Planning of the Administration Undergraduate Course: Case Study at the Federal University of Sao Carlos – UFSCar/NSC-LS

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Abstract: This study aims to investigate the critical perception of PCP's UFSCar Management Course at the Natural Sciences Center, from the perspective of the actors most directly involved with this instrument. Based on the assumptions of the interpretative paradigm, we used a qualitative and exploratory research model. As a data collection instrument, we employed document analysis, questionnaires and participant observation. The main results show that, in general, Educational Program Planning (PPE) translates into an important tool for academic management. However, they revealed the need for greater emphasis on the dissemination of this instrument in the academic community. Nevertheless, the functionality and consolidation of the EPP's proposed methodology requires from all stakeholders an academic management effort with clear objectives, guided by a practical agenda built and practiced by many hands. Nevertheless, it is necessary to update this instrument frequently, especially with regard to nomenclatures - an emblematic fact that the case of "Strategic Planning" changes to "Business Strategy" or "Company Strategy" - and the respective disciplines, always considering the demands and profiles of the market for which the student is being prepared. In short, academic management, seen in this light, needs a redesign of its implementation processes, especially with regard to the control and construction of formal channels to measure the results of the implemented model, thus generating conditions that feed the system and constantly improve it.

Keywords: Business Administration, Educational Program Planning, UFSCar, Bachelor Degree, Academic Management

1. Introduction

The importance of education in citizen education has been discussed since ancient times. In the last decades, the subject has occupied the most diverse arenas of debate. Whether in the context of public policies, government policies, business and third sector organizations, society in general, the issue has been debated to the point of exhaustion, especially in the most critical dimensions of models that are considered outdated, the adoption of new approaches to teaching that are more contextualized, or even the insertion of new technologies as innovation tools in the context of the teaching-learning binomial, or, as Silva [1] points out, in the process of “teaching-learning”.

Education is an important subsystem of the social sphere, allowing the individual to acquire systematized knowledge, develop skills and competencies for the purpose of making effective use of them in their future professional activity [2].

There seems to be no doubt that there is a consensual relationship about the importance of this factor as a strategic contributor to a nation's development. The speed and speed of social, political, economic and cultural change are becoming constant in these new times. It is the “age of uncertainty” postulated by Galbraith [3] or the “age of discontinuity” [4].

Colossi et al. [5] point out that the meaning of the “new millennium” identifies with the global transformations that characterize the so-called modern world. Factors such as computerization, globalization and the knowledge society are some of the factors that put pressure on the status quo of today's life.

In this scenario, education is becoming increasingly
strategic, given the need to respond to the most diverse facets of social demands directly influenced by the mutations/alternations/complexities/differentiations of macroenvironmental variables.

Seen in this way, it can be said that we are positioned in the face of a new epistemology of knowledge, which defines research perspectives centered not only on the material conception of educational facts, but, above all, on the symbolic markets that describe, interpret and place them in a given space/time [6].

Thus, the study efforts on the curriculum, as well as curriculum theory, mainly focusing on the teaching, organization and legitimation processes, besides the transmission of contents, constitute a field that contributes significantly to the awakening of critical-reflexive postures with regard to the relation locus of teaching, culture and its consequences [7].

This article is structured from this brief introduction, also containing as a subsection the establishment of the research problem and the central objective of the work. Section 2 discusses the main theoretical frameworks that support the research. In section 3, the methodological procedures are presented, followed by the analysis and discussion of the results (section 4) and, finally, in section 5, the conclusion of the work.

Given the above, the research question that arises is what is the perception about the Pedagogical Course Project (PCP) of the Administration Course of the Federal University of Sao Carlos (UFSCar) Science Natural Center in the view of its multiple actors?

To solve this problem, the present study aimed to investigate the perception of the PCP of the UFSCar – Natural Science Center management course, from the perspective of the actors most directly involved with this instrument.

It is noted that in the literature the terms Pedagogical Course Project (PCP) and Pedagogical Political Project (PPP) are found, both having the same meaning. Thus, in this paper, the two terms may be cited interchangeably, keeping the original nomenclature used in the adopted theoretical framework.

2. A Conceptual Framework

This section presents a literature review that is minimal enough to provide theoretical support to the research.

Market changes require organizations to take critical stances to respond to environmental demands, prompting them to make continued efforts to remain competitive in this scenario [8].

Transposition into a learning model that is beyond that traditionally based on the simple acquisition of skills to perform the tasks required by each corporate function becomes inevitable and urgent [9].

According to Gonczi [10], there is an urgent need to train people, enabling them to perform tasks with higher levels of competence, a situation very adverse from that emphasized in a mass production context. Such an assertion can also be seen from the perspective of the teachers themselves, as concluded by Nunes and Patrus-Pena [11], stating that the formation of the university professor is a challenge that is at the center of the discussion about the formative process for the most part, has no educational background.

For this to occur effectively, changes must be made to the entire “didactic architecture” of training, needs analysis, goal setting, content selection and delineation, methodology, and evaluation process [12] and in a cyclical process, promoting constant reassessment and monitoring.

Ropé and Tanguy [13] propose that competence be inseparable from action, corroborating the statement by Perrenoud [14], for whom competence formation is “inseparable from the formation of knowledge mobilization schemes with real-time discernment at the service of effective action.”

The formation of human beings contemplating all their capacities, based on a work that includes the knowledge that integrate society, must be a primary task of education [15]. Ching, Silva and Trentin [16] reiterate that ensuring that classroom knowledge or content is meaningful to the student is tied to the fact that they are not “sliced” into subjects. For these authors, on the one hand, “separating them into disciplines is an operation that has facilitated the acquisition of knowledge, but on the other hand has often deprived this knowledge of its meaning” [16].

Undeniably, some limitations will be present in the implementation of competence training [17]. Nevertheless, Gonczi [10] states that the process of change takes a great deal of time, which tends to aggravate the discouragement and the consequent demobilization of the actors involved.

Corroborating this understanding, Rué [18] points out that the introduction of a new educational conception requires investment of time, both quantitative and qualitative, among other resources, besides the involvement of all actors in a process of reflection on the phenomenon, the results achieved (or not), constant monitoring and reformulation of new procedures as premises for replanning. The author also draws attention to the complexity of the pedagogical conception, as well as the application in the classroom and the way of evaluating the students.

This whole theoretical framework is deliberately established in the Pedagogical Course Plan, which brings together the main guidelines for course management.

Silva [19] argues that historizing curricular documents as objects and sources requires that the conditions of their production be taken into account, that is, that the content itself is not dissociated from the place occupied by this form in the history of education and curriculum. Thus, like any other type of printed documentary record, curriculum documents “embody” knowledge [20].

The assumptions of this study are supported by the theoretical conceptions of Silva [19], as systematized in Table 1.
Table 1. Theoretical conceptions adopted as guidelines in the study.

| Excerpt | Theoretical Basis |
|---------|-------------------|
| “[...] in discourses about school education and about school, it has been common to point out that curriculum is not an innocent and neutral element of disinterested transmission of social knowledge...”.
“[...the] curriculum documents produce a specific culture, with organized and selected types of symbols, which are directly related to the types of students and how they make use of this kind of knowledge that is socially stratified and that represents conflicts. Based on these conflicts, it is possible to understand the economic and cultural functions of educational institutions.”
“[...These documents would not be able to realize all the insufficiencies of society in the face of different groups and their educational needs. But it is in the impossibilities of building curricular differentiation that we find the realization of the formal (and ideal) concept of equal opportunities through a single curriculum for all students.” |

Source: Prepared by the author based on Silva [19].

The systematized guidelines in Table 1 support the broader scope of the study, since they show the reading perspective of the Pedagogical Course Project (PCP), object of this study, based on the proposal of Fischer, Waiandt and Fonseca [21], reiterating that one of the main characteristics of research directed at the history of the curriculum is the historical-social character and, therefore, their research emphasizes the studies of oral sources added to documents to understand the construction of knowledge.

The Bachelor of Business Administration Course with Training Line in Agroindustrial Systems, at Natural Science Center of UFSCar, lasts four years and aims to train professionals who can contribute in the traditional areas of performance of the administrator, following the guidance of Resolution CNE/CES 4/2005, in Articles 3 and 4 [22], in addition to incorporating a relevant set of skills/competences and knowledge for graduates and other aspects of teaching and learning that highlight organizational, institutional and technological specificities of the systems’ agribusiness at national and international levels.

Table 2. Profile of Business Administration Graduate - UFSCar/Center for Natural Sciences – CCN.

| Expected Skills/Skills | Theoretical Basis |
|------------------------|-------------------|
| Administer public and private organizations, with management capacity adapted to the peculiarities and heterogeneity of agroindustrial systems | Source: Paulilho et al. [25]. |
| (whether based on family farming or corporate agriculture) in Brazil and around the world, which will help to overcome the challenges posed to food production, the overcoming of hunger and the development of new standards for food regulation, production, distribution and consumption. | 
| Acting within different agroindustrial production models, linking scientific knowledge to sustainable development, professional practice and social progress, in order to allow critical and creative action in the identification and resolution of food production problems and the search for food and nutritional security. | 
| To evaluate economic, political, social and environmental impacts on agroindustrial production and the construction of biodiversity conservation processes in agroindustrial systems. | 
| Integrate different types of knowledge and knowledge areas to develop your administrative skills. | 
| To act in a participatory and interactive way in global and local agri-food and agro-industrial systems through the development of ways of thinking, attitudes, values and skills based on the principles of respect for different forms of production, flora and fauna; conservation and/or restoration of soil, air and water quality; rational, integrated and sustainable technological use of the environment; the use of reflective, critical and creative thinking that enables it to understand and translate the needs of individuals, social groups and political actors. | 
| Develop knowledge, leadership and specific strategies for the management of agroindustrial operations, social organization, food marketing, finances improvements in agroindustrial systems and food production, forecasting capacity of macroeconomic and microeconomics environments, and capacity for developing public and agroindustrial policies for heterogeneous regions. | 
| Manage with a degree of motivation and ability to think independently (learn to learn), with a solid understanding of the fundamentals of management and communication skills. | 
| Manage projects in general and specifically, agroindustrial, agricultural, territorial development, public policy, prospection and development of agroindustrial markets and localized agri-food systems. | 
| Carry out rural extension activities, consolidation of productive chains and agroindustrial and agri-food cooperation networks. |
In order to substantiate this proposed egress profile defined for the Bachelor of Business Administration Course at the Agroindustrial Systems Training Line, at the UFSCar's Natural Science Center, students will be able to acquire general and specific knowledge of the course. Administration course when developing each of the four (4) thematic axes for training in agroindustrial system, as well as the timely development of knowledge and skills involving personal qualities, communication and expression, economics and management, production technologies, quantitative methods and information systems [25].

The pedagogical principles that support the curricular structure of the Bachelor of Management Course, focus of this study, are as follows.

a) Curricular organization in annual periods.

b) Distribution of contents in the following thematic axes:
   1) Sustainable Territorial Development and Public Policy
   2) Finance and Economy
   3) Marketing
   4) Administration of Agroindustrial Operations

a) Non-fragmented content: the thematic axes will be dealt with in full, not being broken down into disciplines.

b) Basic contents continuously taken up and deepened in the thematic axes over the years, according to the needs posing by the knowledge worked in each axis/year.

c) Professional and basic training combined since the beginning of the course.

d) Classes distributed throughout the week, the academic calendar of the university.

The proposition of the pedagogical principles highlights some innovative elements such as the distribution of the contents in thematic axes, the integration of the axes, besides the professional and basic formation since the beginning of the course. The process of resuming the contents with different levels of deepening points to a spiral method.

Veiga [26] points out that innovation and pedagogical political design only make sense if the focus is on improving the quality of public education so that everyone learns more and better. This concern is evident in the three central objectives of education based on the person, citizenship and work.

Developing the student, preparing him/her for the exercise of citizenship and work, represents, above all, contribute to the construction of a subject that masters knowledge, is endowed with a set of attitudes necessary to be part of a political system, besides participating of the production processes of survival, developing personally and socially [26]. To this end, the importance of curricular adaptation to the demands arising from the needs of current applicants is stressed [27].

Fischer [28] proposes that management education, based on the historiography of education, be classified into four levels for research purposes:

a) The life of teachers who built, from their performance as teachers, thematic fields, ways of teaching, organizations and institutions.

b) Teaching legacies, or the history of curricula, programs, and ways of teaching and learning.

c) The history of disciplines or the history of the evolution of thinking in business.

d) The history of business education institutions in Brazil. However, whatever the level chosen, the others may be contemplated as an approach perspective. In other words, there is an inevitable juxtaposition of these levels of analysis and imminent convergence between teachers, teaching designs, educational institutions, and content to be taught [28].

Having established the pedagogical principles, the broad knowledge (mesocontents) that make up each of the thematic axes was defined, as presented in Table 3.

### Table 3. Thematic Axes and their Mesocontent Respectives.

| Profiles | Sustainable Territorial Development and Public Policy (STDPP) | Finance and Economics (FE) | Commercialization (COM) | Agribusiness Operations Administration (AOA) |
|----------|---------------------------------------------------------------|-----------------------------|-------------------------|---------------------------------------------|
| 1        | Approaches to Sustainability and Business Paradigms:          | Introduction to Economic    | Introduction to Marketing| Fundamentals of Management                  |
|          | Sustainability Management:                                   | Thought Classical           |                         |                                             |
|          | Innovation, Operations, Relationship and Responsibility, Socioenvironmental | Macroeconomics              |                         |                                             |
|          | Rural Research and Extension                                 | Keynesian and Neokeynesian  | International Trade and Export Policies |                                             |
|          | Introduction to Systems                                      | Macroeconomics              |                         | Organizational Theory                       |
|          | Agroindustrial Applied Sociology Administration               | Political Economy           | Commercial Law           | Agricultural Production Factors             |
|          | Rural Development and Family Farming                          | Mathematics Applied to      |                         | Organizational Psychology                  |
|          | Agricultural Policies                                         | Administration              |                         |                                             |
|          | Environmental Management                                      | Industrial Organization     |                         |                                             |
|          | Rural Sociology                                               | Statistic                   |                         |                                             |
|          | Legislation and Environmental Law                            | Microeconomics              |                         |                                             |
| 2        |                                                               | Financial Mathematics and   |                         |                                             |
|          |                                                               | Marketing of Agroindustrial |                         |                                             |
| 3        |                                                               |                             |                         |                                             |
| Profiles                                                                 | Thematic Axes                                                                 | Finance and Economics (FE)          | Commercialization (COM)              | Agribusiness Operations Administration (AOA) |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------|-------------------------------------|--------------------------------------------|
| Sustainable Territorial Development and Public Policy (STDPP)           | Investment Analysis                                                            | Products                          |                                     |                                            |
| Associativism and Cooperativism                                        | Management Accounting                                                          | Distribution Channels             |                                     |                                            |
| Water Resources Planning and Management                                 | Agroindustrial Costs                                                           | Rural Company Management          | Supply Chain Management             |                                            |
| Regional Development and Food Security                                 | Financial management                                                           | Futures Markets and Agricultural Options |                                     |                                            |
| Energy Resource Management                                            | Planning and Budget                                                            | Tax Law                           |                                     |                                            |
| 4                                                                      | Company Law                                                                    | Company Project                   | Scientific methodology             | Operational Research                      |
|                                                                       | Development of New Business                                                    |                                   |                                     |                                            |
|                                                                       | Game Theory and Business Policy                                                |                                   |                                     |                                            |
|                                                                       |                                                                                             |                                   |                                     |                                            |
| The development of vertical and horizontal integration occurs through the contents and, to this end, the work of teachers assumes a highly strategic character in this process, especially by requiring a high level of integration and cooperation. This integration is based on themes, questions or problems related to the contents coming from the thematic axes, which are defined by the faculty responsible for the contents of the thematic axes each year, including the moments of the integrative evaluation. Figure 1 graphically systematizes this relationship from the student education profile.

Teachers, in assuming the practice of teaching by competencies, inevitably appropriate responsibilities in choosing their social practices. In this way, they change their own views about culture and society, especially in the process of knowledge construction [14]. However, there is a risk that some will not opt for this approach by continuing to undertake their teacher model in a segregated and disciplinary manner.

This proposal assumes that the learner learns in different ways, requiring from the teacher the ability to perceive and meet this diversity within the classroom. Therefore, it is not enough for the student to have contact with the contents for learning to occur; It is necessary for him to relate his previous knowledge to the new, and to use his knowledge schemes to analyze and apprehend them Zabala [29].

Perrenoud [14] understands that working together with disciplines contributes to thinking problems from epistemological conceptions, both in the method, in the relationship between research and knowledge, as in the valorization of writing and in the potential transverses.

This methodological conception, in practice, requires a high effort from the entire academic community, especially teachers,
demanding an additional agenda of formal or informal meeting to discuss, align their plans, projects, and the daily classes themselves. How do you consider Silva and Felicetti [30]:

Problem situations are a challenge in the development of skills and competences as they require a higher demand for work. For the teacher it is necessary to think about each project, to predict the duration, to observe, to evaluate differently from the usual and more than that, it is necessary to know both the contents and the connection between them, either in the subject or in different subjects, such as the ones. students. Knowing the student means understanding if he already knows, has learned, what he has learned, which competency he has already achieved, which is still being built and which needs to be worked on. The student must establish other relationships, go beyond exercise and repetition, make decisions, analyze the context, separate and articulate parts of the problem in search of solutions.

Additionally, it is known that, over time, the ability to teach as a priority assignment of the teacher has been influenced by the improvement of learning modes, the cognitive aspect, as well as values, attitudes and skills [31]. An emblematic example is the steep increase in students' ability to access information via online content [32]; This capacity becomes even more relevant considering the changing world scenario, inexorably influenced by the revolutionary effects of new technologies [33].

There is no doubt that this methodological design requires additional effort and, perhaps, even paradigmatic changes in conceptions hitherto seen as appropriate. However, the fruits that are expected to reap constitute the “driving spring” to leverage the necessary actions so that, in fact, all this gear can work to its satisfaction.

International studies carried out in several countries (Canada, Australia, Finland, Sweden, Denmark, England, Scotland and the United States) show that the use of integrated teaching models is a real challenge for all involved, especially in the aggregation of knowledge, competences and skills [34], after all, as Perrenoud [35] asserts, “there is no competence without knowing”.

The methodological treatment of the Management Course with Training Line in Agroindustrial Systems of the Center of Natural Sciences (CNS/UFSCar) is based on the proposition of a different methodology, from the treatment of conceptual, procedural and attitudinal contents [29].

These elements that underlie the methodological treatment are presented in Table 4.

| Elements                                                                 | Description                                                                 |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1  Teacher as a mediator of the teacher-student-knowledge relationship   | Maximizing student autonomy in the pursuit of knowledge                      |
| 2  Validity of teaching proved by its justification in learning, so as   | to understand that there will have been no teaching if there is no learning  |
| 3  Vertical integration provided by deepening and resuming, when necessary,| the main contents in each thematic axis over the four years                   |
| 4  Horizontal integration between the contents of each axis/year, allowing | the integrated view of the contents of the different thematic axes           |
| 5  Content integration in the horizontal and vertical planes promoted/guided| by teachers, not under the sole responsibility of the students              |
| 6  Collaborative work of teachers in order to jointly develop the annual | didactic planning, integrating the contents in each of the thematic axes, as  |
| 7  Maximizing student autonomy in the pursuit of knowledge                | well as between the different thematic axes.                                 |

Source: Prepared by the author based on Paulillo et al. [25].

There is a need to change the same content “Strategic and Business Planning” inserted in the fourth profile to “Strategic Management”. This is not a simple change of nomenclature, but part of a broader understanding where “strategic planning” is the instrument that results from strategy design in the context of Strategic Management.

Bertero [36] argues that strategic planning was restricted to analyzing the strengths and weaknesses of an organization, and later incorporated the planning and management of eventual changes in the organizational environment. It went into crisis due to the increasing unpredictability of the business environment, which required a more dynamic and integrated stance. It was in this context that the Strategic Administration gained space, being responsible for the development and implementation of the strategy.

Quality education that seeks to educate citizens capable of critically interfering with reality in order to transform it must necessarily contemplate the development of capacities that enable adaptations to the complex conditions and alternatives of the contemporary working world, as well as to cope with the rapidity of production and in the circulation of information and the formation of new knowledge, which has inexorably become overwhelming and growing. Thus, school education should enable students to develop competence and professional awareness, but not be restricted to teaching skills immediately demanded by the labor market [37].

International studies suggest that the skills and abilities that prospective employers want from business school graduates change as the business environment changes [38]. Therefore, as proposed by the National Curriculum Parameters (NCP), it is essential that, in the teaching and learning process, the learning of methodologies capable of prioritizing the construction of verification strategies and hypothesis verification in the construction of knowledge, the construction of argumentation capable of controlling the results of this process, the development of the critical mind capable of favoring creativity, the understanding of the limits and logical reaches of the proposed explanations [37].

In addition, a teaching dynamic must be considered that contributes not only to the discovery of the potentialities of individual work, but also and, above all, to collective and cooperative work. Evidently, this implies stimulating the subject's autonomy, developing the feeling of security in relation to his own abilities, interacting in an organic and
integrated way in a teamwork and, therefore, being able to act in more complex and differentiated levels of dialogue.

3. Methodology

This study is based on the assumptions of the interpretative paradigm, using a qualitative model [39], since “such models try to incorporate judgments or subjective factors in predictions. Expert opinions, individual experiences, judgments and other subjective factors can be considered.” As for its purpose, this research is classified as applied, since it can “contribute to the expansion of scientific knowledge and suggest new questions to be disclosed” [40]. Within this scope, some premises of the experimental method were used, considering that it consists of a “systematic work [...]” that can contribute to the “improvement of new systems and services” [40]. According to Brownell [41], this method has been low in popularity or even underused in management research.

Regarding the more general objectives, the research is classified as exploratory, which aimed to provide greater familiarity with the researched problem [42]; and descriptive, since it aimed to describe the main characteristics of the object of study. From the point of view of approaching the problem, the research is classified as qualitative [43-46]. Finally, regarding the technical procedures, it is classified as a case study [47-51].

Regarding data collection instruments, documentary research [52, 40] was used primarily with reading and thorough analysis of the Pedagogical Project of the Management Course with Training Line in UFSCar - Natural Sciences Center.

The execution of the first stage of data collection (documentary research) provided greater robustness in the elaboration of the questionnaire. The instrument contained 13 (thirteen) questions of which 12 (twelve) were ordered in an Itemized Scale [53, 54], also classified as a Metric Scale, called the Likert Scale [55] and one (1) open question (justification). The application followed the standards of a semi-structured research script [56-58], given that this collection instrument was administered by the interviewer [59, 60]. Thus, considering that all interviews involve the interaction between the interviewer and the interviewee, formal structuring carefully guides this interaction [61, 62].

Therefore, the validation of the questionnaire was performed by pretesting and determining the method by which the tool would be administered, as proposed by Hair Jr. et al. [55].

In order to obtain information that might not be detected by the other methods, we also adopted participative observation along the lines proposed by Bechker [63], who understands observation as a solution to the study of complex phenomena institutionalized, when descriptive and exploratory analyzes are intended to be carried out or even when the objective is to infer about a phenomenon that refers to certain regularities, subject to generalizations. In this sense, the researcher, in the role of vice-coordinator of the course, effectively participates in the meetings of the Structuring Teacher Nucleus (STN), considered a collegiate body in educational management [64] and the Management Course Coordinating Board (MCCB-Adm).

Regarding the choice of actors, it was decided to consult those most directly involved with the elaboration, implementation and current execution of the PCP. Table 5 presents the actors and their respective positions.

| Table 5. Interviewed actors and their positions and codes adopted in the study. |
|---|
| **Actors** | **Positions** | **Codes** |
| 1 | Academic Board of the Center for Natural Sciences - UFSCar/CCN | ABCNS |
| 2 | Business Course Coordination | BCC |
| 3 | Academic-Pedagogical Coordination | APC |
| 4 | Administrative Technician (Secretariat of the Administration Course) | ATSAC |
| 5 | Student Representative at the Management Course Coordinating Board (MCCB-Adm) | SRGCCC |

It is noteworthy that the actor DACCN, currently occupying the position “Academic Board”, was an integral member of the PCP preparation committee of the course under study.

The next section presents the analysis of the main results found in the research using the proposed methodology.

4. Results and Discussion

The National Curriculum Guidelines (NCG) of the Bachelor of Management Course (Resolution No. 4/2005), in its Art. 5, directs that the Bachelor of Management courses must include, in their pedagogical projects, as well as in their curricular organization, contents that reveal interrelationships with the national and international reality, according to a historical and contextualized perspective of its applicability within organizations and through the use of innovative technologies.

Table 6 shows the correspondence between the provisions of the NCG and the proposed contents in each thematic axis.

| Table 6. Correspondence between the provisions in dcn and the proposed contents in the thematic axes. Source: Prepared by the author based on Paulillo et al. [25]. |
|---|
| **Basic Training Contents** | **Axis** | **Workload** | **Credits** |
| Applied Sociology of Administration | STDPP | 30 | 2 |
| Introduction to Economic Thinking | FE | 30 | 2 |
| Classical Macroeconomics | FE | 30 | 2 |
| Keynesian and Neokeysnesian Macroeconomics | FE | 30 | 2 |
| Political Economy | FE | 15 | 1 |
| Commercial Law | COM | 30 | 2 |
Basic Training Contents

| Basic Content                                      | Axis       | Workload | Credits |
|----------------------------------------------------|------------|----------|---------|
| Rural Sociology                                     | STDPP      | 30       | 2       |
| Industrial Organization                            | FE         | 60       | 4       |
| Microeconomics                                     | FE         | 60       | 4       |
| Legislation and Environmental Law                  | STDPP      | 30       | 2       |
| Company Law                                        | FE         | 30       | 2       |
| Tax Law                                            | COM        | 30       | 2       |
| Scientific Methodology                             | AOA        | 60       | 4       |
| Regional Development and Food Security              | STDPP      | 60       | 4       |
| Rural Research and Extension                       | STDPP      | 60       | 4       |
| Introduction to Agroindustrial Systems             | STDPP      | 60       | 4       |
| Rural Development and Family Farming               | STDPP      | 60       | 4       |
| Organizational Psychology                          | AOA        | 60       | 4       |
| Consumer Behavior                                  | COM        | 60       | 4       |
| Total                                              |            | 780      | 52      |

Vocational Training Content

| Professional Content                                | Axis       | Workload | Credits |
|----------------------------------------------------|------------|----------|---------|
| Introduction to Marketing                          | COM        | 60       | 4       |
| International Trade and Export Policies            | COM        | 60       | 4       |
| Fundamentals of Management                         | AOA        | 60       | 4       |
| Organizational Theory                              | AOA        | 60       | 4       |
| Environmental Management                           | STDPP      | 60       | 4       |
| Agriculture and Agribusiness Marketing             | COM        | 60       | 4       |
| Production Management                              | AOA        | 60       | 4       |
| Marketing of Agroindustrial Products               | COM        | 60       | 4       |
| Agroindustrial Costs                               | FE         | 60       | 4       |
| Distribution Channels                              | COM        | 60       | 4       |
| Quality Management                                 | AOA        | 30       | 2       |
| Supply Chain Management                            | AOA        | 60       | 4       |
| Project Management                                 | AOA        | 30       | 2       |
| Sustainability Management                          | STDPP      | 30       | 2       |
| Financial Management                               | FE         | 60       | 4       |
| Planning and Budget                                | FE         | 30       | 2       |
| Management Information Systems                     | AOA        | 60       | 4       |
| Strategic and Business Planning                    | AOA        | 60       | 4       |
| People Management                                  | AOA        | 60       | 4       |
| Position Management, Compensation and Careers      | AOA        | 30       | 2       |
| Rural Company Management                            | AOA        | 60       | 4       |
| Management Accounting                              | FE         | 60       | 4       |
| Futures Markets and Agricultural Options            | COM        | 30       | 2       |
| Total                                              |            | 1200     | 80      |

Quantitative Studies and their Technologies

| Specific Content                                    | Axis       | Workload | Credits |
|----------------------------------------------------|------------|----------|---------|
| Mathematics Applied to Administration              | FE         | 45       | 3       |
| Statistic                                          | FE         | 60       | 4       |
| Financial Mathematics and Investment Analysis      | FE         | 60       | 4       |
| Agricultural Production Factors                    | AOA        | 60       | 4       |
| Agroindustrial Process Technologies                | AOA        | 60       | 4       |
| Operational Research                               | AOA        | 60       | 4       |
| Game Theory and Business Policy                    | FE         | 60       | 4       |
| Total                                              |            | 420      | 28      |

It is important to note that in the Administration Course with Training Line in Agroindustrial Systems at UFSCar, Natural Science Center, the traditional nomenclature “disciplines” is not adopted, but “mesocontent”, which shows, at first, certain Alignment with the proposal of Ching, Silva and Trentin [16], which emphasize the importance of working the contents in the most integrated way possible, without slicing them into disciplines.

The workload of the four content categories totals 2,700 hours, corresponding to 180 credits. In addition, it should be added to this workload, the values corresponding to Supervised Curricular Internship (120h), Course Completion Work (120h), Complementary Activities (120h) and Optional Content (60h). Table 6 shows that approximately 45% of the total content workload refers to vocational training content.

The optional contents for the course under study will be built during the first years of its implementation. At a first moment, students will be able to study, according to their interest, the optional contents of the other campus courses, considering the interface between them [25].

It is emphasized as positive factor the performance of the Structuring Teaching Core (STC), as well as the Management Course Coordinating Board (MCCB-Adm), which can be proven through participant observation and documentary
analysis, especially the reading the minutes of those collegiate. Nevertheless, it is noted that the notes made in the “field diary” meet the conception adopted by Darnton [20].

In this sense, the Structuring Teaching Core (STC) and the Management Course Coordinating Board (MCCB-Adm) become the locus of constructive genesis, notably, from the perspective of teaching work, thematic fields, different and differentiated forms of teaching [28], which, finally, as stated by Kanuka [34], turns out to be a real challenge for all involved, especially in the aggregation of knowledge, skills and ability.

Table 7 summarizes the ordinary and extraordinary official meetings of these two collegiate with agenda points pertinent to the Management Course, presented here, which have taken place to date.

Table 7. UFSCar Management Course Coordinating Council MCCB-Adm and STC Meetings.

| CCCG-Adm       | Structure Teaching Core         |
|----------------|---------------------------------|
| Date           | Date                            | Category | Date | Category     |
| 17/02/2016     | 09/03/2016                      | Ordinária | 1ª   | Ordinária     |
| 08/03/2016     | 16/03/2016                      | Ordinária | 2ª   | Ordinária     |
| 17/03/2016     | 23/03/2016                      | Ordinária | 3ª   | Ordinária     |
| 23/03/2016     | 06/04/2016                      | Extraordinária | 4ª   | Ordinária     |
| 30/03/2016     | 13/04/2016                      | Extraordinária | 5ª   | Ordinária     |
| 13/04/2016     | 26/04/2016                      | Ordinária | 6ª   | Ordinária     |
| 11/05/2016     | 04/05/2016                      | Ordinária | 7ª   | Ordinária     |
| 01/06/2016     | 08/06/2016                      | Extraordinária | 8ª   | Ordinária     |
| 22/06/2016     |                                   | Ordinária |      |               |

The first MCCB-Adm meeting had as its main agenda the official constitution of the Structuring Teaching Core (STC).

The questions contained in the form structured in the Likert Scale model are presented in summation format, as listed in Table 8.

Table 8. Sum of the questionnaire answers.

| Nº  | Questions                                                                 |
|-----|---------------------------------------------------------------------------|
| 1   | I consider the PCP to be an important management tool for the Business Course. |
| 2   | There is a strong relationship between PCP and teaching practices at the Nature Science Center. |
| 3   | I am interested in discussions/debates about the PCP.                      |
| 4   | PCP is widely publicized and therefore known throughout the academic community. |
| 5   | I notice an effort from the main actors involved with the dissemination and publicization of this instrument. |
| 6   | I am familiar with the teaching-learning methodology by the "axis system". |

Table 8. Sum of the questionnaire answers.

| Questions                                                                 | Importance Level |
|---------------------------------------------------------------------------|------------------|
| How important is PCP to a student interested in entering the NSC/UFSCar Business Course? | Not Important | A little Unimportant | Not Important/Not Unimportant | Somewhat Important | Very Important |
| What is the importance of PCP for the Administrative Technician linked to the Administration Course? | 1X | 4X |

| Question                                                                 | Knowledge Level |
|--------------------------------------------------------------------------|-----------------|
| As for your knowledge of PCP ADM                                          | Totally Unaware | Unaware | Without Knowledge/Without Unknowledge | I Know | I Totally Know |
| 9 How often do you use PCP as a guiding instrument for Course management? | 3X | 2X |

| Question                                                                 | Frequency Level |
|--------------------------------------------------------------------------|-----------------|
| How often do you use PCP as a guiding instrument for Course management?  | Never | Rarely | Sometimes | Often | Ever |
| 10 How interested are you in learning more about PCP?                     | 1X | 3X | 1X |

| Question                                                                 | Interest Level |
|--------------------------------------------------------------------------|-----------------|
| How interested are you in learning more about PCP?                        | No Interest | Little Interest | No Interest or Disinterest | Any Interest | Much Interest |
| 11 How interested are you in learning more about PCP?                     | 2X | 3X |
Some points should be highlighted from what is shown in Table 8. Question 4 reflects an unreasonable level of agreement with the PCP disclosure. There are two "concordances" and two "disagreements", which brings the issue to a critical level (one can say "zero level"), plus a "disagreement and non-disagreement", which does not affect anything the result of this question; Therefore, there is a clear signal here that efforts are being made to make this important instrument more effectively reach its main target audience. This question could even be counterbalanced by the next one (question 5), but it cannot be said that this does indeed occur, since there are three "concordances" for a "neutral position" and a "disagreement." Such result is not supported by Fischer, Waiandt and Fonseca [21] proposition, for which the broad understanding of the curriculum is directly linked to the study of documents to understand the construction of knowledge. Along the same lines, Ching, Silva and Trentin [16] assert that: "there is no way to implement a new philosophy [...] without the support and participation of the faculty who will teach in the course".

Regarding the level of knowledge of the PCP, it is observed that, although 60% of the respondents said they knew and 40% fully knew the instrument, regarding the level of importance, for these same actors, 40% consider "neither important nor without importance 20% “a little important” and the others “very important”. Evidently, there is an asymmetry here that deserves a more careful look on the part of managers, especially if one considers the assertions proposed by the authors [31-33].

As seen, the PCP is a guiding instrument of pedagogical practices in its various dimensions. That said, one can classify as worrying the fact that 60% of respondents “sometimes” use PCP as a management tool and 20% “never” use it. It is noteworthy that the actors selected for the research are directly linked to the conception, implementation, execution and coordination of the course in question. This question refers to the assertion of Nunes and Patrus-Pena [11], who draw attention to the lack of pedagogical training in most university course teachers.

The result of the question concerning the degree of knowledge of the Pedagogical Principles contained in PCP is presented in Table 9, by respondent.

| Nº | Pedagogical Principles | Responding Players |
|----|------------------------|--------------------|
|    |                        | DACCN | CCA | CAP | TAADM | DCCCG |
| 1  | Curricular organization in annual periods | 1     | 6    | 1    | 6     | 1     |
| 2  | Distribution of contents in thematic axes | 3     | 2    | 2    | 4     | 5     |
| 3  | Non-fragmented content: the thematic axes will be treated in full, not being broken down into disciplines | 6     | 4    | 6    | 1     | 4     |
| 4  | Basic contents continuously taken up and deepened in the thematic axes over the years, according to the needs posed by the knowledge worked in each axis/year | 5     | 3    | 4    | 2     | 3     |
| 5  | Vocational and basic training combined since the beginning of the course | 4     | 1    | 3    | 3     | 2     |
| 6  | Classes distributed throughout the week/university academic calendar | 2     | 5    | 5    | 5     | 6     |

Some inferences can be made from the data shown in Table 9. First, however, it is important to point out that the proposed scale was 1 for the lowest level of knowledge and 6 for the highest level of knowledge (no repetition of the numbers).

Thus, for three actors, the first principle is the least known, while for the other two, it is the best known. One of the possible justifications for this asymmetry may be that, although, in practice, the course has annual periodicity, the university's information system is still in a transitional phase, so far remaining semiannually. The second principle presents a result with reasonable heterogeneity. The third principle receives two level four notes of knowledge, while also receiving two notes with maximum degree of knowledge.

The fourth and fifth principles, as they stand, follow the same pattern as the second, with some heterogeneity. The sixth and last principle indicate a certain tendency towards homogeneity, that is, to a higher degree of knowledge on the part of the actors. This result may have been influenced by the actors' own perception in the movement of students/teachers during the academic period, given the fact that the highest degree of knowledge was attributed by the student representative in the Course Coordinating Council.

The participation of the researcher in pedagogical meetings, based on the elaboration of descriptive field reports, attests that there is a consensus among the various actors that the whole process is in the maturation phase. However, when observing the other courses (Agronomic Engineering, Environmental Engineering and Food Engineering) that began in 2014, with a methodology similar to the newly started course under study, it is clear that much has already gone. In turn, it is even more evident that there is a long journey ahead, a fact that seems in line with Gonçzi's studies [10].

Especially in this period of consolidation, there is a need for tactical planning that is aligned with the institutional strategic planning or the Institutional Development Plan (IDP). Course coordinators, such as academic managers, should play this tactical role, thereby linking the guidelines set out in the strategic plans defined by senior management and the operational field. It is not intended to neglect the complexity of the proposal as it was conceived. On the contrary, as stated by Rué [18], this structure model requires investments of time and considerable involvement of the actors, in a process of reflection on the phenomenon and constant measurement and analysis of the results obtained.

Fact is that the academic management, viewed from this perspective, needs reformulation in its implementation processes, especially with regard to control, in order to build formal channels for measuring the results of the implemented
model, thus generating conditions for feedback the system and constantly improve it.

5. Conclusion

This study aimed to investigate the critical perception about the Pedagogical Course Project (PCP) of the Administration Course of UFSCar - Natural Science Center, from the perspective of the actors most directly involved with this instrument.

As it is a methodology still under consolidation, of innovative character, it is observed that there are many points that need to be adjusted. However, it is emphasized that these pedagogical questions, in view of the challenge of implementing, executing and coordinating a teaching methodology with these characteristics, require a collective effort, with management based mainly on a systemic view, which sees not only its most various actors, the uniqueness of their specificities, but also the inevitable and complex relationship of interdependence and interaction of the parties.

There is an urgent need for greater emphasis on the dissemination of this instrument within the academic community. Nevertheless, the functionality and consolidation of the methodology proposed by PCP require from all actors involved an academic management effort with clear objectives, based on a functional agenda, built and practiced in several hands.

In short, there is a great deal of enthusiasm, commitment and commitment from most (if not all) of the actors involved to strive to achieve the desired goal: the training of a professional with a not strictly academic but more than that is, a professional with the technical, human and, at a higher level, conceptual skills.

Among others, a limitation of this study was the number of actors surveyed, circumscribed to five. Although they are the most directly related to the course management, it is possible, in a next step, to increase the number of research subjects, thus involving students and teachers from other courses, considering that all, with small variations in certain specificities, adopt the same methodology.

Thus, as a future research agenda, it is recommended to expand the number of respondents, in addition to inserting other variables that can be listed from the Pedagogical Course Project (PCP) of the other courses, comparing them with the Development Plan Institutional (DPI).

Finally, this paper can serve as a discussion text for the coordinators of the Business Administration courses, in particular, and other courses in general.

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