

Implementation Process of Corporate University in Network (CUN)

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Abstract

The scientific literature points out that there are difficulties for the implementation of corporate university models since it is required the management of cultural, behavioral and structural changes, involving all the stakeholders of an organizational system. Among these difficulties, there is the commitment of leaders, definition of corporate education as organizational strategy, corporate university delimitation, identification of products and services, quality requirements and customers that will be suit. Also, promotion of the recognition system and people's reward, the systematization of best practices and error handling; definition of the centralization and decentralization of education activities across network; besides the strategic alignment design, the technologies, partnerships and evaluation of results. The most current studies describe that, to decrease these locks, the implementation must be perceived as an interaction process between the initial conditions and the expected results. That is, the implementation cannot be considered only as the exact moment of decision-making, but rather, it must be understood as a process composed of different steps to be taken to its effectiveness. In this context, this article aims to propose the most contemporary implementation process of a model of corporate university, identified in Scopus database as Corporate University in Network (CUN), considering the need for care of the different expectations and stakeholder interests in the organizational ecosystem. For such, a bibliographical research of descriptive end was carried out in which it is the Corporate University in Network model is presented, deepen its strategic rationale and taking them in consideration in the process considered for its implementation. As a result, we described the major stages of evolution towards the CUN model, and we proposed an implementation process, consisting of thirteen interrelated actions to achieve the final stage.

Keywords: Corporate University in Network; Stakeholders; Corporate Education; Process implementation; Evolution stage for CUN.

1. Introduction

In the knowledge society context, with globalization and hyper-competitiveness reaching even small

businesses, this context convened the area of personnel management to participate more actively in corporate strategy. Its new assignment is to build a solid path to organizational development regarding, especially, the decrease in talent turnover (Meier and Hicklin, 2007), the essential knowledge and management skills (Hamel and Prahalad, 1990, Nicolai and Dautwiz, 2010), and the motivation for collaborative work (Xie and Ke, 2011, Oliveira and Pombo, 2016) and high performance (Albuquerque et al. 2015). This mission has determined the evolution of what is understood by training, development and corporate education because the required transformations to the organizational development are intrinsically related to people's qualification.

Among the metamorphoses occurred and observed in the knowledge society, it is important to cite the accelerated globalization and technological complexity, the relaxation of labor and capital accumulation, the production practices reconfiguration and reengineering, among others (Baeri, 2009). The changes and new demands of that contemporary society propel a differentiated education in training for work.

Due to the capacity of conceptualization, abstraction, generalization and, mainly, the survey and analysis of multiple cases to verify the consistency of applied models, the partnership between academic universities and corporate education assumes new proportions. This makes it stop looking only at the situational needs of the organization and move towards the development of dynamic capacities for innovation (Teece, 2000, 2009).

Indeed, in this century, the actions of organizational development began to receive more attention from senior management, as well as strengthening the area of human development. Thus, in the restructuring process of the training sector, employee-training actions with restricted focus on improving performance of the task became insufficient. In Brazil, in the 1980s, it was recognized the need to go beyond the operational training, starting to develop skills related to management, including the training of leaders in managing people, technology and processes to reduce the risk in their decision-making.

For a historical overview since the 1920s, the sector responsible for people management training has been implemented according to the following different models: Training, T&D (training and development), people development, corporate education, and even Corporate University. It can be noticed that the different corporate education models have been constantly evolving, reaching in 2016, the most contemporary model, named Corporate University in Network (CUN) by Freire et al. (2016). Briefly, a list of six corporate education models that have arisen since the 1920s can be cited, which are the evolution stages for the CUN model (Table 1).

Table 1. Evolution stages to CUN model

1°	2°	3°	4°	5°	6°
Training Department	E-learning Platform	Corporate Education	Corporate University	Stakeholder University	Corporate University in Network
1 RANGE directed to the internal actors.	1 RANGE directed to the external actors.	1 RANGE directed to the internal actors.	1 RANGE directed to the internal and external actors of the productive chain	1 RANGE directed to the wide internal and external actors of the productive chain	1 RANGE directed to the wide internal and external actors of the productive chain
2 Low INTERCONNECTION	2 Medium/high INTERCONNECTION	2 Medium/high INTERCONNECTION	2 Medium/high INTERCONNECTION	2 High INTERCONNECTION	2 High INTERCONNECTION
3 Recognition of Human Capital	3 Recognition of Human Capital	3 Recognition of Human Capital	3 Recognition of Human Capital	3 Recognition of Human Capital	3 Recognition of human, relational and social capital
4 Low use of EDUCATION TECHNOLOGY	4 High use of EDUCATION TECHNOLOGY	4 High use of EDUCATION TECHNOLOGY	4 High use of EDUCATION TECHNOLOGY	4 High use of EDUCATION TECHNOLOGY	4 High use of EDUCATION TECHNOLOGY
5 Narrow FOCUS for the TASK.	5 Narrow FOCUS for the TASK	5 Narrow FOCUS for the TASK	5 TASK FOCUS on management and strategy	5 Focus on the TASK, management and strategy	5 Focus on the TASK, management and strategy
6 Free courses LEVEL	6 Free courses LEVEL	6 Free courses LEVEL	6 Free courses LEVEL	6 Include Academic University for programs and courses certification	6 Academic University for programs and courses certification included
7 With no alignment between Business STRATEGY and learning strategy.	7 No alignment between Business STRATEGY and learning strategy.	7 - With alignment between Business STRATEGY and learning strategy	7 Alignment between Business	7 With alignment between Business STRATEGY and learning strategy	7 With alignment between Business STRATEGY and learning strategy
				8 Institutionalize a learning culture	8 Institutionalize a learning culture
				9 High actors interaction focusing on research integration, competence development, and KM	9 High actors interaction focusing on research integration, competence development, and KM
				10 Steady and long-term actors	10 Steady and long-term actors, but open to fluidity on entrance and exiting of actors
				11 Uses network learning based on relationships and interactions through communication	11 Uses network learning based on relationships and interactions through communication
					12 KM as transversal course to the CU actions
					13 CE as strategy to CU instrumentalization
					14 CUN as forming unit of network m

Elaborated by the authors based on Margherita and Secundo (2009) and Freire et al. (2016).

As Freire et al. (2016) explain, the evolution of corporate education models comes from the training Department model to the Corporate University in Network (CUN), first proposed by the authors in October 2015, and published in February 2016.

The first stage - training department - has the narrow focus on task training with the range targeted at internal actors, low interconnection by low usage of education technologies. It keeps the focus on human capital. There is no alignment between business strategy and learning; courses remain in the level of free courses.

The second stage starts to use an e-learning platform, but keeps the range targeted at internal actors and focus on developing human capital through task training. In addition, it is still not worrying about keeping the alignment between business strategy and learning, offering free courses level. However, this stage, to have a high use of educational technologies, provides a medium/high interconnection (Margherita and Secundo, 2009).

The third stage, called in Brazil corporate education, is an evolution of the previous stages regarding

strategic alignment. That is, we maintained previous guidelines related to the reach, the interconnection, the human development, the focus on the task, the education technologies, and the course level. However, courses and educational programs are designed with the objective of supporting the achievement of the organization's strategic goals.

The fourth stage is the corporate university. This stage aims to increase the scope of its educational activities, directing them to the external and internal actors of the productive chain. This stage also assumes the alignment between business strategy and learning, increasing training focus on task for the development in strategic management and education. Even keeping the medium/high interconnectivity, the focus on human capital, a high use of educational technologies and the level of the courses as free, the corporate university (CU) seeks to institutionalize a corporate culture of continuous learning.

The CU stage corresponds to "a strategic umbrella for the development and education of employees, customers and suppliers, seeking to optimize the organizational strategies, as well as a learning lab" (Morrison & Meister, 2000, pp. 8). For Phillips (1999), the CU is a process in which employees, customers and suppliers participate in educational experiences to improve job performances and enhance learning for the business impact. In the other hand, for the researcher Renaud-Coulon (2008), CUs are educational structures that help to implement – through education – strategies of the organization in human, financial, technological, economic, environmental and social terms.

Freire et al. (2016) relate the CU setting with the contextual requirements of the productive system in which the organization is located. These are internal and external demands that eventually set up a model able to meet different requirements. One of the external determinant factors is the acceleration of innovations in information and communication technologies (ICT), which imposed a more urgent pace to the organizational changes, registering an obsolescence context of available knowledge. As a result, a demand for more applicable knowledge raised and in shorter and shorter deadlines, leading the people management area to extend the strategic focus, the level of training activities, the content comprehensiveness, the target audience range, the massive education technologies use, and stakeholder interconnection.

Having this context recognized, the fifth stage emerges, elaborated by Margherita and Secundo (2009): "Stakeholder University", whose mission is the strategic skills development of these same employees and all interested parties in the organization.

Comparing the model "Stakeholder University" (SU) to the previous stage models, this one has the widest reach by targeting its educational activities both to internal and external actors, not only those directly related to the organizational production chain, but also to those interested in its results. In this question, SU favors the partnership building with academic universities, neglected in other stages. To this end, it is necessary to maintain a high interconnection between actors, both with a focus on human development, as in the development of social capital. It uses network learning founded in relations and interactions through collaboration to develop social capital. As for the other elements, the SU offers the same guidelines such as seeking a high use of educational technologies, having the focus on the task, in the management and strategy, and respecting the alignment between business strategy and learning.

Privileging the fixed and long-term actors, the SU model makes necessary a high interaction of actors with focus on the integration of research, skills development, and knowledge management (KM) to

institutionalize the learning culture as determined by any corporate university model.

Going further, the most contemporary model arises: CUN. Freire et al. (2016) model the sixth stage that is the Corporate University in Network (CUN). The authors, in accordance with Margherita and Secundo (2009), also argue that, in this new century, is no longer possible to restrict the training initiatives of the internal public to the training for tasks, nor to only include customers and suppliers in the learning network. Therefore, it is the CUN basic premise to seek strategic alignment among all stakeholders in the organizational ecosystem, to promote not only individual learning, but also collective learning.

Comparing the CUN model with the ones before, the first stands out by keeping all the orientations of the SU model, but it extends its educational activities focus to beyond the human and social capital development, strengthening relational capital by believing that both the human and the social development are dependent on relations between individuals, groups and organizations. To this end, the stakeholders of organizational ecosystem are long-term and fixed, but they are fluid in the entrance and the exit of partnerships. Still, we consider the KM as a cross discipline to CUN actions, it uses engineering tools and the knowledge media to the instrumentalization of the University as a promoter, observatory and knowledge memory which is imperative to network development.

Based on these considerations, the CUN model was configured to meet decisive guidelines of a new design of training development and education area (T, D&E), with the priority mission of developing both the human capital, the relational and the social, as shown in Figure 1.

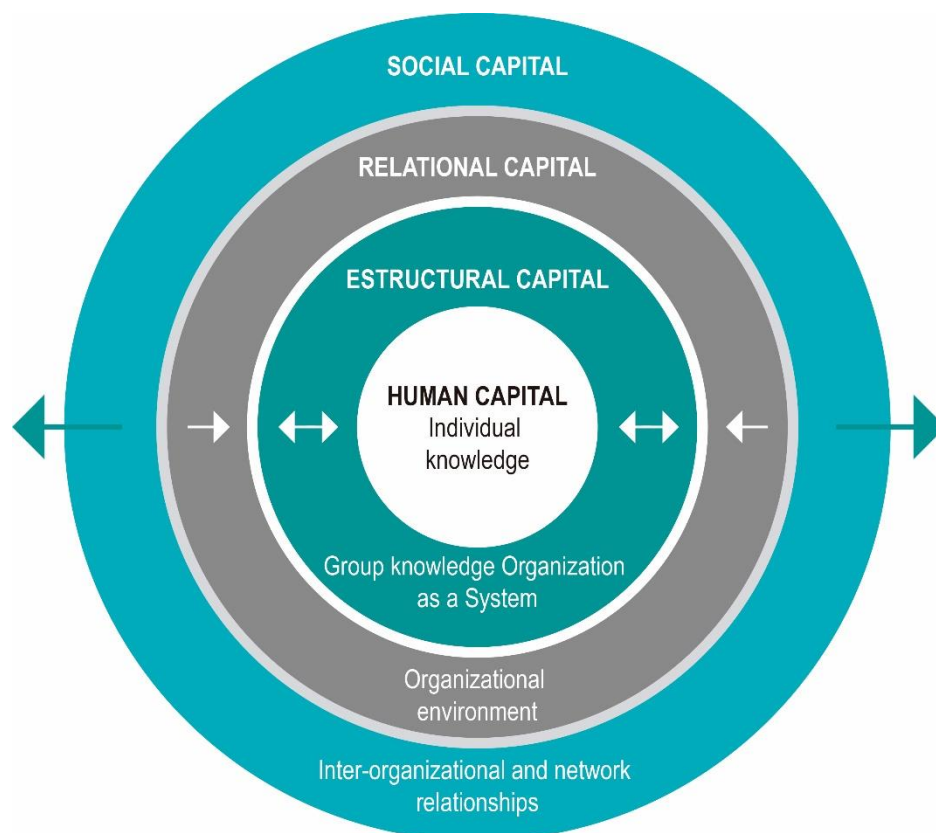


Figure 1. Construction of Intellectual Capital by the logic of learning.

Source: Elaborated by the authors based on Freire (2013).

Freire (2013, pp. 119) explains that by the organizational learning logic, "one can understand that building

the intellectual capital begins with the human capital (individual learning). When these individuals and groups interact, sharing knowledge, they build the structural capital." Moreover, as a result, the relational capital is built as a result "of the organizational cognitive relationship", as a system and its environment (Campos and Pablos, 2007, pp. 6). The elements of intellectual capital are divided between exogenous and endogenous. The endogenous connects people to the organization. The exogenous elements make the link between organizations and the surrounding agents. These are elements relate the organization to its surroundings that, when managed, can create the social capital of the organization. Social capital, according to Putnam (1995, pp. 153), who first defined the term in the organizational context, means the "traces of the life of social network, standards and trust, which enable participants to act together, more effectively, to seek shared objectives".

As a network model, the CUN proposes the use of practices, techniques and tools of knowledge management, e.g. collaborative mechanisms and sharing, for the construction of a high level of confidence, cooperation and connectivity between the organization and, particularly, its employees, the traditional university, science and technology institutes, suppliers and consumers and participants of the productive and social arrangements by creating value for all stakeholders (FREIRE et al. 2016). This model is suitable for the knowledge society, because it targets the organizational development and its ecosystem.

Rodriguez y Rodriguez (2016, pp. 1) indicate that there are difficulties for the Corporate University model implementation, once it is required the management of cultural, behavioral and structural changes, involving all the participants and beneficiaries of the system. Among these difficulties are: commitment of leaders; definition of corporate education as organizational strategy; the corporate university; identification of the "products and services, quality requirements and customers that will be attended"; promoting the recognition and reward system "of the people" and "systematization of best practices and treatment of errors"; definition of the centralization and decentralization of education activities across network; in addition to the design of the strategic alignment of technologies, partnerships and evaluation of results.

Ramos (2001, pp. 3) reinforces that the barriers for a corporate university implementation refer "to the doctrinal character of programs carried out, difficulties in its relationship with the traditional universities and the possible resistance to professional training and development of changes." To reduce these blockages, the implementation must be perceived as a process of interaction between the initial conditions and the expected results. That is, as already pointed Pressmam and Wildavsky (1984), we cannot consider implementation only as the exact moment of decision-making, but rather, we understand as a process consisting of different practices to be carried out for its effectiveness.

Nevertheless, Margherita and Secundo (2009) and Freire et al. (2016) did not model an implementation process of their corporate university models -- Stakeholder University, and Corporate University in Network, respectively.

An example of complex issues related to implementation process of a CUN arises when one thinks of communication practices between participants and those interested in learning network. There are techniques, practices, and tools of internal communication to mobilize the internal public for participation in trainings and skills required in the people management area. Practices such as card point release, bonus and requirements of position motivate employees to participate. However, how to implement a CUN model

in an organization, taking into account the different expectations and the stakeholders interests?

In this context, it was defined as the research objective that gave rise to this article, to model the Corporate University in Network implementation process, considering the importance of the use of knowledge management to meet the different expectations and interests of stakeholders of organizational ecosystem. To achieve this objective, a literature research was carried out with a descriptive and prospective purpose (Alves-Mazzotti, 2001, Bobbio, 1997, Patton, 1988, and Serra, 2006), in which it is presented the most contemporary corporate university model, identified in the database Scopus, - Corporate University in Network - deepening its strategic fundamentals and taking them into account in the proposed process for its implementation.

This article is structured in five sections, including this introduction and the list of references for this study. The second section describes the Corporate University in Network model, deepening its principles and guidelines to be respected during the modeling process of its implementation. In the third section are the CUN deployment process proposed in this work. Finally, the last two sections are the final considerations and references.

2. Identity Model of Corporate University in Network (CUN)

The CUN model was developed by researchers at the Postgraduate Program in Engineering and Knowledge Management at the Federal University of Santa Catarina, linked to the Center for Integration Engineering and Knowledge Governance (ENGIN), having been published in the international scientific journal *Spacios*, in 2016 (Freire et al, 2016).

With the goal of strategic alignment between all stakeholders - beneficiaries, and internal and external participants, productive and social clusters - of organizational ecosystem, we define CUN as an intelligent ambiance of continuing education, not necessarily in the physical environment, which manages and institutionalizes a learning culture in the network. As such, its concept is based on Social Constructivism theories (Vygotsky, 2007), Organizational Learning (Crossan et al., 1999) and Andragogy (Knowles, 1990), using practices, techniques and tools of Knowledge Management.

The definition of the pedagogical line for the CUN is fundamental for supporting its educational practice of "Stakeholder University" (Margherita and Secundo, 2009). Paulo Freire's liberating pedagogy is added to the historical-social constructivist pedagogy of Vygotsky (2007), to achieve a pedagogical orientation based decisively in education as a dialogic process necessary for awareness and commitment to positive transformation of the productive and social arrangements constituting the organizational ecosystem.

To the constructivists, knowledge is related to the experience. Constructivist logic states that the human being is an open system that, when interacting with the environment around establishes a relationship of mutual interference. The individual acts in the environment, transforming it to meet their needs and, in turn, the environment interferes with the human development (Freire and Spanish, 2014). In this process, the individual ends up transforming himself, because "when man modifies the environment through their own behavior, this modification will influence their future behavior" (Luria, 1988, pp. 196).

The history-social theory of Vygotsky (2007), with a contextual approach, believes that the construction of knowledge by the subject is made from its interaction with the environment. However, the author points

out that the object only makes sense to the subject when brokered by a mediating element, allowing, thus, interpreting the symbols that these objects represent, i.e. "the simple stimulus-response process is replaced by a complex mediated. In this process, the direct impulse to react is inhibited, and it is incorporated a helper stimulus which facilitates the operation complementation by indirect means "(Vygotsky, 2007, pp. 33). On Freire and Spanhol (2014) understanding, the individual is not only passive or active, but also interactive. It is producer and receiver because it forms knowledge and it is constituted for intra and interpersonal relations. Thus, knowledge is the result of a process built by the individual through the search for information, within the mean itself - concepts and meanings. This is a non-linear process of construction of human knowledge.

Also, the guidelines of andragogy model were incorporated, which referred to the "art and science of helping adults to learn" (Carvalho et al., 2010, pp.4). These guidelines for adult education must support the CUN actions as for personal development and professional career of young people and adults, by involving them in a spiral of knowledge and learning building. Educational programs, to show the andragogy, must enable an appropriate environment for discoveries, but they also must contemplate meaningful learning, considering the student's previous knowledge. It is started from teaching practices that bring context and work experiences into the learning environment, making the student a questioner and inquirer entity, from their own experience situations in the routine work, for in the adult "interests for learning are directed to the skills development that it is used in their social role, in their profession" (Chandra, 1999, pp. 2). In addition, as a mediator and not simply as a knowledge transmitter, the teacher or tutor must act as a facilitator of learning, from exchanges of knowledge with the adult student, highlighting their experiences of life.

The choice and content management must be challenging and lead effective changes in professional learners lives. Thus, the CUN must show clearly the following guidelines coming from andragogy:

- Need to know: To awake in the adult the conscience to learn something new. Adults seek to understand what the consequences and gains are, from a new learning, highlighting the reasons related to the new learning;
- Student's self-concept: Adults are responsible for their learning. If is not necessary to impose method to the pupil, but to construct it together with the pupil, in accordance with the personal, professional and/or contextual reality;
- Role of Experiences: Contemplate elements that are part of the student's reality, for the adults to consider their historical learning background;
- Learning Readiness: Adults feel ready to learn aspects that will make difference in their daily lives;
- Motivation: Proposition of content aligned to the conditions and interests of the student. The intrinsic (or emotional) aspects, such as job satisfaction, motivate the adults more than external aspects, such as salary improvement, and getting better jobs.

Due the dynamism of the CUN model, various settings are possible. However, whatever the settings established, they must be able to promote collective learning of essential knowledge to the organizational

strategy success, in its operational, tactical, and strategic levels, as well as of all stakeholders in its results, whether individuals, groups, organizations or society.

From this point of view, Freire et al. (2016) describe the guidelines to be observed in the CUN structuring, which are here highlighted. It must be defined, first, what "CUN strategy" must be used, keeping it aligned with the "organization's strategy." The CUN goals can be identified between developing skills, only, or supporting corporate change management, or meeting customers/users/citizens expectations, or preparing the companies for strategic transformations, or, finally, promoting academic research to take the company to innovation (Margherita and Secundo, 2009).

Then, the CUN must be configured according to the fundamental guidelines: Level of Involved Activities; Strategic Focus of the Program; Strategic Focus of the CU; CU’s Archetypes; CU’s Factors; Scope of the Content Offered; Knowledge Management. These guidelines are presented and identified in table 2.

Table 2. Guidelines for a corporate University in Network (CUN)

Guidelines	Characteristics	Theoretical Reference
Level of Involved Activities	<ul style="list-style-type: none"> • Training / Operational Formation • Training / Management Development and Executive Leaderships Formation • Courses that allow to get some college credits • Package of courses that allow to obtain a diploma at the University 	Allen, (2002)
Strategic Focus of the Program	<ul style="list-style-type: none"> • School - focus on the task - objective of improving the efficiency of the individual • College - focus on the delivery - objective of lining up the organizational goals with the individual abilities • University - focus on human capital development - objective of co-creating and co-producing for strategic deployment. 	Rademakers (2005)
Strategic focus of the CU	<ul style="list-style-type: none"> • Competence and Development • Change management • External customer (final customer, user, citizen) • Strategic Business • Academic research 	Margherita and Secundo (2009)
CU Archetypes	<ul style="list-style-type: none"> • Training Department • E-learning platform • Corporate Universities • <i>Stakeholder University</i> 	Margherita and Secundo (2009)
Factors for CU Implementation	<ul style="list-style-type: none"> • Alignment and execution. • Development of skills to support the needs of business • Learning and Performance Evaluation • Partnership with the Academy, and Support Technology for Learning 	Abel and Li (2012)
Comprehensiveness Content Offered	<ul style="list-style-type: none"> • Generalist • Management • Operational 	Antonelli, Cappiello and Pedrini (2013)

Knowledge Management	<ul style="list-style-type: none"> • Organizational Memory - Focus on Content • Organizational Memory - Focus on Process 	Freire et al. (2012)
	<ul style="list-style-type: none"> • Identification of Critical Knowledge • KM processes • ICT strategies • Techniques of Communication • Knowledge Systems • Knowledge Governance - Learning and Leadership 	Pacheco et al. (2012)

Source: Adapted from Freire et al. (2016).

From the CUN guidelines, Freire et al. (2016) have structured the seven strategic foundations for the promotion of network learning, which are:

- identification and understanding of the expectations and interests of each internal and external stakeholder of the organizational ecosystem;
- Be constituted as a collective learning environment taking care of any intended corporate university configuration;
- respect for knowledge management principles for the development of human, social and relational capital of the organizational ecosystem;
- promotion of collaboration among employees and other actors of different productive and social clusters of the organizational ecosystem for the co-creation and co-production of value for all;
- structuring for top-level connectivity for confidence development, cooperation and collaboration between the different actors, whether internal or external, operational, managerial or strategic;
- strengthening of partnerships between the corporate university and the academic universities, to promote the training of teachers, meet the requirements of the Ministry of Education, recognize academic credits for regular courses and diploma certification;
- creation and management of content that meet the level of the task, the activity, the processes and the strategy.

These seven principles are considered as determining elements for the definition of the implementation of the Corporate University in Network model.

Therefore, different from other models of corporate education, the CUN model is positioned in accordance with the CU guidelines added to the knowledge management principles, assuming the practices for the management of organizational memory and knowledge engineering tools (Freire et al., 2016) as structuring of the 21st century organizations. These practices, by facilitating the meeting of content and development of individual and group skills aligned to the strategy, influence the increase in effectiveness and excellence reach of the services provided.

The use of practices, techniques and tools of engineering and knowledge management (EKM) provide the CUN with computer-based training to facilitate the identification of essential skills and essential knowledge to the establishment of the organizational strategy. It even facilitates the processing, storage and distribution of information and knowledge by eliminating geographical barriers in access, from inside and outside the

organization. It even supports the knowledge retention essential to the operation effectiveness, through the establishment of knowledge bases, and channels of interaction and sharing. With the use of EKM, it is possible the integration, interaction and inclusion of skills of several stakeholders, and, consequently, the promotion of collective learning.

In relation to the strategic foundations previously analyzed, two new elements are transversal to the guidelines proposed by Freire et al. (2016). They are:

1. Education technologies (ET): Incorporation of ET in face-to-face teaching, to the teaching learning environment for distance education and technologies for mass education.
2. Participants Interconnection: Use of practices and integrative, inclusive, interactive tools of engineering and knowledge management.

In short, Freire et al. (2016) build a metaphor in Figure 2, which has as central the definition of model identity.

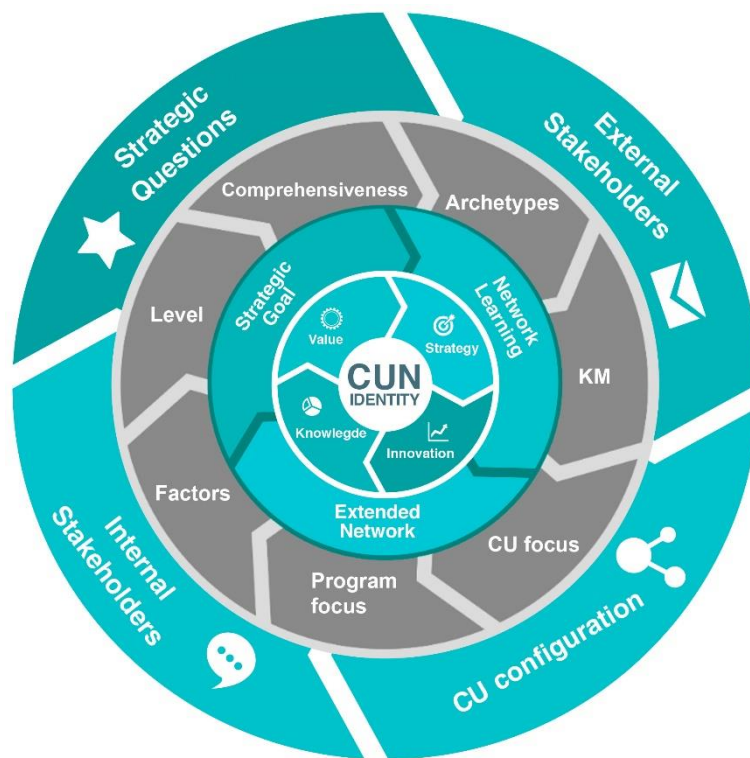


Figure 2. Guidelines of the Corporate University in Network model (CUN)

Source: Freire et al. (2016).

Figure 2 presents the guidelines for the construction of the CUN identity, an initial model made of several rings in a topological structure, showing which levels must be examined, understood and overcome, so that the CUN identity may emerge.

Analyzing from inside out, the first level directs the reader to the CUN strategic questions definition, for the internal and external stakeholder identification served by the CUN, and the definition of the CUN configuration (which is driven by the second level). The second level defines the fundamental guidelines described, as the comprehensiveness of the programs and knowledge management. The third level induces

that the CUN model must extend beyond its internal collaborators, promoting network learning, without losing sight of the strategic focus of the organization to which the CUN is bound. The fourth level guides that the CUN be configured in such a way as to create value for the organization, promoting the creation, sharing, and application of knowledge and innovation, and it must be aligned to the organization strategy. The fifth level determines the composition of the CUN identity, that is, it places the identity as a center of the strategic plan, turning it into a shared goal of the organization.

In order to meet the CUN identity, it is also observed that a Corporate University must be configured as follows:

- as a collective learning environment oriented to the organization and stakeholders demands that make up its ecosystem;
- with principles of knowledge management and focus on the human capital, social and relational development, through qualification, training, corporate education and network learning;
- for all the different people interested in the success of the organizational strategy, whether external or internal, operational, managerial or strategic;
- with high level of confidence, cooperation and connectivity between the organization, the traditional society, the corporate university, and the institutes of science and technology, creating value and social capital;
- offering content aligned to the organizational strategy, which may be of operational, administrative or generalist level;
- with the perspective of obtaining some university credits and a diploma in traditional university;
- with the vision of promoting the co-creation and co-production of value for all stakeholders.

Moreover, assuming the formation of network memory and knowledge engineering among its structuring elements, the CUN model implementation must comply with the following assumptions:

- retain knowledge through the establishment of knowledge bases, and interaction and knowledge sharing channels;
- eliminate geographic barriers in the access to information and expertise, inside and outside the organization;
- increase the productivity of employees and stakeholders by the ease in finding content and expertise;
- provide greater agility in communication between the areas and units, and between the different stakeholders that make up the organizational ecosystem;
- implement efficient means to organize and distribute information in the network;
- form a computerized database with expertise and knowledge produced by stakeholders in the processes that permeate the organizational activities;
- align the application of Information and Communication Technologies in accordance with the needs of the knowledge management processes at all levels of interaction between the stakeholders that form the CUN.

Thus, the present study intends to identify the steps to be followed to model the CUN (table 1), given that

Freire et al (2016), even offering clues on how to implement the model; do not make explicit the implementation process to be configured.

3. Proposition Implementation Process of the Corporate University in Network (CUN)

The coordinated actions of the implementation process of the CUN must consider the factors for implementation described by Abel and Li (2012), listed in table 2. In this way, it can be considered that the implementation process of the CUN should achieve the following goals:

- align the execution of the CUN implementation with the organizational strategy, through a partnership with the corporate HR to evaluate the performance;
- develop skills in line executives and employees of the operation through work-based programs, skills and competencies, to support the needs of business;
- evaluates performance and impact learning, by the return on investment, and learning transference;
- build partnerships with academic universities for exchange of lecturers and certification;
- manage and support learning through online technologies and comprehensive management systems.

Therefore, in order to constitute the CUN as a dynamic and intelligent environment, on the amplest corporate education settings, the implementation process must begin from the stakeholders' recognition of its ecosystem, forming a network with different degrees and connectivity, having as objective collective learning. The strategic foundations of the implementation process of the CUN aim to promote, when respected, the collective learning of essential knowledge to the success of the organizational strategy.

Given these considerations, the implementation process of the CUN is elaborated based on the fundamental model guidelines (Freire et al. 2016): Level of Involved Activities; Strategic Focus of the Program; Strategic Focus of the CU; CU's Archetypes; CU's Factors; Scope of the Content Offered; Knowledge Management.

These guidelines must be considered as objectives of implementation. This way, the interrelationship of thirteen steps must be coordinated to make possible the implementation of the Corporate University adhered to the CUN Model (Figure 3).

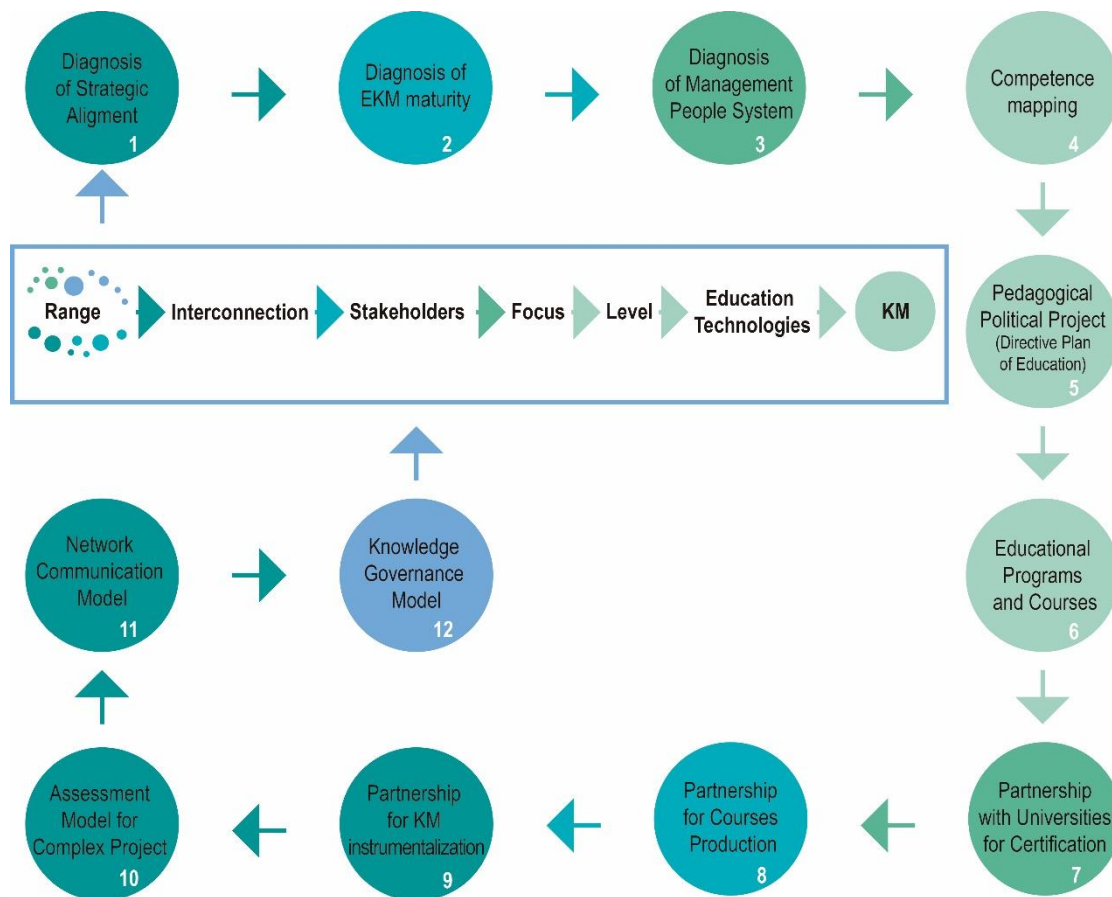


Figure 3. Process of implementation of CUN

Source: Elaborated by the authors.

The first step must be the definition of the CUN strategy aligned to the organizational strategy. Mission, vision and strategic goals of the CUN must be elaborated to fulfill the mission, vision and goals of the organization.

The second step is the diagnosis of the organization's knowledge management to identify the degree of maturity, especially regarding people, technology, innovation, learning and knowledge management. That diagnosis is extremely important to the analysis of different organizational dimensions that, somehow, influence and determine the results of the processes of information and knowledge management; such as leadership, organizational and knowledge processes, people management, and individual behaviors for collaboration and sharing, the existence and use of interactive technologies, learning and innovation, and, lastly, the results of information management itself, in case it is used by the organization or the network.

The third step is the system of strategic people management diagnostic, to identify which subsystems are being managed or not. For the CUN implementation is of utmost importance to identify the way the company manages the selection and movement of people, and their allocation in positions, as well as rewards and people development attracts and maintain them, as well as monitoring the performance of the whole system.

During the fourth stage, individual and organizational skills are mapped to identify the gaps to be developed by the CUN. From the identification of those gaps, the learning trails are defined and the path structuring

begins in order to train each of the participating groups and those interested ones in the ecosystem success in the light of the practices, techniques and tools of knowledge management.

The fifth stage for implementation of the CUN refers to the development of the Pedagogical Political Project, which must consider the results of previous actions (strategies, knowledge management maturity, and individual and organizational skills). Soon after, it is possible to draw up the instructions relating to educational programs and their respective courses. The Pedagogical Political Project (PPP) must be as a guiding reference for the implementation, management, execution and evaluation of a CUN. As its name suggests, it is a project because it presents a proposal for action to be performed for a determining time. It is political when considering the university as a space where conscious, responsible, and critic individuals are trained, who will act individually and collectively to promote changes in the ecosystem. It is pedagogical, since it defines and organizes the activities, programs and courses required for the teaching and learning processes. The PPP details goals, guidelines and actions of the educational process to be developed in the CUN to meet the needs, goals and expectations of individual employees, internal and external participants of the social and productive arrangements, its beneficiaries, and the organization itself; that is, of all its stakeholders. It expresses the organizational culture at the same time that contributes to transform it. It has an overall planning function of its educational action and reveals the ways of thinking and acting of the actors participating in the continuing education process. Thus, the role of the PPP is to define the CUN identity as manager of competence, knowledge and teaching and learning processes of the network participants and its beneficiaries.

In this manner, at the end of this stage of the implementation process, it is prepared a document that records beyond the principles and strategic foundations for the implementation itself; it suggests tactical and operational guidelines for the management and implementation of the CUN. This document is configured in a planning and evaluation tool that all the CUN members of the management and educational teams must consult in every decision-making about the educational process. In the sixth stage, under PPP guidelines, the Educational Programs must be established and the amount and the contents of the courses that comprise it should be set.

The CUN must be structured in Educational Programs and for those Learning Trails, covering the different possibilities of ways of building knowledge, contributing for the learning to take place in accordance with the strategic objectives of the organization and the students. The program must promote the training and qualification of stakeholders for effective and continuous development of human, relational and social capital.

The application of the CUN model guidelines determines that its educational programs are flexible and dynamic, to meet the Organization's strategic alignment, the individual expectations, of the group and the network, allowing greater flexibility in updating and incorporating innovations and adaptations to the changes.

Therefore, the trainings and qualifications offered by university to conduct this educational proposal must be aligned with educational programs, which, in turn, are composed of courses and events to be chosen by the students (Figure 4).

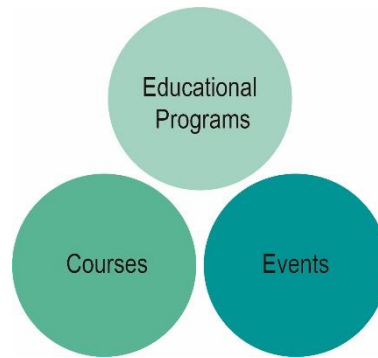


Figure 4 - Educational programs.
Source: Elaborated by the authors.

Although the CUN has as orientation the development of a critical and independent view of the individual in the sense of his / her self-construction, this responsibility can't be attributed only to the student, considering the importance of maintaining the alignment between individual and organizational skills for the effectiveness of the System. Thus, it is up to the CUN to provide the necessary directions and learning opportunities, namely the so-called Knowledge Tracks within educational programs. In this way, each program must address a theme aligned with the strategic planning of the organization. Each educational program may be composed of one or more learning tracks that together form a mosaic of operational, tactical and strategic interrelated contents. These contents must be distributed between courses and / or events with a specific workload,

Still, depending on the educational context of the target audience or purpose of the program, the organization can develop courses to instruct the repetition and practice (qualification); create knowledge for understanding the phenomenon studied (capacitation) or develop gradually and orderly formal education (training).

For these programs and courses to be defined, in this stage six, meetings of the collaborative working groups between the CUN team and the teams of other organizational sectors (courses applicants) and different identified stakeholders must be held. As one of the best knowledge management practices, these Collaborative Groups aim to create trust and cooperation so that it is possible to raise the real needs and expectations regarding training, qualification and network formation for collective development. The results of Competency Mapping are recovered for the modeling of the way to follow as well as the resulting directions of KM and strategic people management diagnostics. With the information and knowledge raised, the collaborative group, in its interdisciplinary vision, follows to the information and knowledge treatment and its prioritization. Finally, it is given the definition of courses that meet the trails of knowledge of educational programs offered in that period.

During program and course elaborations, the collaborative group must also set some criteria that will guide the next steps of the implementation process of the CUN, described in Figure 5.

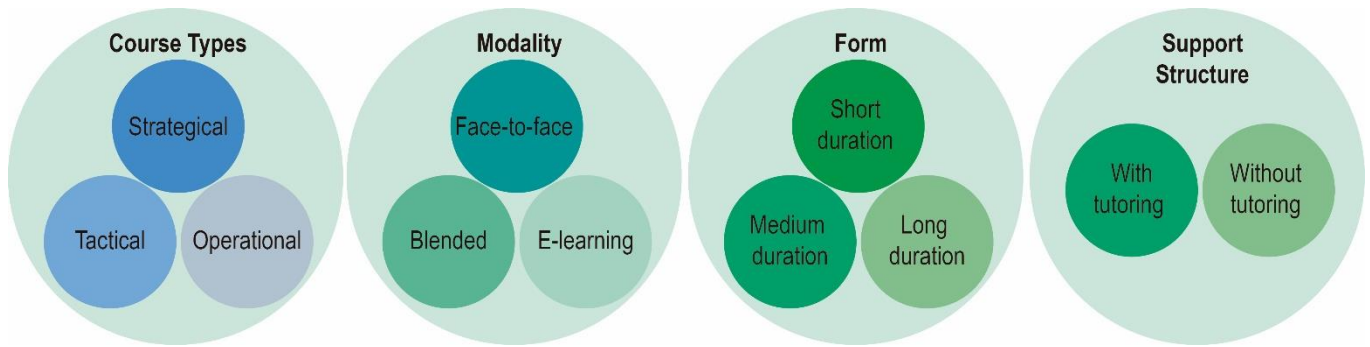


Figure 5. Course Structure.

Source: Elaborated by the authors.

According to the audience to be achieved, courses can be developed from three types: strategic, tactical or operational. As to the modality of implementation, they can be taught face-to-face, blended, or distance courses using appropriate distance education platforms. In relation to the form, the courses must be short (between 10 to 25 hours), medium (from 26 to 50 hours) or long duration (up to 100 hours) and may or may not count on support from tutors. The courses with less than 10 hours are considered events.

The Educational Program formed by these courses must follow the legal guidelines of the regulatory organization for academic universities to certify them. In Brazil, the organization is the Ministry of Education. So, for the Ministry of Education to certify the educational program of the CUN as a *latu sensu* specialization, for example, it must offer at least 360 hours of study, in addition to other requirements as to the modality of evaluations. It must be noted that certification of courses (isolated), programs, or tracks can be effective in this partnership network according to the established cooperation.

In the implementation process of the CUN, from the seventh to the ninth steps, it is important to notice the preparation of reference terms for the academic partnerships negotiation with universities and producing courses companies and of KM instrumentation. The CUN must draw up the reference terms of these services, whether they are carried out internally or by third parties, the hirings and partnerships meet the interest of maintaining the CUN as an innovative knowledge disseminator, to promote the motivation of all those involved in the quest for continuous learning. If the organization does not have an area of innovative technologies of education, for example, it is better to seek partnerships and external hires. If the area of information technology has not advanced for the development of intelligent knowledge systems, based on ontologies and taxonomies constantly updated, it is preferable the achievement of a partnership or hiring of external service providers. Regarding the partnership with academic universities, it is worth doing it to support the Pedagogic Political Project development for teacher training, content producers, mentors and/or tutors of the Organization, as well as for the certification of programs and courses. In addition, it must be considered the participation of external teachers in the CUN Collaborative Working Groups.

In the step 8, regarding the second partnership to be made, once validated the PPP and the syllabus of each course, it is necessary the hiring of service providers to produce high-level technology courses, whether in the classroom or distance courses. This step of course development involves two phases: preparation of teaching materials and course development.

In the first phase of elaboration of didactic materials that will be used in the courses, if it is a face-to-face course, the briefing and the programmatic content created in step 6 must follow for the teacher hired to the course preparation as proposed. If the course is distance, these documents must be referred to a content producer teacher for raw content preparation of the course. In the sequence, the course production service provider must draw up an Instructional Project (visual; technology; content) based on the raw content, aligned to the PPP of the CUN.

The second phase of course development: for face-to-face courses, must be chosen and prepared at least transport and accommodation for the professor, the lease of the place, the instructional support materials, assistive technologies to the course such as a projector and the virtual environment of document sharing. For distance courses, must be configured the virtual learning environment, the prototype of the course, its script, the instructional support materials, as well as the selection and training of the mentoring and monitoring team, as well as the form and language of service and troubleshooting.

In parallel, there is the step 9 of the CUN implementation process, in which it must be structured the creation and/or implementation of KM. Partnerships get started with internal area of the IT and the companies specialized in exploitation of KM. The term of reference to this partnership must provide the elaboration of the Strategy Map of Organizational Knowledge that embraces alternative analysis activities for knowledge mappings; definition of scope for strategy implementation, and the application of the method chosen. Still, the partnership must provide the elaboration of a Data Integration and Interoperability Model, defining the structure of the catalogue of information units, from the cataloguing of internal and external sources of information and strategic definition to compose the document base. At the end of this step, it is set up the scope of the taxonomy of the essential processes to the CUN, and it is initiated the development and implementation of the knowledge system. The systems and Skills Observatory, and the CUN Secretary must be the first ones to be drawn up to provide intelligent support for the CUN's management.

In sequence, for the proper implementation of the CUN, it is provided the modeling of three processes: the Evaluation Model (step 10); Network Communication Model (step 11) and the Governance Model of Organizational Knowledge (step 12).

About evaluation model of the CUN (step 10), it should be noted that there are several possible models, because the choice must be based on the cultural characteristics of the organization, as well as in the structure and purpose of the course to be taught. However, as every step of implementation process, the evaluation model must comply with the guidelines of the CUN. It must be designed so that the diversity in the environment is understood; "It is necessary to understand that the evaluation cannot be an instrument of measure to assess the performance of students, but a resource of observation and self-observation to understand what factors deprive or disinherit the growth of each student" (Covatti, Trentin & Fischer, 2011, pp. 3168). Thus, the evaluation model of the CUN must consider the formative and inclusive evaluation epistemologies.

The formative assessment does not care about the amount of "knowledge" (product) to be purchased by the student, but with the quality of this knowledge gained during the construction process. Formative assessment eliminates the concern to build learning with intent for conceptualization and diploma. It understands that individual learning needs to be built gradually to get the truly domain of a subject and its

application, transforming the acquired knowledge in competence. Hoffman (2005, pp. 20), in his turn, clarifies that "the essence of the formative design is in the teacher's involvement with students and awareness about their commitment to their progress in terms of learning – on the importance and nature of pedagogical intervention". To Freitas, Costa and Miranda (2014, pp. 87) "the formative evaluation is conducted throughout the process, it is continuous, and it gives parameters to the teacher to check whether the objectives were achieved, and they may interfere in what may be compromising the learning". Even when the course is distance and the evaluation and monitoring are handled through non-human tutoring; it is possible to create evaluations to be carried out during the course so that the student can be guided on the way.

Added to the formative assessment model, it should be incorporate the principles of inclusive assessment, so that the differences in expectations and interests of all the stakeholders' clusters and social organizational ecosystem can be observed. It is important to remember that, even with much effort, the organization does not know in depth the difficulties and deficiencies for learning of its employees. Neither it will be able to have dominion over the more distant stakeholders. Santos (2003, pp. 4) points out that "an educational institution with inclusive orientation is one who cares about the modification of the structure, the operation and educational response that should be given to all individual differences, including those associated with any disability – in any educational institution, of any educational level."

The CUN understands that everyone is different and therefore assumes the importance of practicing inclusive assessment, in which the teaching must be collective and must consider all the environmental variations in which individuals are included. Concluding about the evaluation, Santos (2003) states that the individual must be co-participant of the teaching learning process and be a co-agent on building their knowledge, leaving aside the traditional assessment model, in which the student is compared with the others within predetermined labels. The author points out that, in inclusive assessment "are offered various opportunities and different forms of the student to show how they are doing throughout the educational process" (Santos, 2003, pp. 8). That is, in the CUN model must be predict an individual self-assessment focused on the process of construction and application of knowledge by the student, and not comparative to the others.

About the network communication model (step 11), it must consider the strategic objective of inclusion and integration of multiple actors in the ecosystem. Thus, it must privilege interactive, integrative and inclusive medias. For the effective implementation of the CUN model, it is necessary a communication model that recognizes and integrates the stakeholders to the educational process, not only as production collaborates, but especially as part of a learning network. It is known that the effective inclusion depends on the use of information and communication technologies (ICT), as these are crucial for an inclusive system consolidation, "for its inexhaustible possibilities of building features that facilitate access to information, curricular content and knowledge in general, by the whole diversity of people" (Giroto, Poker and Omote, 2012, pp. 7).

The CUN is directly dependent on the mechanisms, tools and applications that facilitate the effective approach of all stakeholders of the organizational ecosystem for the learning network formation. So, when defining the CUN educational programs and courses, dynamic collaboration and sharing spaces that include,

in addition to employees, suppliers and customers must be considered. In addition, academic universities, and participants of the productive and social arrangements of the organizational ecosystem must be recognized (Freire et al., 2016). Furthermore, the communication model must predict the use of inclusive, integrative and interactive technologies as strategic enabling mediation of dialogue between the corporate university and its stakeholders (Freire et al.).

We reach the Step 12, in which the governance model of organizational knowledge must be elaborated. It is worth to point out, initially, that Grandori (1997) coined the expression “knowledge governance” at the end of the 1990s. In the early 2000s, studies of Bart Nooteboom, from Rotterdam School of Management at Erasmus University arise contextualizing the importance of governance of knowledge created in inter-organizational relationships (Nooteboom, 2000). In 2007, researcher, Nicolai j. Foss, from the Center for Strategic Management and Globalization at the Copenhagen Business School, brings the idea of Knowledge Governance Approach (KGA) (Foss, 2007). The author defines Knowledge Governance (KG) as an emerging interdisciplinary approach, running through the fields of knowledge management, organization studies, strategies and human resource management.

In any of the governance dimensions, whether global, public, corporate or of knowledge, scientific literature has identified the term governance is treated as being the governance of systems of authority, leadership and formal incentives; internal communication and with stakeholders; of culture characteristics for transparency and control, psychological contracts for trust and sharing; and the social construction of meaning, focusing on respect for collective and economic, social and environmental sustainability of the organization or country. To draw this KG model is important to rethink corporate governance in the light of knowledge management.

As points Nooteboom (2000) with KG it is possible to win three organizational challenges: to achieve a balance between dependence and power; create powers to keep active the absorptive capacity of knowledge between the internal and external collaborators; keep the focus on achieving the best of each participant’s ability. With these challenges achieved, it is easy, according to Nooteboom (2000), to motivate internal and external participants, for the co-creation and co-production of a new essential knowledge to the success of the organization, because it leads them to “take the interests of others into the heart” (pp. 76-77), corroborating with CUN’s goals.

The CUN understands KG as a new approach to organizational learning that includes control and supervision, leadership, resources, processes and procedures that subsidize and promote the creation, sharing, handling, transfer, storage and knowledge dissemination of competitive value. Whether it be individual, group, organizational, inter-organizational or network, fostering an environment of socialization of experiences where good practices and learned lessons become the basis of new effective applications. The KG model is based on the intention of the organization to achieve a balance between dependence and power; in the creation of skills to keep the absorptive capacity of knowledge between the stakeholders, in order to carry out the improvement of its capacity for the collective good. Therefore, this is the 12th step of the CUN implementation process, that is, to develop the organization’s KG model aligned to the results of the previous steps.

Finally, in the 13th step (Figure 6), the monitoring of adherence of all seven stages of the CUN guidelines

is started, which are: the increased range; the promotion of interconnection; the identification of stakeholders; the expansion of focus; the determination of the level; the use of education technology, and the center for learning and memory. In detail, these are basic guidelines of the CUN.

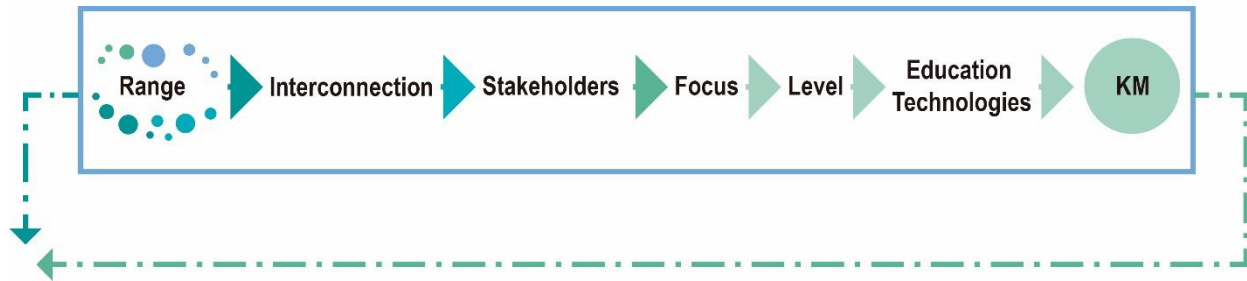


Figure 6. 13th Step of implementation process of the CUN.

Source: Elaborated by the authors.

In short, on this 13th stage, the following conditions that keep the university aligned to CUN guidelines must be analyzed, evaluated and implemented to keep the university aligned to UCR guidelines:

- Range: wide range of training, formation and qualification for collective learning including the stakeholders of the productive and social arrangements of the organizational Ecosystem and its beneficiaries.
- Interconnection: use of collaborative technologies and other tools for the promotion of integration, inclusion and interactivity of the different actors of the training – students, instructors, teachers and tutors.
- Recognition of the Stakeholders of the productive and social arrangements: recognition of the expectations and learning needs of the different stakeholders of the productive and social arrangements for the elaboration of programs that meet them. In other words, the training must propose programs that involve a wide range of internal and external network participants, recognizing the centrality of social capital development and inter-organizational relationships, in addition to human capital.
- Focus: coordinate distribution of courses and events, with a focus on task for individual efficiency improvement; on delivery, to align organizational goals with individual skills; and in the development of human capital, aimed to promoting co-creation and co-production for strategy implementation.
- Level: Programs may offer only a series of free courses, or in partnerships with academic universities, which may be recognized as university credits or rights to a diploma (undergraduate or graduate).
- Technology: Use of educational technologies for boosting and optimization of the network learning process, of knowledge creation and innovation based on relationships and interactions between the stakeholders productive and social arrangements of the organizational ecosystem, through a new generation of collaborative technologies of work and learning. Basic technologies for face-to-face mode, advancing to teaching learning virtual environments until the massive e-learning technologies.
- Knowledge management: Critical knowledge management for the strategic alignment of the operation, management and organizational strategy and network, mainly regarding the network learning, organizational memory, and knowledge retention. To prevent loss of knowledge and promote the construction of organizational memory, the content producer selection of the CUN courses, both internally

and externally, must prioritize the servers in retirement phase, so that the interested parties may retain knowledge and make it available.

If it is a strategy of organization, the CUN may be managed as a self-sustainable business unit. To reach the 13th step of the CUN, the organization has the data needed for the preparation of a university business plan, to monetize some of the educational programs, courses and events offered to external stakeholders. For the preparation of a business plan it is necessary to describe the organizational and business strategy; the expectations and interests of customers, partners, and suppliers; production process, communication and offering; description of products and services. All this knowledge has been developed at the end of the 13 stages of the implementation process of the CUN described in this article.

4. Conclusion

After analysing the different models of training, development and education offered by the scientific literature; after describing the main guidelines of the contemporary model of Corporate University - CU; after identifying the stages of evolution for the CUN model; after understanding the construction of Intellectual Capital by the Logic of Learning; after identifying the strategic fundamentals that a corporate university must develop to become a CUN, it was possible to understand the seven guidelines that must be managed for the evolution among the six stages of the CUN: Training Department, E-learning Platform, Corporate Education, Corporate University, Stakeholder University, and Corporate University in Network (Table 1), as well as to map out the steps that must be followed for the implementation of the most contemporary model, the Corporate University in Network model.

Thirteen steps were proposed for the corporate university implementation that adhering to the CUN model: I) the strategy definition of the CUN aligned with organizational strategy; II) knowledge management diagnostic of the organization; III) diagnosis of the strategic people management system; IV) mapping of individual and organizational skills to identify gaps to be developed by the CUN; V) development of the Pedagogical Political Project; VI) elaboration of educational programs, and definition of the number and contents of the courses from which it's made; VII) elaboration of terms of reference for the negotiation of partnerships with academic universities, and certification; VIII) partnerships with companies producing courses; IX) partnerships for the instrumentalization of KM; X) definition of the Complex Project Evaluation model; XI) Network Communication Model; XII) Governance of Organizational Knowledge Model; XIII) monitoring the adherence of all stages covered to the seven guidelines of the CUN.

The results of this research advance on the existing scientific knowledge, since Freire et al. (2016), the CUN model authors, did not design the model implementation process.

Therefore, following previous research, in this current work, it was possible to model the implementation process of the CUN, respecting each of the identity model guidelines (Freire et al., 2016) taking into consideration the need to attend the different expectations and stakeholder interests in the organizational ecosystem. This action answered the research purpose, which was to model the processes of implementation of the Corporate University in Network (CUN).

Also, have been defined practices, techniques and knowledge management tools to promote collaboration

and sharing of information and knowledge between the internal and external stakeholders, as the Collaborative Groups, and knowledge engineering tools to skills management. The concepts of two new terms dealt by the academy were also introduced. The first one is the concept of Corporate University in Network (CUN) as being an "intelligent environment for continuing education, not necessarily physical, which manages and institutionalizes a learning culture among all beneficiaries and participants, internal and external, of the productive and social arrangements of the organizational ecosystem. It has as a goal the co-creation and co-production of development strategy".

The second one is the concept of Knowledge Governance (which corresponds to the 12th step of the implementation model) as being "a new approach to the organizational learning that includes control and supervision, leadership, resources, processes and procedures that subsidize and promote the creation, sharing, handling, transfer, storage and dissemination of knowledge of competitive value, whether individual, group, organizational, inter-organizational or network, favoring an environment of socialization of experiences where good practices and learned lessons become the basis of new effective applications." With the implementation model of the CUN here proposed, it will be possible to enable organizations to manage the difficulties in managing cultural, behavioral and structural changes, and the strategic alignment of technologies, partnerships and the evaluation of results, creating the path to the effective implementation of a contemporary model of corporate university.

We propose the continuation of this study from theoretical empirical research deepen each of the 13 stages of the implementation process of the CUN.

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