Performance Evaluation in the University Context: an investigation of literature from the Constructivist perspective

Avaliação de Desempenho no Contexto Universitário: uma investigação da literatura sob a perspectiva Construtivista

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ABSTRACT

The objective of the article is to know and investigate the characteristics of Performance Evaluation in the University Context, from a Constructivist perspective. The intervention instrument used was the ProKnow-C which originated a Bibliographic Portfolio (BP) composed of 67 articles. The analysis and discussion of results made use of these stages: Literature Map, Bibliometric Analysis and Systemic Analysis. The Literature Map shows the predominance of studies addressing measurement elements and Performance Evaluation (PE) models. The Bibliometric Analysis showed that most of the articles did not make use of the theoretical contribution of Organizational Performance Evaluation (OPE) regarding metrics. Systemic Analysis points out the misalignment between the evaluation made in the BP studies and the defined OPE concept. The contributions of the study refer to the verification of the paths taken by the literature and the analysis of PE instruments/models, helping to understand the possibilities of future research that seek to improve models and the participation of managers in this process. The originality lies in the knowledge generated by the mapping of aspects involving the field, enabling the identification of research gaps that point to the desire for future research that deepens the themes Intellectual Capital, Knowledge Management, HRM Practices and Performance Evaluation System.
Keywords: Performance Evaluation. University Context. Constructivist.

RESUMO

O objetivo do artigo é conhecer e investigar as características da Avaliação de Desempenho no Contexto Universitário sob a perspectiva Construtivista. O instrumento de intervenção utilizado foi o *ProKnow-C* que originou um Portfólio Bibliográfico (PB) composto por 67 artigos. A análise e discussão de

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RESUMO

resultados fez uso destas etapas: Mapa da Literatura, Análise Bibliométrica e Análise Sistêmica. O Mapa da Literatura mostra a predominância de estudos abordando elementos de medição e modelos de Avaliação de Desempenho (AD). A Análise Bibliométrica evidenciou que a maior parte dos artigos não fez uso do aporte teórico de Avaliação de Desempenho Organizacional (ADO) quanto às métricas utilizadas. A Análise Sistêmica aponta o desalinhamento entre a avaliação feita nos estudos do PB e o conceito de ADO adotado. As contribuições do estudo referem-se à verificação dos caminhos percorridos pela literatura e a análise dos instrumentos/modelos de AD, auxiliando na compreensão das possibilidades de pesquisas futuras que busquem o aperfeiçoamento de modelos e a participação dos gestores nesse processo. A originalidade está no conhecimento gerado pelo mapeamento dos aspectos que envolve o campo, possibilitando a identificação das lacunas de pesquisa que apontam o anseio por pesquisas futuras que aprofundem os temas Capital Intelectual, Gestão do Conhecimento, Práticas de GRH e Sistema de Avaliação de Desempenho.
Palavras-chave: Avaliação de Desempenho. Contexto Universitário. Construtivista.

Introduction

The measurement and management of performance, which compose the Performance Evaluation (PE), in the last decade, are intensely recommended for every sort of organization, and must be in conformity with the strategy and organizational mission, contributing to the reach of view and goals proposed by the management (AL JARDALI *et al*., 2020). The Organizational Performance Evaluation (OPE) is a process which has direct relation with knowledge, as it aims towards construction, fixation and dissemination of said knowledge, having as basis the actions of identification, organization, measurement and integration of the necessary questions to perform the measurement and management of the organization's strategic objectives' performance (TASCA *et al*., 2010).

It is known that every organization has the ambition of reaching high performance, and such assumption reaches the Higher Educational Institutions (HEIs). Abubakar, Hilman and Kaliappen (2018) report that the government and other stakeholders are increasingly concerned about measuring the performance of academic institutions in the most diverse countries. The research in the field of performance

evaluation in universities, in the first moment, focused on the concern regarding the development of metrics and measurement systems focused towards quantitative aspects related to financial dimensions and cost reductions. Posteriorly, there was also the concern towards metrics that would fulfill the requisites coming from academic regulatory requirements and classificatory tables (BALL; HALWACHI, 1987; BALL; WILKINSON, 1994; CAVE; KOGAN; HANNEY, 1989). As time passed, the need to look at qualitative aspects has been perceived. Thus, new concerns regarding behavioral matters and academic, administrative and management staff perceptions, which then began being approached in literature, as highlighted in the works of Turk and Roolaht (2007), Herdlein, Kukemelk and Turk (2008), and Chen, Wang and Yang (2009).

In this sense, it was perceived that the HEIs needed to go beyond measurement, that is, it was necessary to manage performance. So, the studies began broaching how tools and Performance Evaluation Systems can support the performance management of Institutions, as exemplified in the work of Camilleri (2021), who, upon studying the use of the Balanced Scorecard as a tool for performance management in Higher Educational literature, and points as contribution the execution of critical review which reported the increase of establishment of managerialism in Higher Educational. In a general manner, it is perceived that the literature in the field of Performance Evaluation is going through modifications, and there is an amplitude of questions to be explored in literature.

Facing what has been exposed, the question which guides this research is: *How has the literature regarding Performance Evaluation been developing in the University Context?* To answer such question, the goal of this study is to know and investigating the characteristics of Performance Evaluation in the University Context, from the Constructivist perspective. The process of literature selection was conducted through the intervention instrument Knowledge Development Process-Constructivist (ProKnow-C), as it allowed the selection of a Bibliographical Portfolio (BP) based on the delimitations made by the researcher, generating, as a result, a group of relevant scientific works for the studied fragment of literature; for allowing a critical analysis of the findings; and having the Constructivist approach, thus aligning itself to the goal of this research (ENSSLIN; WELTER; PEDERSINI, 2022; THIEL; ENSSLIN; ENSSLIN, 2017; VALMORBIDA; ENSSLIN, 2016).

Considering that universities are organizations focused on knowledge, according to Mettanen (2005), the institutions which have their activities focused on knowledge present more complex factors in relation to a traditional organization of the private sector because, for those institutions, the factors related to success involve the Intellectual Capital as, for example, the knowledge and ability of the staff and their relationship with clients. Thus, investigating how the Performance Evaluation is developing in this sector is an opportunity to identify paths that will aid in the management of universities. This research contributes still for the consolidation of existing knowledge in literature regarding the mapping of aspects involving this field, encouraging future research which may approach the peculiarities of a teaching institution, such as Knowledge Management and Intellectual Capital.

Performance Evaluation in Universities

The Performance Evaluation (PE) is present in every sort of organization, including academic ones. In the university context, literature in the PE field finds itself in a process of construction. For several decades, the studies approached, almost exclusively, tools focused towards performance evaluation and have dedicated themselves to the establishment of measures (ASIF; RAOUF; SEARCY, 2013; BROAD; GODDARD; VON ALBERTI, 2007); construction of indicators (ANGIOLA; BIANCHI; DAMATO, 2018; ASIF; SEARCY, 2014) and indexes (ASIF; SEARCY, 2014; WU *et al*., 2012); and the elaboration of measurement models (ABUBAKAR; HILMAN; KALIAPPEN, 2018; AL JARDALI *et al*., 2020). Despite the expressiveness of works focused on the evaluation tools, it is perceived that the major part of these studies have been dedicated, initially, towards the measurement of financial aspects. Posteriorly, and facing a highly-competitive scenario, the universities began worrying about the fulfillment of requisites of academic rankings.

The quest for fulfillment of external directives, such as regulatory agencies and classificatory tables, made it so that the conduction of the performance evaluation process in universities was exposed to pressure coming from both internal and external environments. Facing this scenario, the field scholars turned their attention

to such pressures and sought to understand how they affected the performance evaluation in universities.

Regarding to pressure coming from the internal environment, Sulkowski *et al.* (2020), while studying performance evaluation in universities, with emphasis on the tension of public service motivation, have reported that, in the last decades, European universities have gone through processes of change which aimed to increase research quality, and turn those institutions into more comparable, competitive, dynamic and transparent. Thus, the management of universities began demanding from the teaching staff focus on the research indicators, generating an internal pressure for the achievement of those metrics. However, such internal pressure turns towards the fulfillment of classificatory tables and academic rankings, making it so that the look upon internal, specific demands from the university stay in the background.

Thus, it could be verified that internal pressures come from external pressures coming from the government and universities' partners. Regarding external pressure, the studies focus, mostly, on government pressures over universities. In that sense, the field's literature, upon approaching government pressures, highlights the development and adoption of performance management systems aiming the fulfillment of established government demands (DOBIJA *et al*., 2019; GUARINI; MAGLI; FRANCESCONI, 2020; RABOVSKY, 2014) and government financing as a steering wheel for performance management (BIRDSALL, 2018).

The efforts to fulfill the external regulatory requirements, the approval in accreditation processes and the receiving of financial resources appear in PE literature in the university context as a restraining factor, as these institutions need to focus on complying to the external regulatory requirements and leave in the background the internal institutional requirements which need to be considered in the process of performance evaluation.

Methodological Aspects

METHODOLOGICAL FRAMEWORK

The present study is characterized as exploratory. The exploratory research aims to "know the characteristics of a phenomenon to seek, posteriorly, for explanations

of the causes and consequences of the aforementioned phenomenon" (RICHARDSON, 1999, p. 326). Thus, in this work, a selection and interpretation of the variables composing the Bibliographical Portfolio were performed.

Regarding the technical procedures, both bibliographical research and research-action were conducted. The bibliographical research was covered in the data analysis extracted from scientific articles, while the research-action is characterized by the participation of researchers in the production of knowledge.

Regarding data collection, primary and secondary data were collected. The use of primary data was evidenced in the boundaries set by the authors for the selection of the Bibliographical Portfolio (BP); the secondary data were obtained from the analysis of characteristics sought in the BP (RICHARDSON, 1999). The approach to the issue is qualitative. The researchers seek to find out the characteristics regarding the fragment of literature of Performance Evaluation in Universities, and then present a critical analysis of the verified issues.

INTERVENTION INSTRUMENT – PROKNOW-C

The instrument of intervention used in this work is the Knowledge Development Process-Constructivist (ProKnow-C), which was developed by LabMCDA, from the Federal University of Santa Catarina (UFSC), having its first publishing in 2010, in the work of Tasca *et al.* (2010), still unnamed. Posteriorly, the studies of Bortoluzzi *et al.* (2011), Lacerda, Ensslin and Ensslin (2017), Kreuzberg and Vicente (2018) and Maragno and Borba (2017) have made use of the aforementioned instrument, which is being updated and currently is comprised of five steps: Selection of Bibliographical Portfolio (BP); Bibliometric Analysis of BP; Literature Map; Systemic Analysis of BP; and the Identification of research gaps which lead to future research questions and objectives. It has been used in qualitative researching such as the present one, as seen in the studies of Ensslin, Welter and Pedersini (2022), Ensslin *et al.* (2022), Matos, Ensslin and Ensslin (2019), Thiel, Ensslin and Ensslin (2017) and Valmorbida and Ensslin (2016).

DATA COLLECTION PROCEDURES

The Selection of BP was subdivided into three steps: gross BP selection; gross BP filtering; and BP articles representativeness test. The gross BP selection

begins with the definition of research axes, keywords related to the axis, databases where research will be conducted and research filters used in those repositories.

The defined research axes for this study are 'Performance Evaluation' and 'Universities'. With the definition of the axes, the next step was to establish the keywords representing said axes. After defining the keywords, the authors began the search in the databases with the goal of selecting the BP, and the aforementioned was conducted through integration between the two research axes. The boolean research was the following: ("Performance Management" OR "Performance Measuring" OR "Performance Evaluation" OR "Performance Measurement" OR" Performance Measurements" OR "Performance Evaluate" OR "Performance Measure" OR "Performance Indicator" OR "Performance Indicators" OR "Performance Appraisal") AND ("Universities" OR "University" OR "College" OR "Colleges" OR "Higher Education").

The search was conducted in the Scopus and Web of Science repositories, both available in the CAPES website. The following boundary filters were defined for research in the database: articles published in scientific journals; articles published without temporal delimitation; and research conducted with the keywords in the title, abstract and articles. The search was conducted between September 12th, 2020 and September 20th, 2020, and 8.183 articles were identified. Subsequently, the "Keywords adherence test" was applied, aiming to validate the keywords used in the initial search. Five articles were selected from the database among the 8.183 articles, and their keywords were compared to the ones used in the search. Through comparison, it has been verified that the keywords of the selected articles were present in the group of keywords used in the search filter in the databases. That said, this step was concluded with the selection of 8.183 articles, thus composing the gross BP.

In the BP filtering step, the authors have made use of bibliographical management tools: software EndNote X9 (Thomson Corporation, 2020) and Google Scholar (Google, 2020).

This step's first procedure consisted in exporting the information of the 8.183 articles in the database and migrating to the EndNote software. In said software, 1.012 publications were automatically excluded, as they were duplicated. The authors have excluded 1.550 more articles, being that 1.092 publications came from

conferences, books, book chapter, patents, series, etc., which ended up being imported even with the filters set into the database; and 458 articles which were repeated and the software did not eliminate automatically. That way, the Portfolio ended up with 5.621 non-repeated articles. The following activity was to verify the alignment of the articles' titles which aligned to the research's topic, and, thus, 396 articles were found to be aligned.

These 396 articles were analyzed regarding scientific relevance, through their citation on Google Scholar (Google, 2020). The authors defined as relevant articles those with more than 88% of citations, which resulted in 110 articles which contained 25 citations or more. It should be highlighted that the 286 articles, which represent 12% of the citations were considered as works that should have their scientific relevance confirmed.

Next, the 110 articles which were considered as scientifically relevant were analyzed regarding the alignment with the topic through the reading of abstracts. Of those, 51 articles had their abstracts aligned to the topic. The authors of said articles compose the Authors Database, composed, thus, by 106 authors.

For the 286 articles which need to have their scientific relevance confirmed, it has been verified if they have been published at least three years prior to the date of the analysis, denoting that there has been not enough time for the work to be cited by the scientific community. That analysis had as result 100 articles, and these works' abstracts were analyzed regarding their alignment to the topic of the study.

The other 186 articles that have been published over three years prior to the research had their authors compared to the Authors Database, aiming to eliminate articles that were indeed relevant to the research, but were not contemplated in the previous processes. In this process, 180 articles were eliminated, because their authors were not in the Authors Database. The remaining six articles were added to the 100 articles which have been published for at least three years, making a total of 106 articles which had their abstracts analyzed regarding their alignment to the topic of this study. Thus, 53 articles have abstracts aligned to the topic, while the other half were eliminated as they did not meet such criterion.

These 53 aligned articles have joined the 51 articles whose abstracts were also aligned to the topic, making a total of 104 articles with titles and abstracts aligned to the topic of this study.

The next procedure was the analysis of free availability of the 104 articles in their entirety, and 96 of the articles were completely available for free. The following analysis consisted of an integral reading of the 96 works, and it has been verified that 60 of these are aligned to the research topic regarding the titles, abstracts and complete texts. That way, 36 articles were eliminated, and 60 articles went on to the next stage of the ProKnow-C.

Lastly, the representativeness test of the 60 articles composing the Bibliographical Portfolio was conducted, considering the 3.078 bibliographical references contained within the articles. With the same boundaries of the gross article selection (duplicated references, languages, articles published in journals), it came down to 1.091 articles listed for analysis regarding the alignment between the works' titles and the topic. With that analysis, 80 articles had their titles aligned to the topic.

Sequentially, an analysis to identify the scientific relevance was conducted, with a similar procedure to the one used for the gross BP, and the articles with 25 or more citations were chosen. That step filtered 54 articles, and in between those, 14 were already included into the primary Portfolio. That way, the 40 remaining articles were submitted to alignment analysis between the works' abstracts and the research topic, and 14 of them have found to be aligned. Next, it has been found that one of the articles was not available for free reading in its entirety. The 13 remaining articles were reading in their entirety, and it was identified that 7 of them were entirely aligned to the research topic. These articles were added to the 60 articles covered in the primary Portfolio, totalizing 67 articles which composed the BP.

That way, by the end of the ProKnow-C's first round, 67 scientifically relevant articles were selected, according to the perceptions and delimitations of the researchers, whose titles, abstracts and texts were entirely aligned to the Performance Evaluation in Universities.

DATA ANALYSIS PROCEDURES

For data analysis, the Literature Map, Bibliometric Analysis and Systemic Analysis will be operationalized. It is noteworthy that the 67 articles which comprise the BP are listed in the References section, numbered sequentially from 1 to 67, between brackets at the end, allowing the identification of the studies in the conducted analysis.

The Literature Map seeks to present the paths followed by the literature. With that, it was found that the Performance Evaluation in Universities is guided by these eight main aspects: (i) Measurement Elements; (ii) Models; (iii) Internal and External Pressure; (iv) Knowledge Management; (v) Intellectual Capital; (vi) Practices for Human Resources Management; (vii) Consequences; and (viii) Organizational Learning. For the construction of the Literature Map, it was sought to evidencing, in a wide manner, what can be found in the 67 articles of the BP. Thus, the representation does not comprehend any other variables which may have been presented in the articles.

The Bibliometric Analysis pursues the identification and evidencing of the BP characteristics, considering the frequency in the occurrence of the selected variables (VALMORBIDA, ENSSLIN, 2016). In this Analysis were examined the 42 articles of the BP listed in the Literature Map in the categories Measurement Elements and Models. It was sought to analyze how the articles fitting into these two categories have made use of the theoretical contribution for the Organizational Performance Evaluation (OPE) regarding metrics, according to Melnyk, Steward and Swink (2004). That way, the first analysis focused onto verifying which articles have shown the properties of the concept of metric, according to the theoretical contribution which are: measurement, verifiability and comparability (point of reference). The articles which represent these three properties were framed as articles which effectively present metrics. The other analyses were conducted, exclusively, based on those articles and sought to identify the works which evidenced the attributes (metric focus and metric time), and the metrics' functions (control; communication and improvement).

> The Systemic Analysis was made in the 49 empiric articles which comprised the BP, Such Analysis is conducted through discourse analysis of the articles and bases itself in the world view regarding the topic defined by the researcher with the goal of highlighting research gaps (ENSSLIN *et al.*, 2022; THIEL; ENSSLIN; ENSSLIN, 2017; VALMORBIDA; ENSSLIN, 2016). The theoretical affiliation which will be adopted by this study was proposed by Ensslin *et al*. (2010) and extracted from Chaves *et al*. (2013, p.10), who considers the Performance Evaluation as a process to build knowledge within the stakeholder (1) regarding specific context (2) which one proposes to evaluate, from the stakeholder's own perception (3) through activities which identify, organize and measure (4) ordinal and cardinal, integrate (5) and allow the visualization of the impact of actions and their management (6).

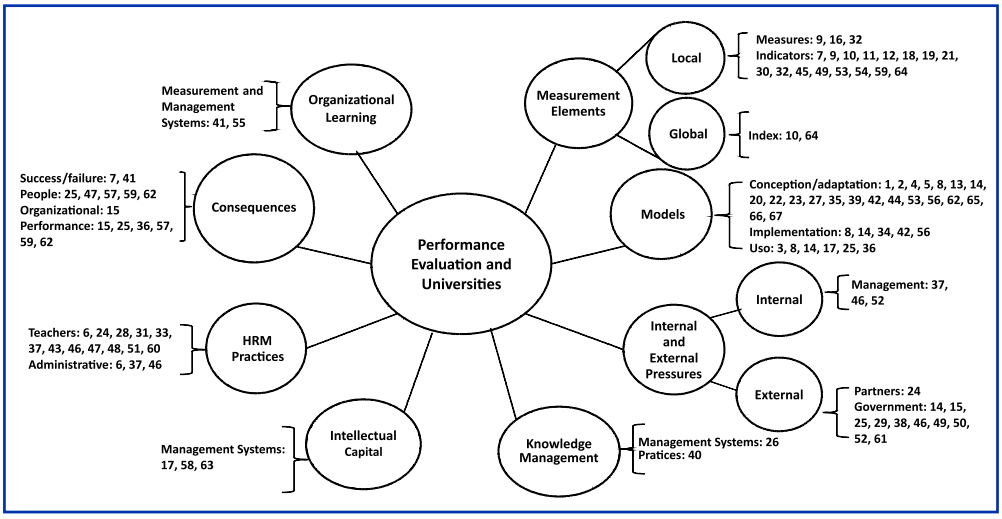
From this concept, derive the six lenses used in Systemic Analysis, and these are: Approach; Singularity; Identification; Measurement; Integration and Management. These lenses were applied considering the articles which worked with the proposal of construction and modification of performance evaluation models, as well as instruments which were used to measure the perceptions of evaluation in universities.

Results Analysis and Discussion

LITERATURE MAP

The Literature Map, developed by the researcher, seeks to synthesize literature through the main aspects regarding the topic. Upon analyzing how articles were developed, it was identified that the performance evaluation in universities has been approached through eight main aspects; (i) Measurement Elements; (ii) Models; (iii) Internal and External Pressures; (iv) Knowledge Management; (v) Intellectual Capital; (vi) Human Resources Management Practices; (vii) Consequences; and (viii) Organizational Learning (Figure 1).

Figure 1 Aspects of the Performance Evaluation in the University Context



Source: Produced by the authors.

The measurement elements show up in the BP articles within the scope of local and global evaluation. The local evaluation comprises the measures and indicators, while global is represented by the production and use of indexes. The performance measurements are generic and have higher level of abstraction, while the indexes have specific character, measurable and with greater operationalization level, and both must be aligned with the results sought by the organization (ASIF; RAOUF; SEARCY, 2013). While some studies have highlighted the importance of measurements and performance indicators being aligned with the institutions' objectives (ASIF; RAOUF; SEARCY, 2013, 2013; ASIF; SEARCT, 2014), others turned towards the development and use of these elements based on government orientations and classificatory tables (BALL; WILKINSON, 1994; PRISACARU; CARADJA, 2019; CHEN; WANG; YANG, 2009). In relation to global evaluation, the performance indexes are proposed to be used as a referential point by teaching institutions aiming towards the conduction of evaluations, creation of educational policies and performance improvement, and, for that, it has been used, as a base, university ranking guidelines and classificatory tables (WU *et al.,* 2012). That way, measures, indicators and performance indexes must be developed with the goal of supporting the university management considering the singularity and the results sought by the institution. Thus, the institution's strategy must guide the definition and development of these measurement elements.

Another aspect found in the BP articles analysis was that of models aimed towards performance evaluation. The models were analyzed considering the life cycle, proposed by Bourne *et al.* (2000), which is composed of four stages: (i) conception/design; (ii) implementation; (iii) usage; and (iv) review. Among the articles that have presented models, a greater frequency of studies focused exclusively in the conception/design stage has been noted. Regarding the conception stage, it is necessary to point out the predominance of models which were adapted for the organizations, as exemplified by the studies of Chen, Wang and Yang (2009) and Philbin (2011), which have made adaptations of the Balanced Scorecard. The adapted models are not able to encompass all the specificities of the organization and might compromise the performance evaluation's success. In this context, surfaces the importance of the construction of singular models, still discrete in the literature regarding universities, which recognize the organization as singular both on what

concerns its managers and its potentialities and vulnerabilities. The implementation and usage stages show up in a smaller number of the BP studies, and none which approached the System review's stage were identified. The findings corroborate the work of Matos, Ensslin and Ensslin (2019), noting that the greatest consolidation and volume of publications of research that dealt with about the Performance Evaluation System (PES) Life Cycle is related to the System's conception/design stage. Thus it is perceived, in the literature, the consolidation concerning the conception of models which evaluate the university performance, but it is still necessary that the studies advance towards the other stages which compose the PES life cycle. The advance of literature, covering all stages of the aforementioned life cycle, contributes to the creation of knowledge regarding the holistic view of the PES' life cycles (MATOS; ENSSLIN; ENSSLIN, 2019).

The measurement elements and the PES act as facilitators for the reach of the organizational performance. However, the reach of the aforementioned performance submits the universities to internal and external pressures. The internal pressures come from the universities management to the academic staff (teaches and researchers). Sulkowski *et al.* (2020) report that the fulfillment of the classificatory tables makes it so that the performance evaluation systems of the universities might not be effective. The management, in turn, begins demanding from the teaching staff the focus on the research indexes. These internal pressures make it so that the activities focused onto the effectiveness of the System are put into the background, as the new focus becomes the search for evaluation points, important publishing and prestige scholarships. However, the internal pressures come from the external ones, brought by the government and the universities' partners. The literature points that the pressure brought by partners are aimed towards individual performance. Thus, the pressure is related to the perception of valuation of these partners (DECRAMER *et al.*, 2012). The pressure coming from the government regarding performance evaluation has grown in the last few years, and has appeared based in policies that brought more competition among universities (MELO; SARRICO; RADNOR, 2010). These government policies usually link the financing to the organizational performance (BIRDSALL, 2018; TURK; ROOLAHT, 2007), but it should be highlighted that said competition is not accessible to all universities, because in addition to the development and improvement process of each university happening in different mo-

ments, they have structures and are inserted into different territorial and economic contexts. Lastly, Barnabe and Riccaboni (2007) emphasized that the internal and external pressures are making the universities changing their governance systems, as well as organizational structures and management practices.

One of the concerns with the management practices found in literature is the Human Resources Management Practices (HRM). The studies which had this as the central topic, in their majority, have worried about these practices along with the teacher staff's evaluation. The financial stimuli, as the remuneration and payments for results/performance, were elements which have taken the spotlight regarding the teaching staff's evaluation (HERDLEIN; KUKEMELK; TURK, 2008; KALLIO; KALLIO, 2014; POLNAYA; NIRWANTO; TRIATMANTO, 2018; RUTHERFORD, 1988; TURK, 2008). The concern with such performance has reflexes on the organizational performance, since in the university context the teachers are seen as the main entities responsible for the knowledge and development of the students, and the good teacher performance impacts on both the student and organization's performance (RASHEED; YOUSAF; NOOR, 2011). Thus, the eye towards the HRM Practices surfaces as one of the possibilities of improvement of institutional performance. However, it is perceived that the study of HRM Practices regarding the performance evaluation is still focused on financial aspects, given that there still is much to be discussed involving other aspects, such as the capacitation of the teaching staff, wellbeing at work and professional development. In that sense, the universities are organizations focused towards knowledge, and the qualitative elements must be taken in to consideration.

The centrality of universities in knowledge is also explicit in the BP articles, by studies aimed towards the knowledge management, which appear under two aspects: performance management practices and systems. Ngoc-Tan and Gregar (2019), while studying knowledge management and the impacts in organizational performance in a Higher Educational Institution, found out that the knowledge management processes, through their practices and tools, influence the dimensions of the aforementioned institution, including the research and publishing performance, the financial and involvement with industry and the community. The link between knowledge and performance management is also evidenced in the study of Esposito *et al*. (2013), which affirms that the management systems go beyond the control

monitoring of people and organizations, as they can be used as an important way of managing knowledge, as well as creating new knowledge for the organization. The knowledge management involves several performance dimensions of the university context, and the processes of knowledge creation and management involve, besides knowledge itself, the Intellectual Capital that exists in universities.

The Intellectual Capital (IC), in Higher Educational Institutions, is an element of entry and exit (ANDREEVA; GARANINA, 2016). In the BP articles, the IC was studied with emphasis on the performance management systems. Tjahjahi *et al*. (2019), upon analyzing the IC, performance management system and organizational performance, have shown that the IC mediates the relationship between performance management system and organizational performance, and highlight the importance of the managers building a strong IC in the implementation of strategy. Veltri and Puntillo (2020), upon investigating if the systems of performance management in universities take into consideration the IC management as an criterion for the managers evaluation, have found out that IC is far from being considered by the university as a criterion for the evaluation of managers. That happens due to the absence of a system design which considers the IC as an element which has to be measured and incorporated to the managerial practices of the organization. Camilleri (2021), while studying the use of the Balanced Scorecard as a management tool in Higher Educational, reports that the perspective of the organizational capacity is related to innovation and learning, and also states that, under such perspective, the performance is examined through lenses, and one of these lenses is Human Capital. In such context, it is perceived that the research of performance evaluation in universities with emphasis on the IC must advance. The IC is perceived as a prominent element in teaching institutions, contributing to the creation of value and increase of competitive advantage, but there still are gaps regarding the recognition of CI in the organization's strategy, conception/implementation and use of the Performance Evaluation Systems and the way in which such element contributes to the reach of organizational performance.

Besides the aforementioned elements, the literature presents implications of performance evaluation in the university context through consequences for peoples, capacity and organizational performance (FRANCO-SANTOS; LUCIANETTI; BOURNE, 2012). The main consequences were identified on the level of people

and the organizational performance. That way, the studies have pointed out that the adoption of performance management systems which had as focus a greater number of quantitative indicators, such as the amount of publications and weekly working hours, instead of qualitative ones, have had impact on motivation, satisfaction, conflicts and tensions, as well as the performance of teams (DOBIJA *et al*., 2019; TER BOG; SCAPENS, 2012; TURK *et al*., 2016; VAKKURI; MEKLI, 2003). Nisio, Carolis and Losurdo (2018), while studying the introduction of the performance management system in an university in the south of Italy, identified the conditions which have impacted on the success or failure of the system's adoption, highlighting the importance of managerial changes which base themselves more in cultural elements, competences and abilities, in organizational learning, than in the application of regulations, on the mere transposition of models and tools coming from private companies. The identification of consequences must not be seen as something negative for the organization, but rather as a process that generates organizational maturity and learning, contributing to the organization's continuous improvement process.

In this context, the organizational learning has been covered in the BP articles with emphasis in the interaction with performance measurement and management systems. Tapinos, Dyson and Meadows (2005), upon studying the impact of the performance systems in the ways adopted by one university's management, have seen that the performance measurement improves the organizational learning and enhances the learning through strong and weak points of the organization, identifying source of competitive advantage and areas which need improvements. Studies involving the introduction of the performance management system have highlighted the organizational learning in the context of managerial changes (NISIO; CAROLIS; LOSURDO, 2018). The organizational learning associated to processes which involve cultural elements and communication promote the organizations' constant improvement, however it is a field which is in ascension in the performance evaluation in the university context's area. In this direction, there is a lot to be studied and deepened on the topic.

BIBLIOMETRIC ANALYSIS

The Literature Map has shown that 42 articles from the BP have presented the topics measurement elements and/or models as main aspect. Such concentration

of articles disserting about these topics evidences the relevance of such categories for the scope of Performance Evaluation in Universities. That way, this section analyzes how the articles framed into these two categories have made use of the theoretical affiliation of Organizational Performance Evaluation (OPE) concerning metrics, according to Melnyk, Stewart and Swink (2004).

Melnyk, Stewart and Swink (2004) conceptualize metrics as a measure that can be evidenced in quantitative or qualitative manner, verifiable and defined from a reference point. The first analysis conducted focused into verifying if the articles have presented the conceptual properties of metrics, according to the established theoretical affiliation. Thus, it was noticed that the majority of the articles have shown only information of the used measurements, as exemplified by the studies of Alani, Khan and Manuel (2018) and Philbin (2011), which presented the measurements and did not advance towards the other properties of the concept. Regarding verifiability, eight works have evidenced data and processes allowing that independent sources arrive to the same metric value, such as the works of Wu *et al.* (2012) and Zangoueinezhad and Moshabaki (2011). Lastly, only three studies have presented the possibility of understanding of the meaning of the metrics starting from a reference point which has been previously set. In a general manner, only the studies of Al Jardali *et al*. (2020), Arena *et al.* (2009) and Bana e Costa and Oliveira (2011) have presented metrics, according to the properties in the theory. In the three articles, the authors have proposed models of performance evaluation and, upon presenting the metrics, evidenced qualitative and quantitative measurements, the data and processes which have secured the metric's verification dynamics and the points of reference which guide the comparability. Facing the findings, it is noted that the literature, in the scope of performance in universities, must advance regarding the improvement and completeness of the metrics, because the isolated definition of measurements, without the possibility for verification and comparison, damages the organization's performance evaluation process.

The metrics can be classified considering two attributes: (i) metric focus; and (ii) metrics time. The metric focus is related to the resource involved, usually financial or operational, while the metrics time evidences if the metrics will be used in a predictive manner or to repute the result's performance (MELNYK, STEWART; SWINK, 2004). For the metrics focus, it has been verified that the studies of Al Jardali *et al.*

(2020) and Arena *et al.* (2009) have presented metrics with focus both on financial and operational aspects; while in the work by Bana e Costa and Oliveira (2011), the metrics were focused on the operational aspect. Regarding the metrics time, the three articles have focused on the judgement of the result's performance. In a general manner, it is perceived that the use of metrics in a predictive way still appears discretely in literature, evidencing an opportunity for the development of studies regarding such attribute.

Another aspect which was presented in the theoretical affiliation for metrics refers to these functions: (i) control; (ii) communication; and (iii) improvement. The metrics proposed by Arena *et al.* (2009) are comprised within these three functions. In the studies of Al Jardali *et al.* (2020) and Bana e Costa and Oliveira (2011), which have presented models of performance evaluation, it was perceived that the defined metrics allow the reach of control and improvement functions. In this context, a gap regarding the metrics development which reinforce the communication function for the internal and external stakeholders of the organization.

As it can be noticed, despite the studies which deal with measurement elements and performance evaluation models being representative in the field of university management, the use of the theoretical affiliation of Organizational Performance Evaluation is still discrete, regarding metrics. In that sense, it was seen that literature must evolve in such aspect in a way in which the conception of PE models and instruments consider, in the development of metrics, the aspects and functions covered in the theoretical affiliation of OPE.

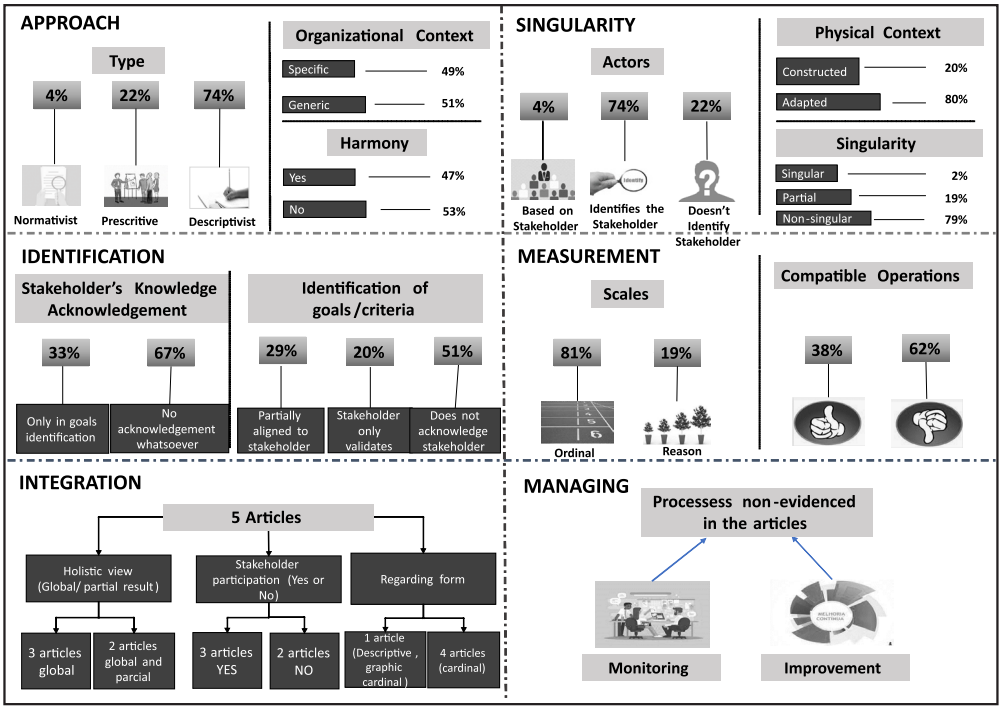
SYSTEMIC ANALYSIS

In order to perform the Systemic Analysis, 49 articles were used and the results are synthesized in Figure 2. The first lens is the Approach, which investigates the scientific approach used in the construction of the model/tool and the context in which it was built, and, lastly, there is verification of the harmony between the scientific approach and the construction context (ENSSLIN L. *et al.*, 2022; THIEL; ENSSLIN; ENSSLIN, 2017). The Descriptivist approach was the most recurrent in the analyzed articles. This evidences that the studies have replicated indexes and models found in literature and in government guidelines and orientations. This replication came, mainly, due to the intensification regarding competitiveness in the

university context. In that sense, university turned their attentions towards the placement into university rankings, justifying, thus the adoption of models consolidated in the literature and indicators evidenced in guidelines of classificatory tables, such as is the case of the studies of Abubakar, Hilman and Kaliappen (2018), Asif and Searcy (2014), Herdlein, Kukemelk and Turk (2008), and Wu *et al.* (2012). However, models based on literature and regulations do not consider the factors and characteristics which give uniqueness to the organization and which, consequently, have influence over the university's performance. One of the ways for covering such gap is the use of models with Prescriptive approach, as seen in the studies of Tapinos, Dyson and Meadows (2005), Tanveer, Karim and Mahbub (2019) and Taylor and Baines (2012), which performed adjustments in literature models seeking coherence between the management's discourse and the model. Still regarding the approach, no models based on Constructivism were found, and the majority of the works did not evidence harmony between the used approach and the organizational context in which the model was applied. Thus, it is noteworthy that the literature must evolve in such aspect through studies which develop models that consider the particularities, needs and perceptions of the organizations' managers. This model configuration allows the creation of knowledge and organizational learning.

The second analyzed lens is the Singularity. This lens has as its focus verifying if the article's authors recognized that the problem is unique in terms of physical and stakeholders' context. In that sense, authors of two articles (ARENA *et al*., 2009; BANA E COSTA; OLIVEIRA, 2011) have pointed out the development of indicators considering the perception of managers, but only the study of Bana e Costa and Oliveira (2011) was considered singular, as it has shown the development of indicators based on the managers' perceptions and the unique characteristics of the organization's physical context. From the 49 articles in the BP, 37 were deemed non-singular, as they have constructed their indicators considering actors and physical environment in a generic form. Thus, in the university context, there is a deficit of construction of singular performance indicators which are developed with values, interests and preferences of the stakeholders and characteristics which are unique and specific to the organization. Such singularity contributes to the performance evaluation in efficient and effective way, seeing that the indicators really represent what the organization wants to measure.

Figura 2 BP diagnosis facing the lenses used in the Systemic Analysis



Source: Produced by the authors.

The Identification lens investigates if the stakeholders' values and preferences are considered in the moment of construction of the model/measurement tool and if it participates in the identification of criteria and goals which will be used to build/adapt the model (THIEL; ENSSLIN; ENSSLIN, 2017). Some studies acknowledged the stakeholder's knowledge only in the step for identification of criteria and goals, for example, the studies of Bana e Costa and Oliveira (2011) and Arena *et al.* (2009), which consider the stakeholders' expansion of knowledge only in the identification of the indicators that were used. In the findings, no study was identified as legitimate, that is, which took into consideration the expansion of knowledge of the stakeholder in the whole process and which used, as a base, their values and preferences. The formulation and implementation of strategy must acknowledge the participation of stakeholders in all the steps of the process, contributing so that the reach of the organizational performance is conducted successfully. However, the

results evidence that the majority of the studies does not acknowledge the stakeholders' knowledge and preferences in the university context.

The Measuring lens verifies which scale of measuring was used in the tool, and if the conducted operations are in accordance to such scales, according to the measurement theory. From the 49 empirical articles in the BP, it has been verified that 26 did the measuring and that most of them use the ordinal scale. The results point that 10 studies conducted statistical operations compatible with the scale used, for example, the study of Franceschini and Turina (2011) and Rasheed, Yousaf and Noor (2011). However, the majority of the articles does not conduct operations compatible with the scale adopted, in accordance to the measurement theory. Regarding the articles whose mathematical operations were not compatible, most has made use of the Likert Scale and applied mathematical operations as average and attribution without evidencing the transformation of these results in compatible scales with that kind of scale. It is necessary to emphasize that the absence of compatibility between scale and the operation used compromises the validity of the tool built/used in the article.

The lens Integration evidences if the tool presents the integration of the indicators. The findings point out that only five studies have presented the integration activity, being that the others have not shown or evidenced such. Of these studies, three present the integration through a global result (ARENA *et al*., 2014; ASIF; SEARCY, 2014; SURYADI, 2007), and two of them evidence the participation of managers. Two articles have conducted the integration through global and partial results (BANA E COSTA; OLIVEIRA, 2011; NAZARI-SHIRKOUHI *et al.*, 2020), being that one of them considers the participation of managers. Lastly, regarding the means of integration, one article conducts, descriptive and/or graphically and cardinally, using levels of reference (benchmark and deficient); and the others, cardinally using levels of reference (benchmark and deficient). Facing such, it is perceivable that the integration of indicators is scarcely evidenced in literature, and it is necessary to consolidate the participation of managers in this process, thus allowing a holistic view of organizational performance.

The lens Management seeks to verify if the models allow the monitoring and improvement of performance through the identification of the current situation's diagnosis and the availability of process to create improvement actions. The BP articles

did not evidence how the organizations monitor the performance and how improvement actions are developed and applied. This result points the predominance of studies focused on the conception of performance measuring models/instruments. That way, there is a gap regarding research works which approach the monitoring of such models and the improvement of performance in the university context.

In a general manner, it is perceived that the authors of the studies in the university scope are worried about models/instruments which allow the increase of competitive advantage of the universities. However, in the processes of construction of these models, sometimes, the organizational strategy and the effective participation of managers stays in the background, making it so that the indicators are built in a generic way, disregarding the specificities of the organization.

Final Considerations

This research had as its goal to discover and investigate the characteristics of Performance Evaluation in the University Context, under the constructivist perspective. For that, the intervention instrument *ProKnow-C* was used, which allowed the selection of 67 articles and the conduction of critical analysis for the creation of knowledge regarding the studied context. In that sense, research gaps were identified, and those can be explored in future works. The studies' boundaries should be emphasized, be them: (i) the search covered only articles which were available for free and in English language; (ii) the consulted database were Scopus and Web of Science; and (iii) the characteristics and theoretical affiliation used were the ones defined by the authors. However, the study sought to demonstrate what effectively is being published in the studied field.

The construction of the Literature Map showed that the studies' authors discussed, in their majority, indicators, measurements and models of performance evaluation. The development of such elements still presents influence of government policies and university rankings/classificatory tables guidelines, making it so that the organization's strategy is relegated to the background. The Map highlighted the appearance of studies directed towards the particularities of institutions focused on knowledge, such as the works of Esposito *et al*. (2013) and Tjahjadi *et al*. (2019),

which have approached the topics of Knowledge Management and Intellectual Capital. In a general sense, it is noticeable through the Map that, in literature, the field of performance evaluation in the university context is going through an evolution process, and there still is a plethora of questions to be investigated in the area.

In the Bibliometric Analysis, it was observed that the majority of the articles has not made use of the OPE conceptual affiliation regarding metrics, according to Melnyk, Stewart and Swink (2004). It has been noticed that most studies limited themselves to developing performance measures. Thus, it has been seen that there was no concern for turning such measures verifiable, as well as evidencing referential points which allowed the comparability of the metrics.

Regarding the Systemic Analysis, it has been observed that, despite the studies having worked, in their majority, performance evaluation tools, there still is a gap in the construction of instruments and models which consider the singular characteristics of the organization. Besides that, the majority of the studies also has not considered the particularities, needs and perceptions of the organizations' managers. The results point out the absence of interaction between researchers and managers in the analyzed environments. In that sense, it was noted that the number of studies which use the information coming from organizations' management is discretel, and such finding highlights the lack of alignment between the literature and the concept of OPE proposed in this study.

This research contributes theoretically for the PE in the university context literature upon presenting a mapping of the roads travelled by the literature. Such mapping points out how the area's literature must advance, that there are several topics which permeate the scope of PE in universities and that it is necessary to amplify the researches in this area that approach the particularities which involve a teaching institution, such as Knowledge Management and Intellectual Capital. Another contribution of this work is linked to the analysis of instruments/models of performance evaluation presented in literature with the theoretical affiliation defined for this study. This contribution is destined both for the literature in this area, once that upon disclosing these models' characteristics, it is possible to direct future research which seek the improvement of the PE models, as well as for the managers of HEIs which need to understand the importance of PE tools and the role of management in this process.

Lastly, it was identified as a research limitation the exploration of the following topics which were not approached in depth in this study: Intellectual Capital, Knowledge Management, Human Resources Management Practices and Performance Evaluation System. Furthermore, as future Research Agenda, the conduction of empirical studies in the scope of investigation proposed in this study according to Chart 1 is suggested.

Chart 1 Research Agenda

Elements	Research Agenda
Intellectual Capital	• How does Intellectual Capital contribute to the improvement of organizational performance? • What is the role of Intellectual Capital in the conception of the PES?
Knowledge Management	• How do the practices of Knowledge Management contribute to the organizational performance? • How does Knowledge Management contribute to the use of the Performance Management System?
Human Resources Management Practices (HRM)	• How do the HRM practices, with emphasis on teacher qualification and professional development, contribute to the improvement of the organizational performance?
Performance Evaluation System (PES)	• Which characteristics/elements must be considered in the conception of a Performance Evaluation System? • What is the role of managers in the conception/implementation of a PES?

Source: Produced by the authors.

Facing such, the originality of this research is centered on the knowledge created by the mapping of aspects that involve this field, which allowed for a diagnosis of the paths traced in the area and identification of research gaps which point the yearning of literature for future research which deepen the topics Intellectual Capital, Knowledge Management, HRM Practices and Performance Evaluation System.

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