Immanuel Kant's system of layers of institutional acculturation applied to Higher Education in Administration

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Abstract

This reflective-theoretical article evaluates concepts of Immanuel Kant (1724-1804) in order to build a theoretical instrument capable of indicating guidelines for planning practices to be adopted in Higher Education in Administration. The study describes the basic concepts about knowledge, reason and judgments, presenting an illustrative model in which some clarifications and fruitful interpretations in the review and establishment of Administration courses are evidenced. This is the first stage of theorization, which must be followed by technical work aiming at the implementation of the ideas presented in this study.

Keywords: Kantian Rationality. Teaching. Culture. Knowledge. Administration.

Sistema de camadas de aculturamento institucional em Immanuel Kant aplicado ao Ensino Superior em Administração

Resumo

Este artigo, de caráter reflexivo-teórico, avalia conceitos de Immanuel Kant (1724-1804) com o objetivo de construir um instrumental teórico capaz de indicar diretrizes para o planejamento das práticas de Ensino Superior em cursos de Administração. O estudo descreve os conceitos básicos sobre conhecimento, razão e juízos, apresentando modelo ilustrativo no qual se evidenciam alguns esclarecimentos e interpretações profícuas na revisão e montagem de cursos de Administração. Trata-se da primeira etapa de teorização, que deve ser sucedida por trabalhos técnicos com vistas à implantação das ideias gerais aqui apresentadas.

Palavras-chave: Racionalidade kantiana. Ensino. Cultura. Conhecimento. Administração.

Sistema de capas de aculturación institucional en Kant aplicado a la Educación Superior en Administración

Resumen

Este artículo, de carácter reflexivo y teórico, evalúa los conceptos de Kant con el fin de construir una herramienta teórica capaz de indicar directrices para la planificación de las prácticas de enseñanza superior en los cursos de Administración. El estudio describe los conceptos básicos de conocimiento, razón y juicio, al presentar un modelo ilustrativo en el que se muestran algunas aclaraciones e interpretaciones útiles para la revisión y montaje de cursos de Administración. Esta es la primera etapa de la teorización, a la cual seguirían los trabajos técnicos con el propósito de aplicación de las ideas generales aquí presentadas.

Palabras-clave: Racionalidad kantiana. Educación. Cultura. Conocimiento. Administración.

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INTRODUCTION

In *Critique of Pure Reason*, Kant (2012) approaches concepts that form hypotheses and propositions customarily discussed in works of epistemology. This work of Immanuel Kant (1724-1804) considers that a part of what man knows in life is derived from innate structures and that another part is understood and acquired through experience. Written in his most mature phase, the *Critique of Pure Reason* is a treatise on the theory of knowledge, widely analyzed until today for its philosophical density, Kant (2012) seeks to balance rationalism and empiricism, creating a system of basic concepts in the field of epistemology.

This article aims to elaborate useful guidelines for the construction of mechanisms to be applied to teaching in undergraduate courses in Administration. It is hoped to evaluate the basic concepts of Kant (2012), verifying how the ideas presented in this work can "illuminate" the production of knowledge in contemporaneity.

The following study question was adopted:

- Is it possible to extract new and relevant contributions to the practices of Higher Education in Administration from an update of Kantian epistemology?

From the answers obtained, this article presents guidelines (a framework) from which are ordered a list of useful ideas for the programs of graduation in Administration.

The methodology of this research is theoretical-reflexive and its theoretical framework consists of the work of Kant (2012), developed from a logical basis in which semantic attributes are inserted from the contributions of contemporary authors in the fields of Education, Institutional Theory and Philosophy of Science.

In addition to the answers to the main question and the set of guidelines raised, this article also makes a contribution with an explanatory model of the theoretical construct of Immanuel Kant (1724-1804), elaborated on by means of illustrations that intend to offer help with textual interpretation by means of resources of spatial perception. We present a model of knowledge production formalized in a system of layers, which represent the process of institutional acculturation. This model demonstrates the rationality evolving with overlapping layers over time, depositing knowledge and underpinning the cultural, evolutionary and ontological structure of the production of human knowledge.

DEFINITION OF PURE KNOWLEDGE AND EMPIRICAL KNOWLEDGE

Immanuel Kant calls *a priori* the independent knowledge of experience and distinguishes it from empirical knowledge, which he calls *a posteriori* (arising from experience). For Kant (2012), *a priori* knowledge does not cover the whole meaning of non-empirical knowledge, leaving room for knowledge that is derived indirectly from experience and cannot be classified as *a priori* knowledge. As in this example:

> If one digs the foundations of a house, "*a priori*" one can expect it to fall, without having to observe the experience of its fall, since, practically, one already knows that everybody abandoned in the air without sustentation falls to the impulse of gravity. Thus, this knowledge is clearly empirical (KANT, 2012, p. 3).

The philosopher exposes that there is an intermediate area between *a priori* knowledge and *a posteriori* knowledge. Thus, indirectly, it suggests that there is a less empirical empirical and there is a more rational rational. To distinguish what becomes *a priori* knowledge, Kant (2012, p. 3) asserts that it is "whatever is acquired independently of any experience". On the other hand, Kant (2012, p. 3) also states that "one cannot doubt that all our knowledge begins with experience". So how can we understand that all knowledge is initiated through experience, while there is independent knowledge of that experience?

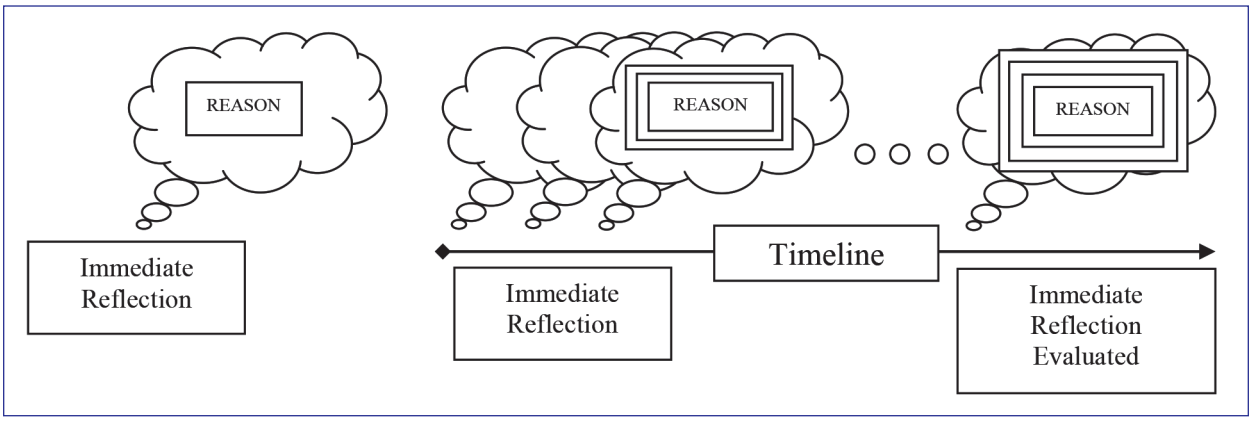
To distinguish Kantian statements, one must consider the difference between the verbs "begin" and "acquire". The verb "to begin" defines the order, the sequence and the point of approximation of the experience by means of an ordering; the verb "to acquire" means that *a priori* knowledge had no direct contact with experience, although it was generated from the cumulative and gradual incorporation of previous experiences, through a process that began with experience, but without there being any direct and immediate contact with such an empirical moment.

In order to clarify the supposed contradiction of Immanuel Kant, it is verified in Bombassaro (1994, p. 18) that knowledge "is an intellectual activity in which man seeks to understand and explain the world that constitutes him and the enclosure", being the structures created in this historical process a vector of contents that vary in terms of closeness and temporal distance. This procedural and temporal distance, formed in a historical context, will constitute a structural scale that defines a greater connection with the innermost nuclei of rationality or the outermost layers of epistemological empiricism.

Thus, in order to explain the apparent contradiction between "beginning in experience and being independent of experience", we note the existence of degrees in the construction of pure rationality. Starting from Rodrigues's reflection (2011, p. 152), which distinguishes the "phenomenon of perceiving" from the object *per se*, a view is built here that reason is not an indifferent capacity for variations of state and experience and based on ideas accessed only here and now. On the contrary, it is understood that reason is based on layers that accumulate over time, and are also processed through the intensity of lived experiences, evaluated with all that the experience is able to accumulate and offer to those who reflect, following closely Vigotski's (2000) thinking, as Figure 1 illustrates.

Figure 1

Reason as a product of experience

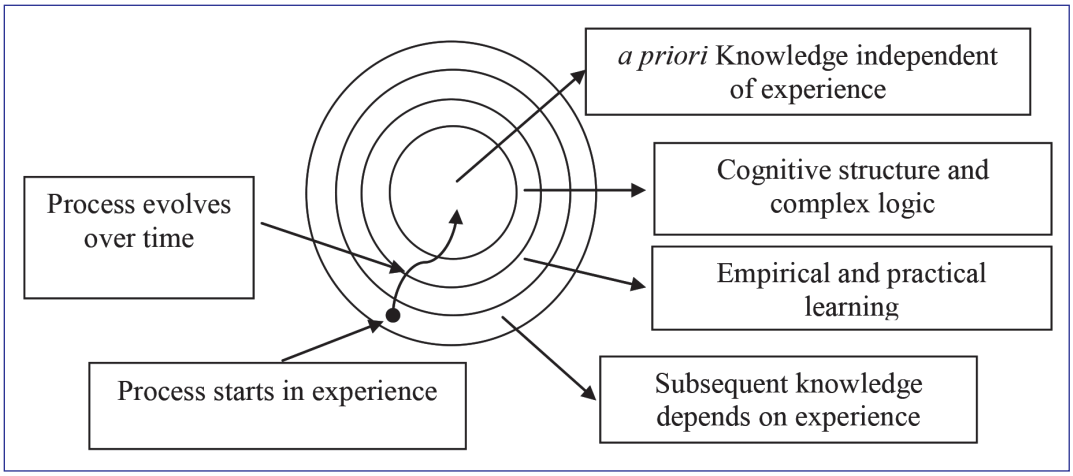


Source: Elaborated by the authors.

Vigotski's (2000) conception updates and harmonizes the controversies between empiricism and rationalism, contributing to the construction of the notion of the formation of the cognitive notions of man from historical and cultural contexts. Reason would not be based only on the moment, but based on innate logical bases constructed during the "timeline" experienced by each individual, assisted and influenced by the social phenomena that involve each person, being triggered not only by what is innate but also by the full range of cultural resources accumulated so far. Developing and advancing a little more this notion, this study proposes to explain this process (Figure 2).

Figure 2

Process of evolutionary layers of formation of *a priori* knowledge



Source: Elaborated by the authors.

Figure 2 illustrates the *a priori* knowledge formation process, which begins with empirical contact and then the layers advance inwardly over time. From the above, the most remote (internal) structure of this system harbors the logical and cognitive mechanisms - the cognitive apparatus cited by Rodrigues (2011) – close to what Kant (2012) calls "pure". This process produces the structural layers that form the pure reason that covers *a priori* knowledge. The process suggests that the complexity and stabilization of knowledge widens as it accommodates in layers. If there is a differentiating root of the human species – and there is – it will be located at this innermost point of the layers, although it is also linked to the intuitive processes (VIGOTSKI, 2000).

The knowledge admitted by Kant (2012) as pure is one in which there is no direct participation of experience (HUME, 1999; MONTEIRO, 2014; VIGOTSKI, 2000). However, it should not be forgotten that Kant (2012) states that all knowledge starts with experience, so how could there be a "pure *a priori* knowledge"? Figures 1 and 2 and their comments show knowledge composed of layers of accumulation and longitudinal evolution. "*A priori* pure knowledge" is represented by the innermost part of the layers of reason, which is the most remote place of rationality (the one which has taken the most time to constitute). In the central right area, knowledge proves more transcendental than all the layers, constituted by culture or by learning acquired by one or even several generations of the same kind of individuals (BURREL, 1999; VIGOTSKI, 2000; WAIZBORT, 2001).

Transcending Vigotski's view (2000), the conception of the nature of reason and the reflective capacity of man is based on the biological origins of the species (WAIZBORT, 2001). Darwinian evolutionism makes clear that the accumulation of knowledge, layer by layer, moment by moment, both from the point of view of the individual and through the species, transcends through descendence to all beings, and this cannot be different for men. Thus, the innermost layer of the ratio would be that generated by the biological evolution of the species (DARWIN, 1996; WAIZBORT, 2001).

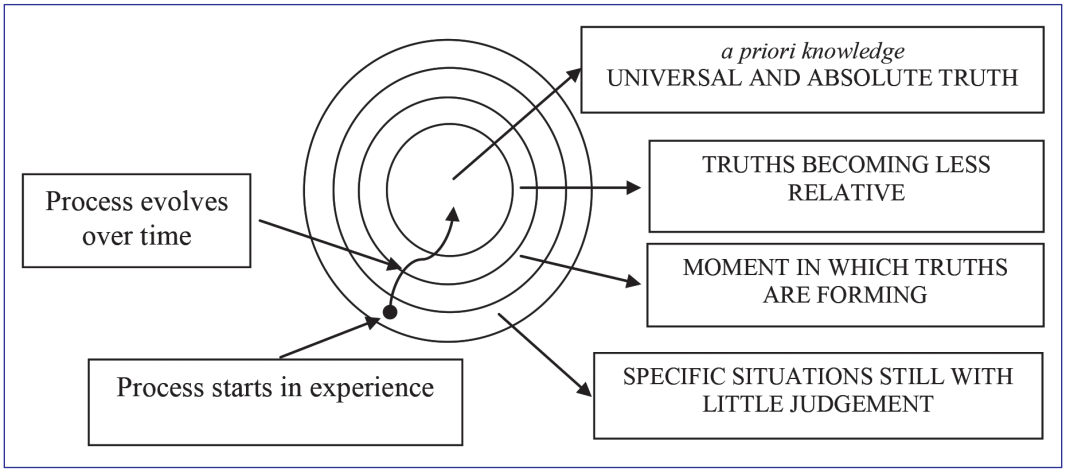
In fact, knowledge begins in the experimental layer, but evolves to more internal and perennial layers through incorporation, via culture, into an even longer and more gradual process that goes beyond generations or even transcendences (BOMBASSARO, 1994). Pure *a priori* knowledge consists of the whole structure of knowledge that is not directly tied to experience, that is, not found in layers closer to the layer of experience. Therefore, it is one whose experience, although participated in at its constitution at a remote time, is not properly determined at the time of its apprehension.

Kant (2012) himself admits to some difficulty in distinguishing empirical knowledge from pure knowledge. In an attempt, the philosopher first proposes that all essential and necessary thinking to the understanding be obtained *a priori* (basic structures). Then he proposes that experience should never provide judgments with a true universality, but only with a

supposed, relative, or inductive generality (superficial structures), as Chalmers (1993) puts it. At this point a precondition arises to understand that, in a view contrary to that of the inductivists, the Kantian notion understands that empirical studies or qualitative studies based on empirical observation cannot represent absolute universal truths, since they are obtained through experiences and socializations, based on a knowledge that is not structured *a priori*. For this reason, Kant (2012) attributes strict universality only to *a priori* knowledge, while empirical knowledge is not subject to such a condition. However, what the philosopher calls absolute are the experiences based on the truth built with the help of time (DARWIN, 1996; VIGOTSKI, 2000).

Figure 3

Immanuel Kant's vision of universalism and absolute truth



Source: Elaborated by the authors.

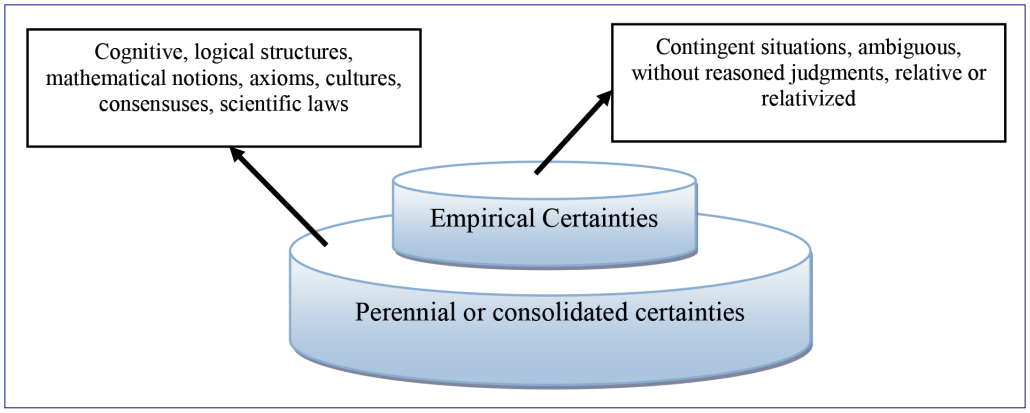
For Kant (2012), the absolute truth corresponds to the one farthest from the extremity of the set of layers, the innermost, being the one that took the most time to embed itself into human rationality (VIGOTSKI, 2000). In this way, the more transcendental (obtained over time and generations), the more absolute such truths would be. For Rodrigues (2011, p. 153), Kantian truth is "the result of a mutual appropriation of the cognitive apparatus and of the world. Truth is therefore not in any way the result of a one-way process". The cognitive apparatus fits the world and the world fits the cognitive apparatus. For Vigotski (2000), it is a dialectical process between experience and consciousness. This is the double meaning cited by Rodrigues (2011) in dealing with the circularity between the empirical environment and reason, with points in common between these theories and the proposal of the evolutionary layers presented here.

However, what would "rigorous universality" mean to Kant (2012)? This would be something that allows no exception, something that derives from *a priori* knowledge. The opposite side of this universality, the *a posteriori* side of knowledge, adopts the notion of a validity based "on most cases." Thus, for Kant (2012), when a rigorous universality is essential in a judgment there will be the ability of knowing *a priori*. Judgments that cannot be challenged so as not to harm logic and common sense are some of these examples. Here the Kantian idea strengthens the notion that *a priori* knowledge is most embedded in man's nature, which is why it would be the purest and closest to absolute judgment.

As to the universality of Kant (2012, p. 5), one asks: "where would the experience base its certainty, if all the rules it employed were always empirical and contingent"? There would be no basis for sustaining the observations and experiences if there were no duly consolidated knowledge of previous and perennial structures (RODRIGUES, 2011). Looking from the perspective of the structural layers, it can be seen that *a priori* knowledge is the innermost layer that sustains the outer layers or those closer to the experiences, being here views very close to those held by Vigotski (2000).

Figure 4

Perennial structures with the support of empirical certainties



Source: Elaborated by the authors.

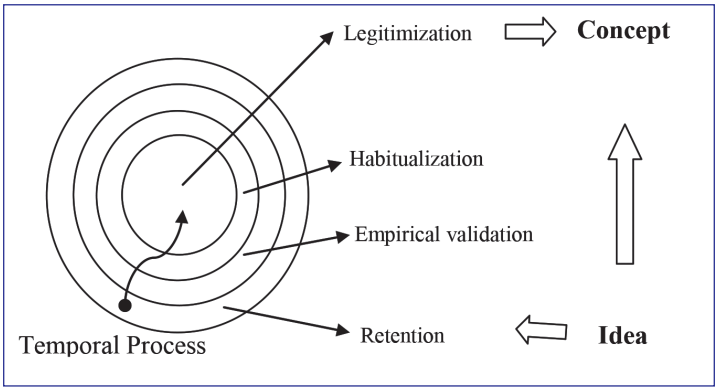
INSTITUTIONAL THEORY AND INSTITUTIONALIZATION OF CONCEPTS

In the Kantian view, concepts are objects that cannot be provided by experience and emancipate themselves and extend beyond the limits of our judgments. God, freedom and immortality are examples of what is known as a concept. Therefore, emancipating concepts means incorporating ideas into a more internal structural core. Knowledge that is more internal is *a priori* knowledge or that which has been incorporated longer in the culture of the society in question (GONZALEZ, 2004; VIGOTSKI, 2000). It is believed that the most well-established concepts are those that will become perennial or less vulnerable to change (CHIBENI, 2014). Once well instilled at this level, knowledge will make up the innermost nucleus of the structure of reason and will be less subject to change.

The process of including new concepts at the deepest levels of the layers of knowledge is also paralleled in the ideas of the Institutional Theory, taken here from the view of the Social Sciences. Based on the institutional vision, the process of consolidation of judgments consists of the stages of retention, empirical validation, institutional habitualization and legitimization. This process, known as "institutionalization", applies to the epistemological process and is associated with the view that learning and skills occur through cultural formations acquired by adaptation and identity of value between individuals sharing the same environment (BERGER and LUCKMANN, 2003; TOLBERT and ZUCKER, 1999; SELZNICK, 1996). These knowledges are formed in a gradual, adaptive and evolutionary way (VIGOTSKI, 2000), as shown in Figure 5.

Figure 5

Process of institutionalization of concepts



Source: Elaborated by the authors.

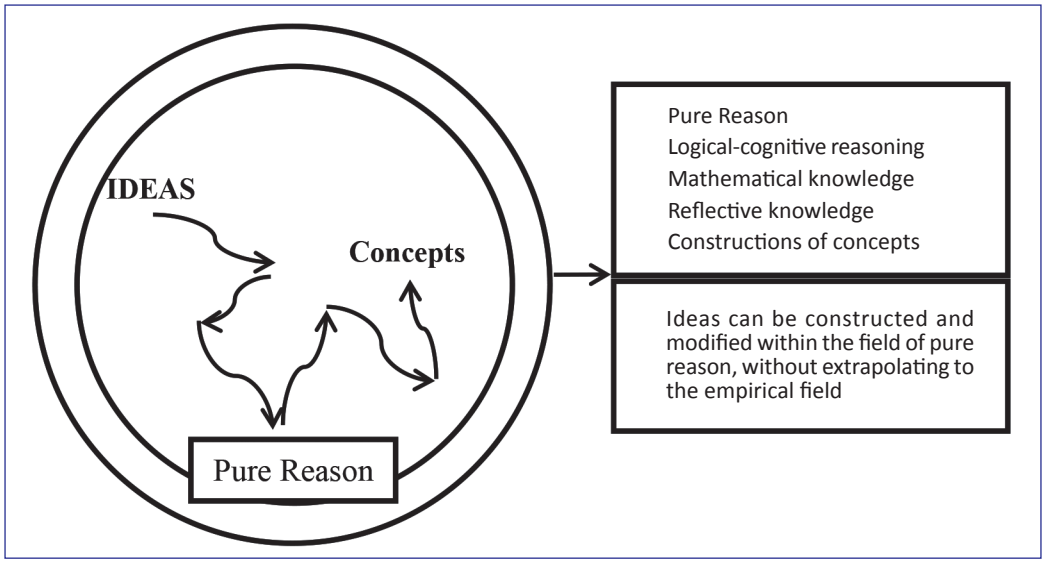
Hume (1999) touches upon the question of habit, but puts the order of this process in the implicit form of immediate "necessity", he assumes rationality to be something more connected to the learning of the now, without a rationality evolving over time (VIGOTSKI, 2000). However, the notion of learning does not properly identify itself with the processes related to rationality, since it does not include the processes of institutionalization and cultural formation generated from the richness of the myths and symbols that are being incorporated into consciousness and which, thus, constitute pure rationality (BARCHEE and ALMEIDA, 2015; BERGER and LUCKMANN, 2003; LÉVI-STRAUSS, 1991; VIGOTSKI, 1984; 2000).

It seems reasonable to concede that Hume (1999), in his defense of a reason built on experience, would be laying the foundations of institutionalism when he recognized knowledge based on habit and the accumulation of successful experience. However, Kant (2012) assumed that something more fundamental (internal structures) would have to support the capacity for apprehension of reality and the formation of concepts without, however, denying the participation of empiricism as a mechanism of entry of this epistemological system (MONTEIRO, 2014; KANT, 2012; LÉVI-STRAUSS, 1991).

According to Kant (2012), the learning of Mathematics places itself as the light that illuminates the compartments of the mind, being an important part of the content of preexisting concepts. However, reflection, learning and introspection produce real *a priori* knowledge. For Kant (2012), the reflection goes so far as to deceive the reason, which does not perceive the nature or origin of the new concepts, obtained from *a priori* data (SANTOS, 2016; PRÍNCIPE, 2016).

Figure 6

Internal processes of construction of ideas and concepts realized in the reason



Source: Elaborated by the authors.

Some concepts assimilated by man are of great usefulness, as well as true in the point of view of logic and pragmatism. On the other hand, certain concepts are shown as beliefs and myths that, although not true from the perspective of reality, are used in the conception of the senses and of the whole basis of cognitive support (ZILLES, 2006). These myths seem to serve as emotional encouragement for the incomprehension of the complex senses of human existence. The construction of these conceptual structures, which continue to be related to what is also practical, reveal the senses of thought, struggles and conflicts linked to the metaphysical arguments that support the myths and religions (BURREL, 1999; LÉVI-STRAUSS, 1991; VIGOTSKI, 1984, 2000).

Another angle of Institutional Theory presented by Dimaggio and Powell (1983), specified by Selznick (1996) and typified by Berger and Luckmann (2003), shows that institutionalization occurs in a process that standardizes habitual actions shared between actors. These patterns produce processes, skills, and competencies. This condition is manifested by an exchange of influences, generating imitative or isomorphic behavior. For authors of the learning school, such as Nonaka and Takeuchi

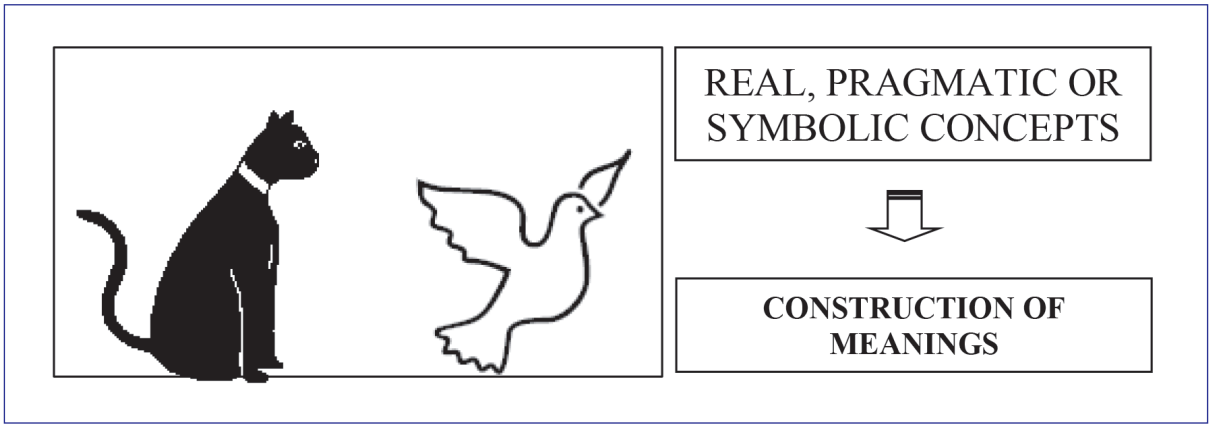
(1997), this process of information exchange and skill development through imitation and repetition of practices is called socialization, which represents the transference of tacit knowledge among people.

From the epistemological view, the institutional notion stands as the mechanism or as the cognitive apparatus of Kant's conception of transcendental aesthetics (2012), as Rodrigues (2011) emphasizes, carrying out the transmission of knowledge through the layers of institutional acculturation and apprehension of the world and its objects. The contact with the environment, the use of sensibility and its experiences over time, builds concepts that will guide the judgments in general, constructing the vision of reality, also based on myths and ideological narratives (RODRIGUES, 2011). Ideologies relativize Kantian truth by not allowing a conception of unique agreement between knowledge and the object, producing what is called a phenomenon (*phainoumenon*), opposing truth *per se* or *noumenon* (RODRIGUES, 2011).

When one is related to an ideology, whether of a political or religious nature, one starts to internalize symbols that, throughout the doctrinal process, will institute concepts through the layers of institutional acculturation, as can be verified with the help of Figure 5 (BERGER and LUCKMANN, 2003). Once instituted, concepts of an ideological nature will rarely offer favorable conditions to allow for the attempt to remove or revise their content because they are allocated to the innermost and most consolidated part of reason.

Figure 7

Concepts formed in pure reason



Source: Elaborated by the authors.

Figure 7 shows that the interpretation or understanding of objects or facts is objectively available in the constructions of the broader meanings. Concepts are contextualized with the aid of a set of premises that are already properly instituted in this innermost layer of reason. Once the new judgments are generated, they will rarely vary due to the isomorphism produced by the nature of the premises of contextualization of the concepts. The concepts-assumptions would compose a process of conceptual isomorphism, for example in the view of institutional isomorphism, as originally argued by Dimaggio and Powell (1983). Thus, the concepts to be formed take their own course that follow the conformity of the set of isomorphic premises already established in the ratio. That is, the views of the present are not completely autonomous or free, because they maintain an inevitable link with the set of concepts-premises that contextualize and prejudice the reflections and their new apprehensions. Intending to remove, influence or alter the interpretation of a new concept of a person who assimilated a certain doctrine would require changing a whole set of concepts-premises that give meaning to the formation of new concepts that would be allocated, through internalization, in pure reason. For Rodrigues (2011) this is a conception that reveals a non-passive condition of the Kantian understanding, since there is a dynamic process in the formation of reason, while, at the same time, revealing a truncated and reactive reality generated by the idiosyncrasies pre-established by the concept-premises, which are not disconnected with the interests, desires and needs of a material, existential or affective nature (TASSONI, 2015; VIGOTSKI, 2001).

For Vigotski (2000), the construction of knowledge necessarily passes through the elaboration of symbolic analogies. The production of meanings comes from associations learned from the signs obtained from contact with the other by the exchange and negotiation of logical apprehensions. Mediated by language, the result of these exchanges, negotiations and socializations of symbols produces the metaphors that will internalize the senses in the deeper layers of reason.

KANTIAN NOTIONS OF ANALYTICAL JUDGMENT AND SYNTHETIC JUDGMENT

For Kant (2012) the analytic judgments carry out the link between the subject and the predicate. The relation between subject and predicate is conceived by means of an *identity*. Identity being the property of belonging of the predicate in relation to the subject and the predicate something contained in the subject. Identity is the result of the process of insertion of the concepts that are installed and perennial in reason, forming the convictions. What Kant (2012) calls analytical judgment represents the process that connects knowledge constituted in concept form and which establishes itself in a stable way in reason. In this way, what was once an idea, mediated by analytical judgments, becomes an integral part of the thinking subject, when ideas become concepts, properly internalized or institutionalized, they come to form the identity of those who conceive them.

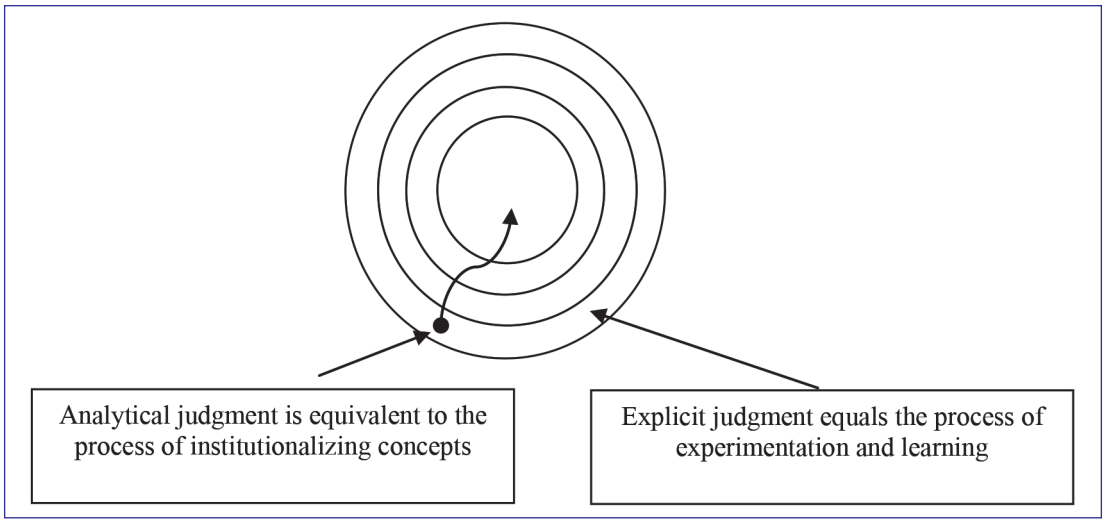
The sense of predicate for Kant (2012) is not of the mere action of the subject, but of conviction. A phrase of the type "John plays with a ball" is understood by the philosopher as "John is convinced that he plays with a ball". Predicates are the concepts embodied in reason, being the attitudes, will or feeling formed by the concepts instilled in it. In this sense, Long (1965) points out that there is no way to justify "neutrality of values" in the formation and performance of an administrator, and this judgment, in the opinion of this author, is more relevant than technical knowledge. Identity is the set of concepts that shape one's attitudes. To identify oneself is to conceive ideas and become convinced of them. The process of constructing these attitudes - and identity-forming convictions - is called by Kant (2012) *analytical judgment* (SANTOS, 2016; PRINCIPE, 2016).

Kant considers that the predicates contained in the subject form the tacit knowledge. Thus, those who play with a ball are those that are convinced that they have acquired the concepts necessary to play with a ball. The concept associated with the belief in the apprehension of this concept is the predicate. Thus, tacit knowledge forms the skills or instrumental capacity for the realization of actions, which are generated from an identity formation - processed (or generated) by the analytic judgment. The analytical judgments form the concept, and do not require the testimony of the experience, having been already incorporated from previous moments lived by the individual, by the community that generated a shared culture or by the antecedents of the same species that passed on this knowledge through biological evolution (DARWIN, 1996; VIGOTSKI, 2000).

Predicates that are not contained in the subject form explicit judgments. All judgments reasoned from an immediate or contingent experience are explicit judgments. Explicit judgments are not internalized in the subject and are developed in the peripheral circle of the reason layer. A person who has no contact with the activity of playing football, for example, can kick a ball without analytical judgment associated with such an action. A soccer player plays ball by conviction, assuming analytical judgments, on account of his identity with this action. Figure 8 represents the definition of these concepts.

Figure 8

Characteristics of analytical judgment and explicit judgment



Source: Elaborated by the authors.

At the same time, tacit knowledge is associated with the abilities and faculties of the subject, while explicit knowledge is associated with the formalization of knowledge so that it can be apprehended or documented. Tacit knowledge is related to the ability already incorporated into the individual and can only be transferred to others through socialization, which is a process that involves coexistence and maturation generated by time (NONOKA and TAKEUCHI, 1997; VIGOTSKI, 2000).

Assuming the conception of Kant (2012), tacit knowledge is taken as distant or independent of immediate action, and socialization is a process of the "analytical judgment" type, since it will only be incorporated into the individual after a certain amount of time of contact with such activities. It is noted, for example, that playing football is not an activity that is acquired immediately through the transmission of explicit knowledge. On the contrary, training is constant and long-term. Practicing swimming is also an activity acquired by a process that is not immediate. In this way, the point that connects the modern notion of tacit knowledge with the Kantian enlightenment vision is established by the process and by the properties of analytical judgment (NONAKA and TAKEUCHI, 1997; SANTOS, 2016;VIGOTSKI, 2000).

CONCEPTS AND SYNTHETIC JUDGMENTS

Any and all knowledge that has not undergone the process of analytic judgment is called synthetic judgment, which makes use of explicit processes and, from them, without intermediation of analytical processes, can reach reason in its purest layer. Therefore, synthetic judgments can be explicit, but they can also cause concepts to advance structurally inward without the fulfillment of all the institutional steps by which analytical judgments pass. Synthetic judgments transform ideas into concepts independent of analytic judgment (SANTOS, 2016; RODRIGUEZ, 2011).

Mathematical concepts are, above all, *a priori* propositions or judgments, because they imply necessity and cannot be obtained directly or essentially through experience. However, according to Kant (2012) they are synthetic judgments. Synthesis produced in synthetic judgments is obtained from equally synthetic elements, one arising from the others. At this point, the Cartesian certainty is present, because, from a single apodictic logical reference, all the mathematical concepts can be generated. That is, a single mathematical proposition is enough for all other propositions to be deduced (RODRIGUES, 2011).

It should be clarified that in defining mathematical concepts as synthetic rather than analytical judgments, Kant (2012) argues that such conceptualization is not the place or level at which this concept is to be fixed, but rather it is a process, for judgment is equivalent to process for the philosopher. The difference between analytical judgment and synthetic judgment lies in the way the process develops, especially in relation to time (VIGOTSKI, 2000). The analytical judgment requires a longer term and the synthetic judgment is shorter. However, the synthetic judgment can take "leaps", leading to pure reason (central layer) knowledge that passes from explicit and external contact directly to the central part of reason (RODRIGUES, 2011).

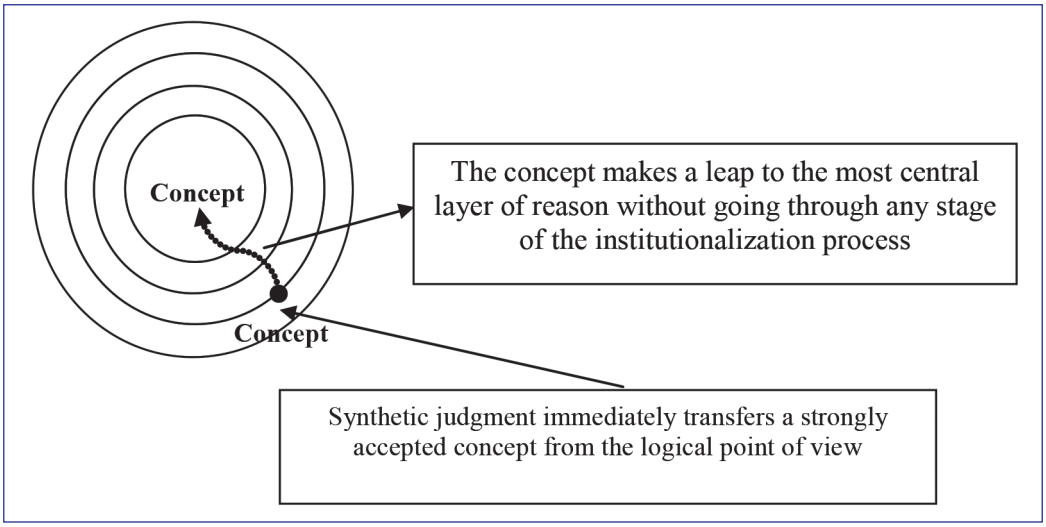
When Kant (2012) suggests that mathematical concepts are related to synthetic judgments, when he cites that the axioms of mathematics and geometry are synthetic because they can only be demonstrated by intuition, the philosopher is proposing that there is a direct path between the conceived notion of an idea and its accommodation in reason. Thus, synthetic judgment is responsible for the insertion, for the explicit inputs of information to reason, and not necessarily for the peripheral part of reason, but also for the more central areas of reason. What matters in the synthetic process is that the idea becomes a concept, without going through the path of analytical judgment (SANTOS, 2016).

Concepts are not exclusive objects of the field of Exact Sciences, on the contrary, they also refer to the formation of linguistic or structuralist structures. Claude Levi-Strauss and Ferdinand de Saussure and other linguists deal with the formation of concepts on the basis of the relationships between their meanings (LÉVI-STRAUSS, 1970, 1991; VIGOTSKI, 2000).

The view of synthetic judgment has very interesting practical consequences in the context of learning and functional training. The existence of this possibility allows knowledge to be incorporated directly into the most central and definitive layer of reason, without there being a long and painful process of knowledge apprehension. Through synthetic judgments, concepts can enter the purest part of reason by the mere transmission of that knowledge.

Figure 9

Concept leap in synthetic judgment



Source: Elaborated by the authors.

Figure 9 illustrates the way the apprehension of categories of knowledge can be transferred directly, rapidly and definitively, without the need for training or socialization processes. This type of knowledge acquires strongly intuitive or clearly structured concepts from the point of view of logic, thereby enabling the penetration of this knowledge without major difficulties in the purest layer of reason. The predicates are added to the concept by intuition and not by an experience lived through over time, being that the systems of apprehension of the knowledge are developed by means of movement of principles.

The pragmatic consequence of this phenomenon consists of two conditions or possibilities:

a) synthetic judgments show that there is a category of knowledge that can be converted into training quickly or almost immediately; and
b) synthetic judgments can be worked out so that they can be more easily converted to pure reason.

Here, what is shown is that even if an idea has not yet been reasoned analytically, it can be transferred directly to the innermost layer of reason, provided it is already properly elaborated in concept form.

A concept structured in a logical and well-structured way may dispense with a process of institutionalization, "skipping" the steps common to analytical judgments. Such assumptions having been met will provide the following practical results:

a) reduction of the time for training people; and
b) expansion of the general training due to the increase in the facility for replication of ideas or concepts.

THE ARTICULATION OF EDUCATION IN ADMINISTRATION ON THE KANTIAN BASES

According to the considered reflection model and the process of knowledge internalization (Figures 1 to 3), fast decision-making heuristics, an especially useful skill for leaders, supervisors, and coordinators, allow for swift judgments largely based on knowledge bases accumulated throughout the process of internalizing visions and apprehending ideas. For this reason, the student of Administration needs to have specific skills and knowledge of a general nature, but that will only be strengthened through practical work effectively identified with the functions assigned to them. The proposal to learn Administration in practice, simulated with the help of case studies or simulated games, has been discussed since the 1970s in the universities of

the United States of America, especially in Harvard, and in Canadian universities (CAIDEN, 1971; CUNHA, 1981; SHERWOOD, 1979; BARNES, CHRISTENSEN and HANSEN, 1994; BHATTI, 1985; HAMMOND, 2014).

However, in spite of the supposed historical preoccupation with the valuation of managerial practices as a learning requirement in postgraduate programs in Administration (CUNHA, 1981; CUNHA, 2006; LONG, 1965; VALE, BERTERO and ALCADIPANI, 2013), in practice, with exceptions, the general rule in the selections of masters and doctoral candidates *stricto sensu* does not assign considerable relevance to the professional experience in Administration. Although focused on academic activity, *stricto sensu* education in Administration requires a minimum of pragmatism, especially in order to achieve effectiveness in the definition of objectives, elaboration of constructs, models and analysis of processes in Administration (VALE, BERTERO and ALCADIPANI, 2013; LONG, 1965). It is necessary that the training of the students of Administration in Brazil be more based on the production of direct or indirect effectiveness than in the valuation of curriculum through titles (CUNHA, 1981; CUNHA, 2006).

Neither is the professional conduct of the administrator with holistic skills, in the systemic sense of the expression, a recent demand, not even referring to this millennium. According to Cunha (1981) and Vale, Bertero and Alcadipani (2013), ever since studies were conducted at the end of the 1960s, a systemic vision and multidisciplinarity have been requested as paradigms to follow because of their importance in analogy and the employment of metaphors as an instrument for enriching judgments in the service of administrative practices. Analogies are rich because they employ an already institutionalized knowledge of other sciences (see Figure 5), taking advantage of all the theoretical consequences obtained in science as a model (FRANÇA JÚNIOR, 2002; CONTRACTOR, 2007).

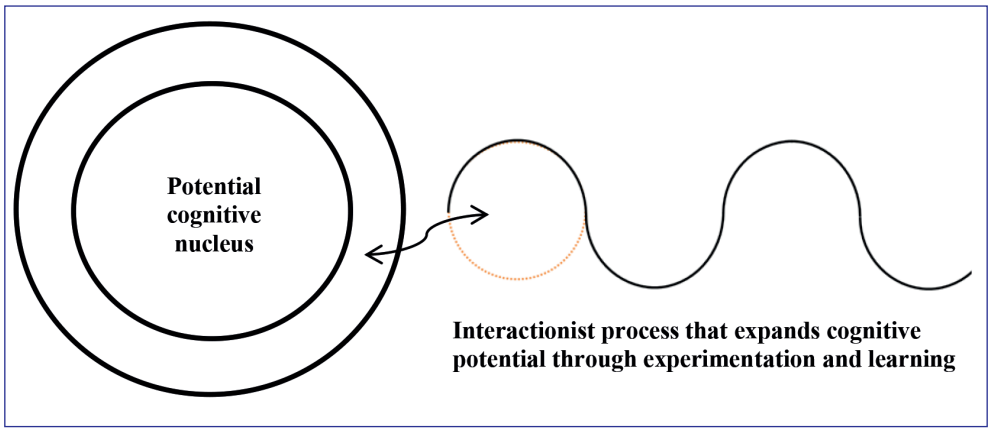
The analysis of Vale, Bertero and Alcadipani (2013) shows the influence of the North American model in the Brazilian Administration schools, being an influence derived from scientific method itself, based on previous studies and the bridging of gaps (ALVESSON and SANDBERG, 2014).

The formation of analytical judgments and the constitution of synthetic judgments do not depend only on socialization as a process of knowledge convergence (TERRA, 2000). The possibility of a theoretical, original and rich construction depends more on the personal acculturation capacity of the training agent (teacher or researcher), associated more with the broad research resources and information technologies than on the social conditions to which the teaching and research professionals are subjected.

The view of the layers built from Kant (2012) lead to the design of the zone of proximal development (ZPD) of Vigotski (1984; 2001). The layers of reason and the processes of internalization of knowledge have a relevant logical equivalence with the concept of ZPD of Vigotski (1984, 2001). The innermost layer corresponds to the Vygotskian structure of cognitive potential, and the processes of experimentation and learning are the equivalent processes of interactionist development of Vigotski (1984; 2001). The relationship between Vigotski's theory (1984; 2000; 2001) and Kant's thinking (2012) applied to the learning, teaching and research processes in Administration would give rise to exclusive and extensive work, which is not characterized in the scope of this study (cf. Figure 10).

Figure 10

Layers and the zone of proximal development



Source: Elaborated by the authors.

Figure 10 shows how the process of interaction accomplishes the evolution of the layers of cognition and knowledge throughout the experiences. In Education, this process reviews the ways in which learning can be understood, revealing, according to Vigotski (1984; 2001), how interaction enables better teaching methods and how it is possible to verify students' potential in teacher-student interaction. The following topics present a set of practical proposals for the theoretical and general questions discussed.

GUIDELINES FOR THE PRACTICAL APPLICATION OF KANTIAN CONCEPTS

The following is a list of guidelines based on the conceptual model conceived in this work. These observations are not directly related to the pedagogical programs of administration undergraduate courses, but connected to a roadmap that can order constructions of pedagogical resources guided by the concepts developed through the theoretical framework and the constitutive discussions of the theoretical framework defined in this work. These references relate to:

a) the formation of administrators with leadership skills;
b) the qualification of the administrators regarding the four levels of knowledge and reason;
c) the training of administrators through the institutionalization stages;
d) the development of the administrator's logical and analytical reasoning; and
e) the cultural and institutional identification of the student of Administration.

The training of administrators with ability for leadership

The training of administrators implies preparing them for attitudes that identify them as leaders that hold business functions, among those which stand out are: training, management and development of businesses. In view of the complexity of these functions, it is understood that the methods in education for Administration should be the trainers of a pure reason, rich in concepts and skills generated in analytical and synthetic processes, from the Kantian point of view. For the analytical processes, it is necessary that the teaching of Administration is not permeated by trainings or specific disciplines based on techniques adopted without integration of the profession's responsibilities. In other words, the rationality to be developed in an Administrator needs to be considered with training based on processes of socialization of tacit knowledge (BARCHE and ALMEIDA, 2015; SILVA and JONES, 2015; TERRA, 2000; VIEIRA and MACHADO, 2012).

The qualification of administrators concerning the four levels of knowledge and reason

The qualification of professionals of Administration, not being any different from other professions, demands to conceive the following levels of consciousness:

I. the structure of pure reason;
II. the structure of cognitive and complex logic;
III. the structure of empirical or practical learning; and
IV. the structure of empirical or explicit learning.

Thus, enabling administrators means perpetrating learning across all the four levels of knowledge and reason. Such levels will not be analyzed in their order of presentation, but in an interleaved manner.

Actions for level IV consist of teaching in its most explicit dimension, which involves lectures, presentations, studies and reading texts. On the other hand, this study shows that in the explicit structural level much can be done and gained if the content is well explained and well worked out in terms of conceptualization. This quality can be achieved as Barche and Almeida (2015) point out, using technological innovations and being based on material previously planned for employment during the course.

Actions for level III relate to laboratory activities and practical training. The choice of training and the methods to be employed should be based on the same criteria recommended for level IV. In the face of much more autonomous students in relation

to the acquisition of knowledge, it is considered more productive to employ procedures for transferring knowledge from disciplines such as: Accounting, Finance, Financial Mathematics and Statistics (through practical activities in computer labs or in virtual learning environments - VLE). Barche and Almeida (2015) consider that the use of technology to support higher education is strongly related to the transformation of the curriculum, although changes in the curriculum may depend on normative issues, as emphasized by Vieira and Machado (2012). However, this study considers that using the spreadsheet resources for the development of the contents mentioned above seems feasible even without a change to the curriculum, being this an academic choice.

Actions for level II require long-term assignments and represent preparation for the understanding of Mathematics, Logic and Linguistics. Having a more internal structure, this preparation cannot count on the simple exposition of discipline contents for this area, but there must be the elaboration based on the socialization of propaedeutic abilities and direction to meta-methods or for the expansion of the capacity for maturation and retention of knowledge (BECKENKAMP, 2010). In this sense, the training would not come directly from the classes, but from the cumulative process of knowledge throughout the course. However, in order to keep knowledge in evidence and in view of its function of structuring and facilitating the acquisition of new knowledge, the apprehended contents must be retrieved in interdisciplinary activities throughout the course. There must be preparation for the integrated use of knowledge and tasks that need to be planned not only by the teacher but also which can be supported by a coordinated course plan.

It is also necessary to prioritize the training process to reinforce structural, cognitive, logical, mathematical and axiomatic aspects. At this point, the challenge is to maintain in the curriculum the disciplines that involve Mathematics, whose withdrawal is commonly requested with arguments that are based on practically invalid allegations. Although this type of training should not be excluded from the curriculum, such competences need to be applied and integrated with the other disciplines. It should be emphasized that the content of the "Calculus for Administrators and Economists" or "Mathematics for Administrators" books, which prove to be too propaedeutic for the pragmatic world experienced by the bachelors in Administration, is not being proposed here. However, it is recommended that there is an intensification in the teaching of Statistics, including activities applied to other content, such as Finance and Quality Control and objectives related to the production or commercialization of goods. In addition, it is important that propaedeutic knowledge is always required, so that it can be institutionalized in the most internal cognitive structures. On top of this structure is where the outermost layers will develop. Empirical, contingent and passive activities of questioning or reasoning will require these bases of more perennial and consolidated certainties to establish themselves - and also to internalize in the process of acculturation.

Actions for level I also presuppose long-term actions, through socialization. The goal at this level is to integrate the knowledge of experienced professionals by placing students in the emulation of the most real situations possible. At this level, the main objective is to generate a culture or its inclusion in "pure reason", including the most important theoretical concepts and inserting them in the most stable layer which is better identified with the skills of an administrator. Training people at this level of reason is tantamount to producing people with tacit knowledge and the minimum experience required to safely assume their roles as decision-makers in their field when they graduate from their courses. In this process, a clear selection is necessary of knowledge that can be passed on in a conceptual and direct way, albeit through a process of explicit sharing of knowledge. However, the most effective procedure in this field is based on the processes of socialization based on the culture of the egress, an education rich in tacit knowledge (NONAKE and TAKEUCHI, 1997; VIEIRA and CALDAS, 2006; VIEIRA and MACHADO, 2012).

The training of administrators through institutionalization internships

The acculturation of the profession goes through the stages of retention (of experiences), of empirical validation (of lessons learned), of institutional habitualization (of the adoption of techniques as a criterion of work) and of legitimization (of stabilization, confirmation and defense of concepts).

The process of acculturation begins with an experience, passing through a process of socialization - which needs to be continued and progressive, so that there is stabilization of ideas at the end of a time that should not be short. Certain cultures will be questioned at the outset until ideas come to fruition over time. To train administrators means to lead students into

experiences, processes of socialization and transmission of concepts, until the acquired culture identifies this student with the profession of administrator (VIEIRA and CALDAS, 2006; VIEIRA and MACHADO, 2012; VIGOTSKI, 2000).

The development of logical and analytical reasoning of the administrator

The development of logical and analytical reasoning also constitutes an important element to be generated for the cognitive structuring of graduates in Administration. It should be possible to teach the internal processes of constructing ideas and concepts realized in pure reason. The proper use of the teaching of logic and its application in knowledge production techniques are rich in the revelation of concepts, among other initiatives that may employ analogies, preparation of frameworks, interdisciplinarity and the application of theoretical models. All these steps must be taken with integrated and associative planning.

The cultural and institutional identification of the Administration student

The Administration student should perform activities that promote positive feeling, should scan the myths - analyzing and restructuring the current culture (VIGOTSKI, 2000), developing new ideals, creating concepts, identifying more relevant values and meanings to the courses of Administration, and should define mechanisms to monitor institutionalized cultural values, monitoring and assuming them for the support of a prosperous culture in accordance with the desired culture. Finally, we must identify, recognize and adapt the predominant feeling in schools to the feeling that may enhance the future of the bachelors in Administration.

FINAL CONSIDERATIONS

Based on Kant (2012), with counterpoints by Vigotski (2000; 2001) and the Institutional Theory (DIMAGGIO and POWELL, 1983), it was possible to elaborate a model of the system of production of judgments and knowledge formed by the overlapping layers that over time generates new knowledge and is based on the formation of the cultural structure of the students of Administration in consonance with its cognitive structure. The process of accumulation of layers corroborates the importance of learning through experience, which is why, currently, this method generates relevant interest in the problematization of academic curricula in Administration.

The analysis concludes that the competence of a decision maker derives from the meeting of analytical judgments (experience) with synthetic judgments (logic, concepts and cognition), and this meeting point is the main means for effectively coping with the contingent situations which the professionals have to deal with. The layer training system, when well applied in its educational development, surpasses the traditional view of Education, still heavily constrained in offering contingency plans that associate problem situations with procedures that fit into ready-made solutions for specific cases. The layering system is the main enabler of rapid decision making.

This study also inferred that each empirical certainty evolves to new perennial certainties, either by internalization of experience, or by combinations of concepts or signs synthesized by judgments duly based on the logical rearrangement carried out in the innermost layer of pure (*a priori*) reason. Concepts derived from validated research constructs can be transformed into powerful and orchestrated resources in operational activities by means of synthetic judgements which have the advantage of not relying on training or any other types of tacit formation, and are put into operation by the simple transfer of knowledge. That is, knowledge leaps from the outermost layer to the innermost layer of reason immediately.

It has also been conceived that, at the heart of the layers, truth is taken as absolute. In this layer, concepts and signs can be combined to generate new concepts or new signs. However, this truth is absolute for an individual, thereby revealing that each person will have their own absolute truth, not being inferred a consequence of universal or objective absolute truth. In this sense, it is possible for everyone to make combinations of concepts and signs, producing through this result a diversity of idiosyncratic visions of the world.

It is understood that at the innermost level of knowledge lies the most solid truths. At this central point, the structure is stable or even inertial.

This model reveals that once a concept is internalized in the innermost structure of reason, it becomes strongly protected against modification and will react strongly against threats of revisions from the outermost layers of the sensitive world. Thus, the cast of concepts and procedures that guide the actions of individuals suffer inertial biases that both contribute to maintaining values important for the preservation of good procedures and to create obstacles to new proposals. Such a condition reveals that cultural changes must be carried out with patience and over a long period. The formal education of the academic field or the professional training of the administrator requires time for possible cultural reforms to succeed if these changes prove necessary. As for these possible needs, because this study is eminently theoretical-reflexive, it has no proposals on all the possible ways to implement solutions to this problem, this is its main limitation and its most relevant shortcoming for future studies.

The knowledge in its innermost layer is sustained and guaranteed by signs and by a rationality permeated by feelings. It is in this center that theory and practice combine and where new concepts can be derived from the consistency inherent in the quality of the whole process of accumulation of cultural layers. The complementarity between experience and logic, between the empirical and the reflexive, between the learning process and the immediate knowledge of the concept, makes it clear that education demands this range that opens longitudinally and latitudinally and that the praxis of teaching in Administration still has many edges to be trimmed as a result of the range of situations and the contingencies that future managers must experience.

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