

ORGANIZATIONAL ASSESSMENT METHODOLOGY OF CORPORATE UNIVERSITIES

METODOLOGIA DE AVALIAÇÃO ORGANIZACIONAL DE UNIVERSIDADES CORPORATIVAS

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ABSTRACT

Purpose – In the available literature, we can find research on how to conduct an assessment of an organization's Corporate Education, but not of the Corporate University. Therefore, in our research we propose a methodology to evaluate the organizational management of Corporate Universities.

Design/methodology/approach – This research is descriptive and uses the multicriteria analysis method as basis. Specifically, we use the Multi-Attribute Global Inference of Quality (Magiq) methodology for the definition of weights, to measure the importance of factors and sub-factors that determine the organizational evaluation of Corporate Universities.

Findings – The resulting methodology contemplates six factors and 18 sub-factors. The six factors in descending order of weights are: Strategic Management, Organizational Learning, Process, Performance, Institutional and Market.

Research limitations/implications – The fact that our research is based on the knowledge of Brazilian experts, it infers the use of this methodology only for the case Brazil, which can be seen as a limitation of this research.

Practical implications – The leaders of Corporate Universities will henceforth be able to mirror and look for greater performance to achieve their goals.

Originality/value – Our research intends to contribute to reduce the gap either in theory and practice of how to evaluate Corporate Universities. From there, we hope to make possible to compare them, to create rankings and to establish awards, since the existing literature provides criteria on how to evaluate Corporate Education, but not Corporate Universities.

Keywords - Corporate Education; Corporate University; Business Strategy; Organizational Management Assessment; Multicriteria Analysis.



RESUMO

Objetivo - Na literatura disponível, podemos encontrar pesquisas sobre como realizar uma avaliação da Educação Corporativa de uma organização, mas não da Universidade Corporativa. Portanto, em nossa pesquisa propomos uma metodologia para avaliar a gestão organizacional de Universidades Corporativas.

Desenho / metodologia / abordagem - Esta pesquisa é descritiva e tem como base o método de análise multicritério. Especificamente, utilizamos a metodologia Multi-Attribute Global Inference of Quality (Magiq) para a definição de pesos, para medir a importância dos fatores e subfatores que determinam a avaliação organizacional das Universidades Corporativas.

Resultados - A metodologia resultante contempla seis fatores e 18 subfatores. Os seis fatores em ordem decrescente de pesos são: Gestão Estratégica, Aprendizagem Organizacional, Processo, Desempenho, Institucional e Mercado.

Limitações / implicações da pesquisa - O fato de nossa pesquisa se basear no conhecimento de especialistas brasileiros, infere a utilização desta metodologia apenas para o caso Brasil, o que pode ser visto como uma limitação desta pesquisa.

Implicações práticas - Os líderes das Universidades Corporativas passarão a ser capazes de se espelhar e buscar um maior desempenho para atingir seus objetivos.

Originalidade / valor - Nossa pesquisa pretende contribuir para diminuir a lacuna teórica e prática de como avaliar Universidades Corporativas. A partir daí, esperamos possibilitar compará-los, criar rankings e estabelecer premiações, uma vez que a literatura existente fornece critérios para avaliar a Educação Corporativa, mas não as Universidades Corporativas.

Palavras-chave: Educação Corporativa; Universidade Corporativa; Estratégia de negócio; Avaliação de Gestão Organizacional; Análise multicritério.

1 INTRODUCTION

As an evolution of the traditional Corporate Training and Development (T & D) area, the Corporate Education emerged in the United States between the years 1940 and 1950, while in Brazil it appeared at the end of the 1990s. Corporate Education was institutionalized in several companies in the so-called Corporate Universities (Eboli, 2004).

According to Meister (1999), the emergence of Corporate Universities was due to several aspects, such as: the birth of lean and flexible organizations; the development of the knowledge economy; decrease in lifetime employment; the expansion of the global market, and the State's inability to provide qualified labor for the market.

Corporate University (CU) is an innovative concept of empowering people. It is a work-oriented education system, with structures created within the company itself, aiming to wisely manage the skills and talents of the employees, by forming the professionals' profile according to the reality of each organization (GlobalCCU, 2017).

Integrated organizational knowledge among individuals, technologies and processes are advocated as keys to create value (Teece, 2000) and competitive advantage (Barney, 1991). The need to manage them effectively can support the strategic vision and initiatives of an organization to lead the creation or the development of a CU (Rheume; Gardoni, 2015).

The theme CU is widely disseminated among large companies around the world, considering that a World Council of CUs (GlobalCCU) exists, as well as the GlobalCCU Awards (Castro & Eboli, 2013).

Every two years, the GlobalCCU awards the Corporate Universities, Academies, Campuses, and Learning & Development structures in order to recognize the best on a global scale in creating strategic value for business, people, organizations and societies (GlobalCCU, 2017).

GlobalCCU has the following eight awards: general; impacts on business; culture and brand; social responsibility; holistic and digital human approach; innovation; leader of the year. Besides,



they are also a certifier of Compliance, Performance and Excellence (GlobalCCU, 2017).

Apart from the GlobalCCU methodology, which has no public access, other scientific studies on Corporate University evaluations have not been found in the literature, although there are studies on Corporate Education assessment (Borges-Andrade, 2006; Carvalho, 2014; Kirkpatrick & Kirkpatrick, 2010; Hamblin, 1978). We found only one theoretical research about CU involving four constructs proposing a model (Castrillon, 2018) and only one thesis found on the evaluation of Corporate University (Marinelli, 2013) focus exclusively on development banks in Brazil.

In this context, our research question is: How to carry out an organizational evaluation of Corporate Universities? Then, this research aims to elaborate an evaluation methodology for the organizational management of Corporate Universities.

The research is a descriptive approach and the data analysis method used is the Multi-Attribute Global Inference of Quality (Magiq). The Magiq method is a multicriteria analysis tool that allows the determination of a general quality measure for each system, in a set of systems, when each of them is compared, based on an arbitrary number of attributes (McCaffrey; Koski, 2006).

Our research intends to contribute to reduce the gap either in theory and practice of how to evaluate Corporate Universities. From there, we hope to make possible to compare them, to create rankings and to establish awards, since the existing literature provides criteria on how to evaluate Corporate Education, but not Corporate Universities.

Methodologically, our research innovates because it incorporates the technique of multicriteria analysis, and this method has not yet been found in the literature for this empirical object. As practical relevance, the leaders of Corporate Universities will henceforth be able to mirror and look for greater performance to achieve their goals.

As an extension, for future work, we want to work on the institutionalization of awards and certifications of Corporate Universities in Brazil, as well as around the globe. And further, to elaborate software that can measure this performance and rank it.

2 CORPORATE UNIVERSITIES AND RESEARCH TOPICS

In this section we discuss the concepts, origin and areas of activity of Corporate Universities, as well as research on Corporate Education and Corporate University assessment.

2.1 Background on Corporate University

For Nielsen and Michailova (2007, p.319), the Corporate University is a Knowledge Hub, a knowledge flow coordinator of an organization in the division, integration, creation, transformation and transfer of knowledge (Kotlarsky, Van Fenema, & Willcocks, 2008), and between business units (Both & Both, 2009; Tsai, 2002).

The CU concept aligns employee education with business objectives, and according to Meister (1999, p.29), CU is “a strategic umbrella to develop and educate employees, customers, suppliers, and the community in order to comply the corporate strategies of the organization”. Then, it can be seen that Corporate Education (CE) is institutionalized by the Corporate Universities (CU) in the organizations.

For Ecuonet (2017), the Corporate University is a management tool designed to support the implementation of organizations’ global strategies through training and knowledge activities, both at the individual and organizational levels.

Alperstedt (2003) explains the term “corporate university”. The term “corporate” means that the university is tied to a corporation and that educational services are not its primary purpose.



The term “university” should not be understood within the context of the formal higher education system, which designates student education and the development of research in several areas of knowledge. Instead, the “corporate university” offers knowledge related to a business area of a specific organization. Therefore, the term university for those companies is basically a marketing artifice (Alperstedt, 2001; Junqueira, 2010).

However, many Corporate Universities have adopted some of the characteristics of traditional universities: rectors, catalogs of courses, schools within the university and even some campuses. But, one area that corporate academies have not worked on is institutional research (Allen & Mcgee 2004).

When focusing on the functions of teaching, research, extension and management of formal universities, it is verified that Corporate Universities have a greater relationship with teaching and management. Although, the CU may be starting to undertake certain forms of research on knowledge of processes, and to consider that they provide an extension service to society in relation to the relevant interests of their organizations (Barnett, 1999).

The term Corporate University (CU) is best known in the United States (Meister, 1999). In Europe, the most widespread term is Corporative Academy (Renaud-Coulon, 2002 apud Allen & Mcgee, 2004).

Morin and Renaud (2004) report that the first two CUs in the United States were: General Motors Institute and General Electric University created between the 1940s and 1950s.

In Brazil, Corporate Education began in 1992 with the implementation of ACCOR Academy as a support system for management skills, followed by other organizations such as Ambev University (Eboli, 2004).

According to Castro and Eboli (2013), it is estimated that by 2012 there were between 500 and 600 CUs in Brazil, although there is no official database.

2.2 Research on Corporate Education and Corporate University evaluation

The International authors (Allen & Mcgee, 2004; Firtz-Enz, 1995; Kirkpatrick & Kirkpatrick, 2010; Hamblin, 1978; Ma, Liu, Jiang, Yu, & Gan, 2017; Meister, 1999; Philips, 1991) and national ones (Alperstedt, 2001; Borges-Andrade, 1982; Eboli, 2004; Lacombe & Albuquerque, 2008; Vargas & Abbad, 2012; Vergara, 2000) are preeminent in research on this empirical object, having studied topics such as evolution, trends, scope, pedagogy, productivity, alignment with performance, cooperation, competitiveness and evaluation. A bibliometric summary presents the corresponding researches and authors (Figure 1):

Based on the available literature, it is inferred that there is a lack of studies on Corporate University evaluation and only one study was found. However, the study focuses on development banks, although there are studies on training and corporate education evaluation,

In Figure 2 below, we present a list of possible factors and sub-factors studied to measure Corporate Education, which can also contribute as an input to measure CU.

Based on the literature variables, our methodology will guide the elaboration of a complete and structured list as possible, in order to give conditions for the measurement of the excellence in the performance of Corporate University.

Figure 1 – Bibliometric Summary on Research in Corporate Education and Corporate Universities

Theme	Author
Corporate Education Assessment	Borges-Andrade (2006); Carvalho (2014); Maurício, Vieira, & Claro (2018); Kirkpatrick & Kirkpatrick (2010); Hamblin (1978).
Training as Competitive Advantage	Basterretxea & Albizu (1982).
Return on Investment in Corporate Education	Phillips (1991).
Impact of Tacit Knowledge on Generating Competitive Advantage	Berman; Evans (1998).
Learning as a Competitive Advantage	Hatch & Dyer (2004); Ma et al. (2017)
Corporate Education Productivity	Allen & Mcgee (2004).
Corporate Universities Profile	ABTD (2014); Eboli (2010).
Stakeholders-based Analysis	Guerci, Bartezzaghi, & Solari (2010).
Management by Competence in Corporate Universities	Santos, Nascimento, Andrade, & Santos (2012).
Operational Process	Abel & Li (2012).
Assessment of Corporate University in development banks	Marinelli (2013).
Coordination of the knowledge flow of Corporate University in the Context of multinational companies	Slettli & Gronhaug (2017).

Source: Prepared by the authors (2017).

Figure 2 - Variables to evaluate organizational performance in Corporate University.

Factor	Sub-factor	Author
Environment	Society, Information and Knowledge	Martão & Demajorovic (2019); Marinelli (2013); Moore (1997).
Compliance; Governance	-	GlobalCCU (2017); Marinelli (2013).
Strategic Acting and Alignment	Objectives, mission, alignment with people management; alignment with organizational objectives	Castro & Eboli (2013); Freitas-Dias & Albuquerque (2014); GlobalCCU (2017).
Competitive Advantage Source	Learning, training.	Barbosa (2016); Basterretxea & Albizu (2011); Berman & Evans (1998); Hatch & Dyer (2004).
Competition with Traditional Universities	-	GlobalCCU (2017).
Alliances and Partnerships	-	GlobalCCU (2017).
Internationalization	-	Castro & Eboli (2013); Slettli & Gronhaug (2017).
New CUs or Products	-	GlobalCCU (2017).
Use of Suppliers	-	Barbosa (2016).
Risks and stumbling blocks of CUs	-	Castro & Eboli (2013).
Target (Value Chain Education)	Stakeholders, customers, suppliers, franchisees, community and other stakeholders	Castro & Eboli (2013); Freitas-Dias & Albuquerque (2014); Guerci et al. (2010); Marinelli (2013); Parker (2017).

Factor	Sub-factor	Author
Marketing and Branding	-	GlobalCCU (2017).
Management by Competence and knowledge coordination	-	Marinelli (2013); Santos et al (2012); Slettli & Gronhaug (2017).
Culture of Continuous Learning and Behavioral Change	Promoting learning	Freitas-Dias & Albuquerque (2014); Kirkpatrick (1994); Hendriarto & Suzanty (2017).
Leadership Development	-	Barbosa (2016); Castro & Eboli (2013); GlobalCCU (2017); Marinelli (2013), Maurício, Vieira, & Bido (2019).
Talent Engagement and Retention	-	Barbosa (2016).
Design and Structure of Process	People, Structure, Resources and Processes	Abel; Li (2012); Hendriarto & Suzanty (2017); Marinelli (2013).
Education Methodologies	Forms of Learning, Distance Learning, Hard skill x Soft skill, Use of knowledge pills	Barbosa (2016); Delloite (2016).
Formal certification of diplomas	-	GlobalCCU (2017).
Organizational level	-	Castro & Eboli (2013).
Scale	Scope of the contingent of employees	Parker (2017).
Mobile and digital technology and Innovation	-	Abel; Li (2012); Castro & Eboli (2013); GlobalCCU (2017), Ma et al. (2017).
Maximizing Impact and business impact	-	GlobalCCU (2017); Parker (2017).
Monetization	-	Parker (2017).
Investment as a Strategic Action	-	Barbosa (2016).
Budget	-	Castro & Eboli (2013).
Effectiveness of Corporate Education	Reaction, satisfaction, behavior change, application, effects on processes, impact on culture, impact on results	Albuquerque (2014); Allen & Mcgee (2004); Barbosa (2016); Borges-Andrade (2006); Freitas-Dias & Carvalho (2014); GlobalCCU (2017); Kirkpatrick & Kirkpatrick (2010); Hamblin (1978).
Efficiency and Productivity of CE and CU	Control of direct and indirect costs, resource efficiency, evaluation of procedures	Allen & Mcgee (2004); Freitas-Dias & Albuquerque (2014); GlobalCCU (2017).
Return on Investment	Economic / Financial Results	Allen & Mcgee (2004); Marinelli (2013); Phillips (1991).
Measurement of Social and Environmental Impacts	Socio-Political and Environmental Results	Castro & Eboli (2013); Marinelli (2013); GlobalCCU (2017).

Source: Prepared by the authors (2017).



3 RESEARCH METODOLOGY

In this section we present the typology and the research process in detail (collection and analysis), as well as a description of the multicriteria analysis method used to support the evaluation methodology of a CU.

3.1 Typology and Research Process

As for epistemology, this research is classified as positivist. The positivist paradigm presupposes that objects and entities exist independently of the researchers' perception (Sacool, 2009), being the researcher impersonal in the analytical language and still not interfering in the research object (Collis; Hussey, 2005).

The research is classified as descriptive, using secondary and primary data (Thomas, Nelson, & Silverman, 2007) with applicable qualitative and quantitative approaches (Creswell, 2010).

The research process is structured according to the following steps:

1) The literature identification on the theme of CUs evaluation, and the elaboration of a database containing structured variables of the factors and sub-factors, in order to measure CUs;

2) Based on that reference, the assembly of the factors and sub-factors tree was built using the qualitative analysis technique (Bardin, 2016) to eliminate duplicities, similarities and variables embedded in others. Our approach goes from general to particular, involving factors of the general environment, the specific environment (industry, sector) and the organizational internal environment (Harisson, 2005);

3) Elaboration of a questionnaire and the validation of the factors and sub-factors structure by three specialists in CU, being two doctors in administration and one manager of a CU, scholar in law;

4) Routing of the factors and sub-factors structure by 110 specialists, among leaders of CUs, researchers and consultants in the area of education and/or Corporate University. A total of 39 questionnaires were collected, using the Survey Monkey method and its returning facilities, without requiring participants' identification. The collection period was from September to November 2017;

5) Tabulation, Analysis and Discussion of the Results.

As a support technique for the proposed method, we used the multicriteria analysis methodology called Multi-Attribute Global Inference of Quality (Magiq) by McCaffrey and Koski (2006). We made that choice for two reasons. First, Magiq creates numerical statistics that are easily comparable, for each analysis group and subgroup. Second, it consists of a multicriteria analysis that is quite versatile and more intuitive than the others (Mccaffrey & Koski, 2006).

3.2 Multi-Attribute Global Inference of Quality (Magiq)

The Magiq method has similarities to the Analytical Hierarchy Process – AHP (Mota, Nogueira, & Ogasavara, 2011), and is used in practical applications such as software selection.

For the variables ranking (factors and sub-factors), the Magiq method was used instead of the AHP (Analytical Hierarchy Process), which is one of the most used multi-criteria methods (McCaffrey & Koski, 2006).

The reason for our preference is because the application of the Magiq method with the trial participant takes less time, and they feel less confused than when using the AHP method. Magiq does not involve the use of paired comparisons (two to two) in a complex scale of 1 to 9 (case of AHP), but an ordering of factors and sub-factors instead (Mccaffrey & Koski, 2006).



The process for the use of Magiq is characterized by the following steps (McCaffrey, 2009):

a) Identification of the evaluation alternatives: selection of the system attributes that will be applied to the analysis, serving as base of comparison and hierarchical decomposition of the elements in several levels;

b) ROCs (rankings ordered by centroids): ordering the attributes of comparison of the system elements from a set of scales, such as (first, second, third);

c) Attribution of weights relative to the attributes of comparison;

d) Comparison of the systems under evaluation and computation of the global quality values: compare each evaluation system in each comparison attribute (lowest level).

For each respondent "j", the determination of the relative weights of factors at the highest levels of the hierarchy allows the conversion of classification orders (eg, 1st, 2nd, 3rd etc.) into numerical values (McCaffrey & Koski, 2006; McCaffrey, 2009; Nogueira, 2014).

Ravi (2012) made the conversion to relative weights by applying the equation 1:

$$\left[\sum_{i=k}^N (1/i) \right] / N \quad \text{for } i = 1, 2, 3, \dots, N \quad (1)$$

Here 'N' is the number of items.

For example, if N = 3, ROC weights are given by:

$$P1 = (1 + 1/2 + 1/3) / 3 = 0.6111,$$

$$P2 = (0 + 1/2 + 1/3) / 3 = 0.2778, \text{ e}$$

$$P3 = (0 + 0 + 1/3) / 3 = 0.111.$$

After sorting and assigning weights relative to each one of the hierarchy levels, the next step in the MAGIQ analysis is to calculate the overall quality value. The global value is given by the simple weighted sum of all comparison attribute weights. The final sum of all vectors is equal to 1.0 (Nogueira, 2014).

Both methods, AHP and Magiq, determine very close values for the local and global weights in most situations. The fact that Magiq is much easier to implement than the AHP, justifies again the application of the Magiq method (Nogueira, 2016).

Finally, according to McCaffrey (2009), the AHP (Analytical Hierarchy Process) technique is highly correlated to the Magiq technique ($R^2 > 0.9$), which further assures its use (Mota et al., 2011).

4 RESULTS AND DISCUSSION

After reviewing the literature and the participation of the specialists via an interview, we present the evaluation sub-factors below, in Figure 3. They were grouped according to the Balanced Scorecard methodology (Kaplan & Norton, 2001), having added both the Institutional, and Management and Strategy perspectives. Next we describe the operation of the MAGIQ methodology and, finally, we present a tree of factors and sub-factors, as well as a methodology proposed to evaluate the organizational management in a Corporate University.



Figure 3 – Factors and Subfactors of the CUs Evaluation Metodology.

Factor	Subfactor	Author
F.1 Institutional	SF1- Social Responsibility	Castro & Eboli (2013); GlobalCCU, (2017); Marinelli (2013); Moore (1997).
	SF2- Environmental Management	Castro & Eboli (2013); GlobalCCU (2017); Martão & Demajorovic (2019); Marinelli (2013).
F.2 Management And Strategy	F3- Strategic Scope (Teaching, Research and Extension)	Castro & Eboli (2013); Especialistas Consultados; Freitas-Dias & Albuquerque (2014); GlobalCCU (2017).
	SF4- Governance (Quality of corporate governance and capacity to face challenges)	Marineli (2013); Especialistas Consultados.
	SF5- Strategy (Creation of corporate universities, alliances, partnerships and internationalization)	Barbosa (2016); Basterretxea & Albizu (2011); Berman & Evans (1998); Castro & Eboli (2013); Ecuonet (2017); Hatch & Dyer (2004); GlobalCCU (2017); Marinelli (2013); Sletli & Gronhaug (2017).
F.3 Performance	SF6- Efficiency (Do more with less)	Allen & Mcgee (2004); Castrillon (2018); Freitas-Dias & Albuquerque (2014); GlobalCCU (2017); Marinelli (2013).
	SF7- Effectiveness (Impacts of Corporate Education in Business)	Allen & Mcgee (2004); Barbosa (2016); Borges-Andrade (2006); Freitas-Dias & Albuquerque (2014); GlobalCCU (2017); Hamblin (1978); Kirkpatrick & Kirkpatrick (2010).
	SF8- Return on Investment	Allen & Mcgee (2004); Marinelli (2013); Phillips (1991).
F.4 Market	SF9 - Stakeholders (Performance in the production chain and reach of the contingent of employees)	Castro & Eboli (2013); Freitas-Dias & Albuquerque (2014); Guerci et al. (2010); Marinelli (2013); Parker (2017).
	SF10 - <i>Marketing and Branding</i>	Especialistas Consultados; GlobalCCU (2017).
F.5 Process	SF11- Modern Methods of Corporate Education	Barbosa (2016); Delloite (2016); Especialistas Consultados.
	SF12 –Virtual and Mobile Technology	Abel & Li (2012); Castro & Eboli (2013); Especialistas Consultados; GlobalCCU (2017); Ma et al. (2017).
	SF13- Modern Spaces (Enterprise style classrooms, auditoriums, laboratories, and convenience and relaxation environments)	Especialistas Consultados.
	SF14- Integrated Corporate Education Management Systems	Especialistas Consultados.
F.6 Organizational Learning	SF15- Development of Leaderships	Barbosa (2016); Castro & Eboli (2013); GlobalCCU (2017); Marinelli (2013); Maurício et al (2019).
	SF16 - Culture of Continuous Learning and Behavioral Change	Castrillon (2018); Freitas-Dias & Albuquerque (2014); Kirkpatrick (1994); Hendriarto & Suzanty (2017); Marinelli (2013); Santos et al. (2012).
	SF17 – Engagement and Retention of Talents	Barbosa (2016); Marinelli (2013).
	SF18 - Organizational Level	Castro & Eboli (2013); Hendriarto & Suzanty (2017); Marinelli (2013).

Source: Prepared by the authors (2017).



4.1. Structure of Factors and Sub-factors of MAGIQ weights

Knowing that the MAGIQ method advocates the ordering of sub-factors in a reasonable number (from two to eight), we established the six factors evaluation model, where sub-factors range from two to four per factor.

Quantitative methods as well as qualitative methods are generally used in those studies, especially in ex-ante evaluations (Nogueira, 2014). To complement the ex-ante evaluation, Nogueira (2014) proposes to use the method, considering the experts' perceptions based on carried out studies.

4.2 Rankings and analysis of factors and sub-factors

In this section we present the ranking of factors and sub-factors of organizational assessment of the CUs, as well as a discussion of the factors and sub-factors in light of the literature.

4.2.1 Ranking of Factors and Sub-factors

For an overview, in Table 1 we present the overall weights of all sub-factors within, showing their inclusion in each factor.

Table 1 - Ranking of factors and sub-factors of organizational assessment of Corporate Education.

#	FACTOR	MAGIQ WEIGHT	#	SUB-FACTOR	GLOBAL WEIGHT
1º	Management and Strategy	0, 2457	1º	SF2 – Governance	0,0997
			2º	SF1 – Strategic Scope	0,0776
			3º	SF3 – Strategy	0,0683
2º	Organizational Learning	0, 2329	1º	SF1 – Leadership Development	0,0728
			2º	SF2-Culture of continuous learning and behavioral changes	0,0710
			3º	SF4 – Organizational Level	0,0469
			4º	SF3 – Talents Engagement and Retention	0,0422
3º	Process	0, 1560	1º	SF1 – Modern Methodologies of Corporate Education	0,0558
			2º	SF4 – Corporate Education Integrated Systems	0,0459
			3º	SF2 – Virtual and Mobile Technology	0,0321
			4º	SF3 – Modern Spaces	0,0223
4º	Performance	0, 1500	1º	SF2 – Effectiveness	0,0666
			2º	SF1 – Efficiency	0,0519
			3º	SF3 – Return on Investment	0,0314
5º	Institutional	0, 1120	1º	SF1 – Social Responsibility	0,0783
			2º	SF2 – Environmental Management	0,0337
6º	Market	0, 1034	1º	SF1 – Stakeholders	0,0699
			2º	SF2 – Marketing and Branding	0,0339
	TOTAL	1, 0000		TOTAL	1, 0000

Source: Research data (2017).

4.2.2 Analysis of Factors

In order to carry out an evaluation of the organizational management in Corporate Universities, there are six main factors to be considered: Management and Strategy, Organizational Learning, Process, Performance, Institutional and Market.

The Management and Strategy factor is aligned with authors such as Castro and Eboli (2013), Freitas-Dias and Albuquerque (2014), which value the strategic scope; Marinelli (2013) highlights governance, as well as Barbosa (2016), Castro and Eboli (2013); also Marinelli (2013) and Sletli and Gronhaug (2017) highlight the strategy as a determinant of the success of a Corporate University.

Analyzing the Organizational Learning factor, core of Corporate Education, it can be inferred that the result is supported by the following authors: Barbosa (2016); Castrillon (2018); Castro and Eboli (2013); Freitas-Dias and Albuquerque (2014); Kirkpatrick (1994), Hendriarto and Suzanty (2017), Marinelli (2013) and Maurício et al. (2019), for topics such as leadership development, and the culture of continuous learning and behavioral change. Organizational learning is a factor committed to the engagement and retention of talents, knowing that a CU is highlighted if it is situated at a strategic level in the organizational structure.

Under the scorecard focus, the Process and Performance factors appeared at the second placement level according to Magiq weights. Then, we understood that in line with the company's strategy and with a high performance training culture program, the process (methodologies, environment and systems technologies) and measurement (efficiency, effectiveness and Return on Investment) are means that can ensure the strategic aspect and the core of a CU. The Process factor is aligned with the ideas of Abel and Li (2012), Barbosa (2016), Castro and Eboli (2013), GlobalCCU (2017), Ma et al. (2017) and experts consulted.

The fifth place of the Institutional factor (social responsibility and environmental focus) is supported by Castro and Eboli (2013), GlobalCCU (2017), Martão & Demajorovic (2019); Moore (1997), Marinelli (2013) and Globalcu (2017). This placement may show that CUs have not yet reached a strong institutional commitment, but are expected to achieve a better score in the future. On the other hand, it can be seen that social responsibility is intrinsic to the mission of CU and therefore, it is already part of a CU culture to contribute to the career of employees, almost as an activity default of the Corporate Education.

The lower weight of the Market factor can mean the endogeneity of Brazilian CUs, since this factor is composed of stakeholders and marketing/branding, evidencing that the training is internal and the communication and brand are not yet so valued. In any case, the market and stakeholders are valued by Castro and Eboli (2013); Freitas-Dias and Albuquerque (2014); Guerci et al. (2010), Parker (2017), and GlobalCCU (2017).

4.2.3 Analysis of the Sub-factors of the Management and Strategy Factor

According to the preference established by the specialists, the orders of importance for the sub-factors of the Management and Strategy factor were: Governance sub-factor first with weight 0.0997, followed by the sub-factor Strategic Scope, weight 0.0776, and in third, the Strategy sub-factor, with a weight of 0.0683.

The Governance sub-factor is aligned with Marineli (2013) as well as with the experts consulted. With respect to the Strategic Scope, literature is almost unanimous in Corporate Education, with little emphasis on research and extension actions, typical of traditional CUs (Alperstedt, 2003),

although this sub-factor is supported by GlobalCCU (2017). Finally, for the sub-factor Strategy, notably some actions such as implantation of Corporate Universities, alliances and partnerships, internationalization, are not yet realities, hence it was the third place for organizational evaluation of a CU, despite its support by Castro and Eboli (2013), GlobalCCU (2017) and Sletli and Gronhaug (2017).

4.2.4 Analysis of Sub-factors on Organizational Learning Factors

As shown in Table 1, there are two groups of sub-factors. The first group is formed by the sub-factors Leadership Development with weight 0.0728 and Culture of Continuous Learning and Organizational Change (weight 0.0710). The second group is formed by the sub-factors Organizational Level (weight 0, 0469) and the Talent Engagement and Retention function (weight 0.0422).

By the presented weights, one can perceive that forming leaders and strengthening the organizational culture are functions of prominence of the Organizational Learning factor.

The preference for Leadership Development and Organizational Culture is aligned with Barbosa (2016); Castro and Eboli (2013), GlobalCCU (2017), Hendriarto and Suzanty (2017), Marinelli (2013) and Maurício et al. (2019).

The fourth placement of the sub-factor Engagement and Retention of Talents apparently surprises. However, as part of the Organizational Learning factor, developing leadership and learning culture / behavioral change and the strategic aspect of the organizational level are preponderant, which explain the higher weights.

4.2.5 Analysis of Sub-factors on Process Factor

In the group of Process factor, Modern Methodologies of Corporate Education appears as the most important sub-factor (weight 0.0558). The sub-factor Integrated Systems to Corporate Education Management obtained a weight of 0.0459, followed by the Mobile and Virtual Technology sub-factor, with a weight of 0.0321 and the sub-factor Modern Spaces, weighing 0.0223.

Being Corporate Education the focus, the results confirmed a highlight to the sub-factor Modern Methodologies of Corporate Education. Because control is one of the problems in managing a CU, to have Integrated Corporate Management Systems with BackOffice functions such as payments, suppliers, accounting etc. was perceived as relevant.

A curiosity is the fact that Virtual and Mobile Technology and Modern Spaces – such as dot-com organizations, appeared in third and fourth places, respectively, in spite of nowadays Corporate Universities have been focusing and privileging the Corporate Education via smart phones and modern environments like classrooms, libraries, auditoriums and lounges, typical of Silicon Valley organizations in the United States.

The emphasis on Modern Methodologies of Corporate Education is aligned with Barbosa (2016), Deloitte (2016), Marinelli (2013), Ma et al. (2017) and consulted experts. The sub-factor Mobile and Digital Technology is aligned with Abel and Li (2012), Castro and Eboli (2013) and GlobalCCU (2017). However, the sub-factors Physical Environments and Integrated Management Systems were pointed out only by the interviewed experts, which may denote needs toward physical environments modernization and the integration of Corporate Education with other corporate systems.

4.2.6 Analysis of Sub-factors on Performance Factor

Effectiveness appears to be aligned with the result achieved by the CU, which is meeting the strategic objectives. Therefore, Effectiveness was privileged. This sub-factor is supported by Al-



len and Mcgee (2004); Barbosa (2016); Freitas-Dias and Albuquerque (2014), Kirkpatrick and Kirkpatrick (2010) and Marinelli (2013), as well as the GlobalCCU (2017).

Consistently, the sub-factor Efficiency comes in second place, since the strategic (Effectiveness) was more prominent than the tactic (Efficiency). This sub-factor is aligned with Allen and Mcgee (2004); Freitas-Dias and Albuquerque (2014), Marinelli (2013) and GlobalCCU (2017).

4.2.7 Analysis of Sub-factors on Institutional Factor

The experts considered that Social Responsibility has greater importance than the sub-factor Environmental Management.

It is pointed out that Environmental Management is not a priority, even because Social Responsibility with employees is the focus by providing training on competent employees with citizen mind. Aligned with Social Responsibility are the authors Castro and Eboli (2013), Marinelli (2013), Martão & Demajorovic (2019); Moore (1997), as well as the GlobalCCU (2017). There is indication that the weight of these two sub-factors has been strengthened in the last years, and that it may get a greater emphasis on the others, associated with business ethics.

4.2.8 Analysis of Sub-factors on Market Factor

Table 1 shows that the most relevant sub-factor for the Market factor is the Stakeholders sub-factor (weight 0.0699), followed by the Marketing and Branding sub-factor (weight 0.0339). A remark is that the GlobalCCU Awards has a specific award for the most prominent CUs in Marketing and Branding. However, in our methodology presented here, Marketing and Branding did not receive greater prominence. More relevance is given to Stakeholders, with the CUs focus on privileging not only employees, but all other actors in the chain, such as clients, suppliers and partners (value-chain education).

The relevance of the Stakeholders sub-factor is aligned with Castro and Eboli (2013); Freitas-Dias and Albuquerque (2014). In opposite, no author in the literature has favored the Marketing and Branding sub-factor, except for the GlobalCCU award (2017) and the experts consulted.

5 ELABORATION OF THE EVALUATION METHOD IN PERFORMANCE MANAGEMENT OF A CORPORATE UNIVERSITY

Finally, based on the Magiq structure presented in Table 1, we developed a methodology to evaluate the CUs, according to the following steps, described below.

The evaluation can be carried out by a team of external consultants, an in-house team or a mixed one. It is acceptable the participation of other stakeholders, such as clients, providers, government and partners.

- For each sub-factor we apply a scale of 1 to 10 points;
- Add all products obtained by multiplying each weight of each sub-factor by the given score of the scale. Record this note in the Result column;
- Calculate the mean of the factor results, dividing the sum of the sub-factor scores by the denominator n (number of participants). That way, we calculate the final score of each sub-factor;
- The sum of those averages is the CU evaluation index.
- In Table 2, we present a template of an evaluation form, as the final product of this research.

Table 2 – Evaluation methodology of Corporate University

#	SUB-FACTOR	MAGIQ WEIGHT	SCALE 1-10	RESULT
1	Governance	0,0997		
2	Social Responsibility	0,0783		
3	Strategic Scope	0,0776		
4	Leadership Development	0,0728		
5	Culture of Continuous Learning and Behavioral Change	0,0710		
6	Strategy	0,0683		
7	Stakeholders	0,6730		
8	Effectiveness	0,0666		
9	Modern Methodologies of Corporate Education	0,0558		
10	Efficiency	0,0519		
11	Organizational Level	0,0469		
12	Corporate Education Integrated Systems	0,0459		
13	Engagement and Retention of Talents	0,0422		
14	Marketing e Branding	0,0339		
15	Environmental Management	0,0337		
16	Virtual and Mobile Technology	0,0321		
17	Return on Investments	0,0314		
18	Modern Spaces	0,0223		
	Total	1,0000		10,0

Source: Research data (2017).

According to the criterion of a five-level scale, the obtained organizational evaluation index of a CU (Iaorg-Cu) will be framed according to Table 3 below:

Table 3 - Interval and Concept of the Organizational Evaluation Index of a CU (IAORG-CU)

Scale (interval)	Concept
8,1 a 10	Very Good
6,1 a 8	Good
4,1 a 6	Regular
2,1 a 4	Deficient
0 a 2	Insufficient

Source: Prepared by the authors (2017).

The scale has the range from 0 to 10. The evaluation is considered INSUFFICIENT to the minimum grade and VERY GOOD to the maximum grade, for the organizational management of the Corporate University.

The fact that our research is based on the knowledge of Brazilian experts, it infers the use of this methodology only for the case Brazil, which can be seen as a limitation of this research.



6 CONCLUSION

Our research mapped the literature on Corporate University, aiming to identify an evaluation methodology.

As we did not identify a generic methodology, we aimed to structure a methodology with the support of a multicriteria analysis, which is a new approach for this topic. We chose then the Multi-Attribute Global Inference of Quality (Magiq) technique.

By means of a content analysis of the available literature, added to the consultancy with three experts, we came to six factors and 18 sub-factors as parameters to evaluate the organizational management of a Corporate University.

A consultation with 39 experts has determined the weights of the factors and sub-factors. The factors in descending order of weights are: Strategic Management, Organizational Learning, Process, Performance, Institutional and Market. The most privileged sub-factors are: Governance, Social Responsibility and Strategic Scope; the ones with lower weight are: Virtual Technology, Return on Investment and Modern Spaces.

As the result of our research, we generated the following products: a ranking table of the global weights for the factors and the sub-factors; the proposal of an evaluation methodology of Corporate University, based on a 10-point scale and a five-track framing scale; and a final model of evaluation of Corporate University.

For future work, we make two main suggestions that will extend the research, by incorporating: (1) international experts; (2) the elaboration of a computational tool to simplify the process of data collection and the calculation of the assessment grade of the organizational assessment of a Corporate University. Subsequently, we suggest the extension of the study with the establishment of indicators by sub-factors, for a scorecard-style evaluation.

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2. Development of hypotheses or research questions (empirical studies)	√	√	√
3. Development of theoretical propositions (theoretical work)			
4. Theoretical foundation / Literature review	√	√	√
5. Definition of methodological procedures		√	√
6. Data collection		√	√
7. Statistical analysis	√	√	√
8. Analysis and interpretation of data	√	√	√
9. Critical revision of the manuscript	√	√	
10. Manuscript writing	√	√	√

