) and Spell ($H \geq 8$) and is still indexed Scimago Scopus; Redalyc; Clase; Hapi; ICAP; IBSS; Academic Keys; Proquest; Ulrich´s Periodicals Directory e no World Wide Science Org. For stratified in B1, according to Appendix B (supplementary file), they are differentiated by H Spell ($6 \geq H \leq 7$),

being indexed in Redalyc; Proquest e Ulrich's Periodicals Directory. Those whose Qualis is B2 (Appendix C - supplementary file) has an impact factor in Spell ($3 > H \leq 5$) are also indexed in Redalyc; Proquest; Ulrich's Periodicals Directory. Finally, those classified as B3 (Appendix D - supplementary file). has an impact factor in Spell ($1 \geq H \leq 3$) and indexed in Dialnet, ProQuest and the Electronic Publishing System (SEER). Figure 2 presents an overview of the characteristics of each Qualis/Capes.

Figure 2 - Characteristics of Journal classified in different Qualis/Capes

A2	<ul style="list-style-type: none"> - Impact Factor Scopus ($0,11 \geq H \leq 0,24$) e Spell ($H \geq 8$) - Indexers: Scimago Scopus; Redalyc; Clase; Hapi; ICAP; IBSS; Academic Keys; Proquest; Ulrich's Periodicals Directory e no World Wide Science
B1	<ul style="list-style-type: none"> - H Spell ($6 \geq H \leq 7$) - Indexers: Redalyc; Proquest e Ulrich's Periodicals Directory
B2	<ul style="list-style-type: none"> - H Spell ($6 \geq H \leq 7$) - Indexers: Redalyc; Proquest e Ulrich's Periodicals Directory
B3	<ul style="list-style-type: none"> - H Spell ($1 \geq H \leq 3$) - Indexers: Dialnet, ProQuest e no Sistema Eletrônico de Editoração de Revistas (SEER)

Source: Research data.

It is interesting that journals of all strata are indexed in the Proquest database and those with stratification higher than B2 are indexed in Redalyc, possibly in the next Qualis classification these will be variables that will no longer be parameters to discriminate these journals.

By the analysis of the results, it is inferred that there is a high homogeneity of conformity between the journals, especially the types of indexations and the impact factor of each Qualis. an acceptable justification is that this is a process related to quality, with parameters for the selection of journals that ensure a certain standardization, in addition to the fact that it is assumed that indexed journals have greater repercussion or audience. The Impact Factor has the same purpose;

to gauge the quality based on the number of citations received in a given period by the total number of published works.

A supplementary analysis of the journals that were not correctly grouped, trying to identify the possible reasons for such occurrence. Thus, initially those presented whose grouping of the discriminant function was superior to the current Qualis of the periodical, and the reasons for this classification. There were 7 journals in this situation, according to Frame 4.

Frame 4- Periodicals classified incorrectly (Higher Projections)

Journal	Ranking		Possible Reasons
	Current	Designed	
Revista Brasileira de Inovação – RBI	B3	B2	In the last evaluation of CAPES this periodical was downgraded from B1 to B3, which forced the Journal to re-adjust to the new parameters.
Revista de Administração e Inovação – RAI	B1	A2	Due to its thematic axis and its own mission to be a reference in academic studies, it ends up having a differentiated position when compared with the others.
Revista Brasileira de Estratégia – REBRAE	B3	B2	
Revista Economia & Gestão - E&G	B2	B1	Organization and structuring of the site within the parameters established by CAPES
Revista Hospitalidade	B3	B2	In the last evaluation of CAPES this periodical was downgraded from B1 to B3, which forced the Journal to re-adjust to the new parameters.
International Journal of Innovation – IJI	B3	B1	Organization and structuring of the site within the parameters established by CAPES, besides the fact that the journal is the result of distinct research / study groups in Universities around the world, which allows the journal greater possibility of ascension.
Revista Eletrônica de Sistemas de Informação – RESI	B3	B2	Organization and structuring of the site within the parameters established by CAPES

Source: Research data

The classification for Qualis superior is justified, since these journals have shown clear evolution and improvement over time, aiming for recognition and credibility, so that they can be classified in strata higher than the current one. But this is not a recent fact. In the previous evaluation, CAPES itself showed a change in the Qualis, increasing some and decreasing others (Capes, 2015).

In the same way that some journals were classified in the analysis of this research with Qualis higher than the current one, other journals were classified in a stratum lower than its current one. There were 7 journals classified with Qualis inferior to the current ones, according to Frame 5. One of the main reasons is the lack of compliance with the criteria or parameters of the B1 classification identified by this study (see Frame 1), as well as problems found on the websites of the journals.

Frame 5- Periodicals classified incorrectly (Lower Projections)

Journals	Ranking		Possible Reasons
	Current	Designed	
Enfoque Reflexão Contábil	B1	B2	Doesn't meet organizational criteria. The site has repetitive information, however, it provides clear and objective guidelines for submissions.
Revista de Contabilidade e Organizações – RCO	A2	B1	In the period in which the analysis was carried out, the site was undergoing renovation, this may have prejudiced the evaluation of this journal.
Revista de Empreendedorismo e Gestão de Pequenas Empresas – REGEPE	B1	B2	Doesn't meet the parameters of B1 identified by this study
Turismo: Visão e Ação - RTVA	B1	B2	Doesn't meet the parameters of B1 identified by this study
Contextus - Revista Contemporânea de Economia e Gestão	B1	B2	Doesn't meet the parameters of B1 identified by this study
Administração: Ensino e Pesquisa – RAEP	B1	B2	Doesn't meet the parameters of B1 identified by this study
Interface - Revista do Centro de Ciências Sociais Aplicadas	B2	B3	It doesn't meet the criteria of organization and structuring determined by CAPES, being one of the most differentiated.

Source: Research data

In the final section are presented the main observations and notes from the data and the theoretical review carried out on the Brazilian scientific editorial context in Management,

Accounting and Tourism, and indicates practical contributions or actions that can be adopted by the current and new periodicals for its legitimation, ascent and recognition in the scientific world.

5 Final considerations

It is relevant to consider that this study didn't intend to carry out the qualitative analysis of the publications of the articles of the Journals. Therefore, after careful and detailed analysis of the 100 selected journals for this study, it is understood that, apparently, the "good journal" is one whose formal requirements meet the CAPES criteria, which are configured as more structural and organizational. However, should structural elements be considered as a legitimate classification parameter for CAPES?

In order to respond to this question, it is inferred that the classification parameters of the periodicals used by CAPES involve several criteria, some objectives or subjectivity, as shown in Frame 1. The fact is that even some A2 journals present in this analysis don't meet all the structural criteria defined by the CAPES classification. An example of this is the annual disclosure of the reviewers' list where it is evident that many journals don't make it available and when they publish it is outdated. This fact is understandable when one observes from the prism of the Management, Accounting and Tourism journals that seek legitimate means for their rise and recognition in the scientific world, resisting the "productivism" inherent in the current research context, but at the same time aiming at the progress of science and, consequently, the improvement of its stratum.

With this scenario, institutions are likely to lead future changes in their journals, including from the perspective of their readers, in order to achieve a reality of research more focused on the process of constructivism and research impact.

It should be emphasized that the journals differ in the aspects aimed at stimulating quality, techniques for attracting good research and indexing, in a way that seeks parameters that can guarantee the quality and development of its agents involved in the editorial process. Although potential and promising, it was still restricted to criteria aimed at organization and structuring. This fact is understandable in the area of management, since this field of study is in maturation

in Brazil, in the process of Brazilian academic legitimacy in the international scenario (there is still no journal in stratum A1) and that it is supported in sciences with theoretical legacy, such as sociology, economics and psychology, according to Oliveira Jr. (2018).

It is noticeable that the Brazilian journals have sought their improvement and best practices, this in a way has become the filter and the lever for the stimulation to the research, since they are agent helpers for the improvement of the articles submitted to their Journals (Lewin, 2014) and for the change in the Brazilian scientific editorial context in management, Accounting Sciences and Tourism. In addition, "good journals" point researchers to the research strands under study, define quality, and determine what is worth reading (Ferreira, 2015). Additionally, it is interesting to note that there is a considerable number of new indexes, which are not considered by the CAPES evaluation, but may contribute in the future to the dissemination of studies in Brazilian management.

Regarding the contributions, this study allowed to identify among the 200 variables surveyed, the aspects (25 variables) that make it possible to stratify the journals in their respective Qualis, being this a way for those who want the repositioning in the upper strata and even a "map of the steps" for the new journals.

Discrimination made it possible to identify the aspects that differentiate each group (A2, B1, B2 and B3). Therefore, as suggestions for future studies, an analysis is proposed to identify what is being published by these journals (articles, reviews, cases of teaching), so that the characteristics, contributions and impact can be evidenced. It is also pertinent to compare the journals incorrectly classified with the next Qualis/Capes classification, so that it can be refuted or / and corroborated with the findings of this research. In addition, considering what was presented in this study, to enrich the findings of this study, it is suggested as future researches, besides applying the model presented here in the next classification Qualis/Capes 2017-2020, verifying the assertiveness of the discriminant analysis, and also applying the 25 variables presented in this study in a new research with international journals classified as A1 to identify the characteristics of this group, considering the lack of this stratum in national journals in the Management, Accounting and Tourism Areas.

6 References

- Alcadipani, R. (2017). “Periódicos brasileiros em inglês: A mímica do publish or perish global”. *Revista de Administração de Empresas*, v. 57, n. 4, pp. 405-411.
- Archambault, É. and Larivière, V. (2009). “History of the journal impact factor: Contingencies and consequences”. *Scientometrics, Dordrecht*, v. 79, n. 3, pp. 1-15.
- Bardin, L. (2002). *Análise de conteúdo*. 70. Lisbon, PO.
- Balachevsky, E. (2005). “A pós-graduação no Brasil: novos desafios para uma política bem-sucedida”. In: Brock, C and Schwartzman S. (Ed.). *Os desafios da educação no Brasil*. Nova Fronteira. Rio de Janeiro, BR, pp. 275-304.
- Bauer, M., and Aarts, B. A. (2002). “Construção do Corpus: um princípio para a coleta de dados”. In: Bauer, M., Martin W and Gaskell, G (Ed.). *Pesquisa Qualitativa com Texto, Imagem e Som: Um manual prático*. Vozes. Petropolis, BR.
- Bedeain, A. (2003). The manuscript review process: “The proper roles of authors, referees, and editors”. *Journal of Management Inquiry*, v. 12, n. 4, pp. 331-338.
- Bertero C. O. and Keinert, T. M. M. (1994). “A evolução da análise organizacional no Brasil (1961-93)”. *RAE*. São Paulo, v. 36, n. 3, pp.81-90.
- Beuren, I. M. and Souza J. C. (2008). “Em busca de um delineamento de proposta para classificação dos periódicos internacionais de contabilidade para o Qualis CAPES”. *Revista Contabilidade & Finanças - USP*, v. 19, n. 46, pp. 44-58.
- Campanário, J. (1996). “Have referees rejected some of the most-cited articles of all times?”. *Journal of the American Society of Information Science*, v. 47, n. 4, pp. 302-310.
- Cardoso, A. L. J. (2016). “Processo científico: A Formação do pesquisador em Administração”. *Revista Pretexto*, v. 16, n.1, pp. 99-116.
- Capex (2015). “Relatório do processo de classificação de periódicos: Área de Administração, Ciências Contábeis e Turismo Quadriênio 2013-2016”. Available at: <https://capes.gov.br/images/stories/download/avaliacao/relatorios-finais-quadrienal-2017/20122017-Administracao-quadrienal.pdf> (accessed 26 January 2018)
- Choo, C. W. (2003). *A organização do conhecimento: como as organizações usam a informação para criar significado, construir conhecimento e tomar decisões*. Senac, São Paulo, BR, p. 27-45.
- Crespi, T. B., Preusler, T. S., Luna, N. A. and Ferreira, M. P. (2017). “Novo Qualis: Impacto na Avaliação da Produção Intelectual dos Pesquisadores em Administração”. *Revista de Ciências da Administração*, v. 19, n. 47, pp. 131-147.

- Davenport, T. H. (2002). “Cultura e Comportamento em Relação à Informação”. In: Davenport, T. H. (Ed.). *Ecologia da Informação: porque só a tecnologia não basta para o sucesso na era da informação*. Futura, São Paulo, BR. pp. 109-139.
- Ferreira, M. P. (2015). “Periódicos e rankings de periódicos em Administração”. *Revista Pensamento Contemporâneo em Administração*, v. 9, n. 2, pp. 1-16.
- Field, A. (2009). *Descobrimo a estatística usando o SPSS*. Artmed, Porto Alegre, BR.
- Frigeri, M. and Monteiro, M. S. A. (2012). “Abrindo a caixa preta do Qualis: entendendo a avaliação dos periódicos científicos no Brasil”. In: *36º Encontro Nacional da ANPOCS – Associação Nacional de Pós-Graduação e Pesquisa em Ciências Sociais*, Águas de Lindóia, BR.
- Frey, B. (2003). “Publishing as prostitution? Choosing between one’s own ideas and academic success”. *Public Choice*, v.116, pp.205-223.
- Garfiel, E. (1972). “Citation analysis as a tool in journal evaluation”. *Science*, v. 1, n. 178, pp. 471-479.
- Ipe, M. (2003). “Knowledge sharing in organizations: a conceptual framework”. *Human Resource Development Review*, v. 2, n.4, pp. 337-359.
- Indexadores. (2015). “Indexadores para periódicos científicos: critérios de avaliação”. Available at http://laboratorio.periodicos.ufsc.br/files/2017/04/criterios_indexadores.pdf (accessed 26 January 2018).
- Lewin, A. (2014). “The peer-review process: The good, the bad, the ugly, and the extraordinary”. *Management and Organization Review*, v.10, n.2, pp.167-173.
- Le Coadic, Y. F. (1996). *A ciência da informação*. Briquet de Lemos, Brasília, BR.
- Maccari, E. A., Almeida, M. I. R., Nishimura, A. T. and Rodrigues, L. C. (2009). “A gestão dos programas de pós-graduação em Administração com base no sistema de avaliação da CAPES”. *Revista de Gestão*, v. 16, n. 4, pp. 1-16.
- Machado-da-Silva, C. L., Cunha, V. C. and Amboni, N. (1990). “Organizações: o estado da arte da produção acadêmica no Brasil”. In: *ENCONTRO Anual da Anpad 1990, proceedings of the Encontro Nacional da Associação Nacional de Pós-Graduação e Pesquisa em Administração in Florianópolis*, BR, pp. 11-28.
- Meadows, A. J. (1974). *Communication in Science*. Butterworth, London, EN.
- Miranda, A. C. C., Carvalho, A. V. and Ramos, A. S. M. (2016). “Comunicação científica em Administração”. *Revista Ciências Administrativas*, v. 22, n. 2, pp. 573-604.
- Oliveira JR, M. de M. (2018). “O futuro dos programas de pós-graduação em administração: novas escolhas e novos caminhos”. *Revista Administração de Empresas*. v. 58, n.1, pp. 87-90.

- Nonaka, I. and Takeuchi, H. (1997). Criação de conhecimento na empresa: como as empresas japonesas geram a dinâmica da inovação. Campus, Rio de Janeiro, BR.
- Pfeiffer, J. and Fong, C. (2004). “The business school “business”: Some lessons from the US experience”. *Journal of Management Studies*, v.41, n.8, pp.1501-1520.
- Riege, A. (2005). “Three-dozen Knowledge-sharing barriers managers must consider”. *Journal of Knowledge Management*, v. 9, n. 3, pp. 18-35.
- Rego, T. C. (2014). “Produtivismo, pesquisa e comunicação científica: entre o veneno e o remédio”. *Educação e Pesquisa*. v. 40, n. 2, pp. 325-345
- Roth, W. M. (2002). “Editorial power/authorial suffering”. *Research in Science Education*, v. 32, pp. 215-224.
- Sandes-Guimaraes, L. V. and Diniz, E. H. (2014). “Gestão de periódicos científicos: estudo de casos em revistas da área de Administração”. *Rev. Adm.*, v. 49, n. 3, pp.449-461.
- Shugan, S. (2007). “The editor’s secrets”. *Marketing Science*, v.26, n.5, pp. 589-595.
- Stumpf, I. R. C. (1996). “Passado e futuro das revistas científicas”. *Ciência da Informação*, v. 25, n. 3, pp. 1-6.
- Serra, F. A. R., Fiates, G. G. and Ferreira; M. P. (2008). “Publicar é difícil ou faltam competências? O desafio de pesquisar e publicar em revistas científicas na visão de editores e revisores internacionais”. *Revista de Administração Mackenzie*, v. 9, n. 4, pp.32-55.
- Serra, F. A. R. and Ferreira, M. A. S. P. V. (2016). “Comentário editorial os principais motivos de rejeição na revista ibero-americana de estratégia”. *Revista Ibero-Americana de Estratégia -RIAE*, v. 15, n. 3, pp. 1-5.
- Seglen, P. O. (1997). “Why the impact factor of journals should not be used for evaluating research”. *British Medical Journal*, v. 314, n. 7.079, pp. 498-513.
- Tourinho, M. M. and Palha, M. D. C. (2014). “A CAPES, a universidade e alienação gestada na pós-graduação”. *Cadernos EBAPE*, v. 12, n. 2, pp. 270-283.
- Trzesniak, P., Plata-Caviedes, T. and Córdoba-Salgado, O. (2012). “A Qualidade de conteúdo, o grande desafio para os editores científicos”. *Revista Colombiana de Psicologia*, v.21, n.1, pp.57-78.
- Ziman, J. (1979). *Conhecimento público*. Belo Horizonte: Ed. Itatiaia, São Paulo, BR

Artigo recebido em: 27/07/2019

Avaliado em: 14/08/2019

Aprovado em: 11/09/2019