4

Artigo

Pilot project, *Universidade Aberta do Brasil* – Open University of Brazil: what says the national performance examination of students (Enade)?

Antonio Roberto Coelho Serra [1]
Fátima Bayma de Oliveira [2]
Luciana Mourão [3]

ABSTRACT

This study aimed at the analysis of the relation between the management configuration of pilot distance education undergraduate programs on Administration and their evaluation, as expressed by the Brazilian national examination of students performance (Exame Nacional de Desempenho de Estudantes – ENAD). The organizational structure of distance education departments was described at Federal University of Maranhão (UEMA), State University of Paraíba (UEPB) and Federal University of Ceará (UFC). A comparative analysis between the three institutions took into consideration their complexity, centralization level, and coordination dimensions. The distance learning systems underpinning the pilot profram conducted by th Open University of Brazil (Universidade Aberta do Brazil – UAB) were also analyzed, based on reference quality parameters for higher education, as defined by the Brazilian Ministry of Education. Components interdisciplinarity, didactic materials, evaluation system, multidisciplinary team, communication and infrastructure of education centers were highlighted. The research was qualitative, descriptive, explanatory, and multicase based. Data was collected based on interviews, focal groups, questionnaires and online documents. Primary data were processed using category content analysis, and secondary data, by means of document analysis. Considering a descriptive-interpretative analysis and a cross-section perspective, some induction concerning management configuration was possible. A strong and direct relation between the management configuration and students performance (ENADE results) became evident. When the various educational institutions included in this study are

[1] Universidade Estadual do Maranhão, StateUniversityof Maranhão; antonioroberto.serra@gmail.com

[2] Fundação Getulio Vargas, Getulio Vargas Foundation. Rio de Janeiro – RJ; fatima.oliveira@fgv.br

[3] Universidade Salgado de Oliveira. Niterói – RJ; mourao.luciana@gmail.com

concerned, findings are, thus, consonant with differences among students performance having a direct relationship with the way their Distance Learning departments are structured.

Keywords: organizational structure; DE system; administration courses; enade.

RESUMEN

Este trabajotuvo como objetivo final el análisis de la relación entre las configuraciones de las gestiones de los cursos a distancia de Administración (proyecto piloto de la UAB), y sus conceptos definidos por el Examen Nacional de Desempeño de Estudiantes. Para ello, se partió de una descripción de la estructura organizacional del área responsable por la educación a distancia en la UEMA, en la UEPB y en la UFC, comparándose las dimensiones complejidad, centralización y coordinación de las tres instituciones. También se analizaron los sistemas de EaD del curso piloto de la UAB, a partir de las referencias de calidad para educación superior a distancia del MEC, destacándose los componentes interdisciplinaridad, materiales didácticos, evaluación, equipo multidisciplinario, comunicación e infraestructura de polos. Se trata de una investigación predominantemente cualitativa, descriptiva, explicativa y multicaso, cuya colecta de datos se realizó a partir de entrevistas, grupos focales, cuestionarios *online* y documentos. Los datos primarios fueron tratados mediante análisis de contenido de categoría y los dados secundarios, por medio del análisis documental. Las observaciones elaboradas, dentro de una perspectiva descriptiva-interpretativa y de un corte seccional permiten inducciones sobre las configuraciones de las gestiones en cada universidad. Se evidenció fuerte y directa relación entre las configuraciones de las gestiones del curso piloto y los respectivos resultados en el Enade. Por tanto, se admite que las diferencias en los resultados en el Enade de las instituciones de enseñanza investigadas tienen relación directa con la forma de estructurar por parte de los sectores responsables por la intermediación de la EaD.

Palabras-clave: estructura organizacional. Sistema de EaD; cursos de administración; enade.

RESUMO

Este trabalho teve como objetivo final a análise da relação entre as configurações das gestões dos cursos a distância de Administração (projeto piloto da UAB) e os seus conceitos definidos pelo Exame Nacional de Desempenho de Estudantes. Para tanto, partiu-se de uma descrição da estrutura organizacional da área responsável pela educação a distância na UEMA, na UEPB e na UFC, comparando-se as dimensões complexidade, centralização e coordenação nessas três instituições. Também foram analisados os sistemas de EaD do curso piloto da UAB, a partir dos referenciais de qualidade para educação superior a distância do MEC, destacados os componentes interdisciplinaridade, materiais didáticos, avaliação, equipe multidisciplinar, comunicação e infraestrutura de polos. Trata-se de uma pesquisa predominantemente qualitativa, descritiva, explicativa e multicaso, cuja coleta de dados foi feita a partir de entrevistas, grupos focais, questionários *online* e documentos. Os dados primários foram tratados mediante análise de conteúdo categorial e os dados secundários, por meio da análise

documental. As observações elaboradas, dentro de uma perspectiva descritivo-interpretativa e de um corte seccional permitem induções acerca das configurações das gestões em cada universidade. Evidenciou-se relação forte e direta entre as configurações das gestões do curso piloto e os respectivos resultados no Enade. Assim, admite-se que as diferenças nos resultados no Enade das instituições de ensino investigadas têm relação direta com o modo de estruturação dos seus setores responsáveis pela intermediação da EaD.

Palavras-chave: estrutura organizacional; sistema de EaD; cursos de administração; enade.

1. INTRODUCTION

Considering the priority given to knowledge, a fundamental pillar in current society, education definitely becomes determinant for the development of nations. In that sense, organized educational processes should remain in place as much for the construction of new knowledge and technology as for moderating and meeting the needs imposed by this new order, demanding a new concept in educational systems from different countries. In the case of Brazil, the scenario could not be different, because the conception that such systems capable of strongly contributing to the democratization of knowledge is imposed at the same time that they overcome the exclusionary impacts caused by the absence of that action.

Therefore, it is necessary to assess not only DE's contribution against the current growing demand for training, but also the way in which it organizes and reverberates in the Brazilian educational context. With regards to higher education, the Ministry of Education (MEC) has been adopting public policies in order to expand higher education since the early 1990's, showing efforts to democratize and widen access, in order to fulfill its own National Plan for Education – PNE, *Plano Nacional de Educação*. In the wake of this evolution, MEC accepts the DE model as an important ally and, in an articulation effort with the Bank of Brazil, state and municipal levels of government, and public and private higher educational institutions, implements the Open University System of Brazil (UAB, *Sistema Universidade Aberta do Brasil*), in 2005. The system's objective is to encourage, finance and monitor the offer of distance learning higher education programs in all administrative regions of the country.

With that perspective, the management theme and its unfolding developments and incorporated as objects for discussion in order to understand the configurations within the organizational structures of those areas responsible for Distance Education in certain universities that are part of the Open University of Brazil. Therefore, the object is its own pilot program, in order to identify how inspired are the configurations of its DE systems in the *quality references for distance-learning higher education* set by MEC. For this quest, we have adopted the meaning taken by the terminology *configuration of management* in representing the conjunction of organization configurations of the variables analyzed in this paper: structure and system.

The discussion also aims at the performance results obtained by those institutions that offer higher education

programs in the distance-learning model in the National Performance Examination of Students (Enade), one of the pillars of the National System of Higher Education Evaluation (Sinaes – *SistemaNacional de Avaliação da Educação Superior*), under the responsibility of the National Institute of Educational Studies and Research (Inep, *Instituto Nacional de Estudos e Pesquisas Educacionais*), linked to the Ministry of Education. With that configuration, the question was asked: **What influences do management configurations in distance-learning business administration programs (UAB's pilot project) have on appraisals defined by Enade?**

It is believed that the question can reverberate in the educational realm, altering nuances of economic, politic and administrative nature, as higher education institutions are able to make better choices regarding the adopted management model. Once these assumptions on the research problem have been confirmed, education institutions will be able to take a more assertive stance on the configuration of their structure and their DE system.

The implementation of this research required the quest for and description of the different organizational configurations, manifested in the inter-relations that take place between the many components, which are necessary parts of the attainment of management of the Open University of Brazil's pilot project. For that purpose, the year 2009 was considered as a sectional cut, as that was the moment the analyzed program was subjected to the Enade exam. Such investigation is focused on a single and broad pilot program, which debuted in 2006, among public higher education institutions. This is the reason why no historic series of results in the National Performance Examination of Students was investigated and why no programs from private institutions of higher education were included.

2. D.E. SYSTEMS

The modern milestone on the origin of a General Systems Theory is accredited to Ludwig Von Bertalanffy who, by proposing the interaction between natural and social sciences, has systemized a principle on the "all integrated" idea, where elements of a whole are in permanent inter-relation with themselves and their environment. This thought erupted in the late 1960's and encountered great resonance in the scientific community, given their dissatisfactions with the prevailing vision of the time, the mechanism and fragmentation of sciences (RAPOPORT, 1976).

Although the idea of a system had been defined and interpreted in different ways, a general consensus is accepted on the meaning of the term as a group of interacting and coordinating parts acting to attain at least one goal. For Bertalanffy (1975), the systemic vision invariably approaches the world as a group of systems and subsystems assorted according to relations of being container and contained. According to the author, this perspective shows that an organism's fundamental properties, whichever it is, are the result of interaction and relationships among the parts and therefore, are properties of a single whole.

When addressing this kind of interdependency, Aretio (2001) describes

certain subsystems as strategic components of a DE system. The first of which is the *student*, basic foundation and the object of all educational action, as well as the target of diverse methodologies. The second component would be the *teacher*, present from the conception of the project for the program until the performance evaluation of students, with the responsibility of achieving the means to assure efficiency and efficacy in the educational action. Then, the author considers bidirectional *communication* through any means as relevant element in the interaction among subjects that make up the subsystems. In this integrated perspective, *structure, organization and management* are also accepted and are noticed in their apparatuses of administrative, material and human nature as prerequisites for the proper operation of the system. Finally, the author classifies under *other components* all the general remaining philosophical, conceptual and relational aspects that also contribute for the order in educational organization.

With this understanding, Moore and Kearsley (2007), without losing track of the single perspective of a system, accept that separately studying its subsystems allows for better comprehension of its interrelations. For the authors, the interrelations between the subsystems within a system aimed towards the undertaking of a distance-learning course support the creation of control mechanisms that promote effective articulation and integration among all of its components. For the authors, the final quality presented by a distance-learning course will be higher the less isolated their subsystems are. They consider it to be relevant the existence of a subsystem capable of planning the operation of the course and of another that allows for the communication between managers, teachers, tutors and students, who in turn should have access to different environments for learning.

There definitely is more than one organizational form for DE systems and Moore and the propositions made by Moore and Kearsley (2007) are certainly not applicable for all contexts. Nevertheless, at the very least, such aids create the necessary indicatives for drafting the counterpoints in order to reach the expected results of this investigation. As a general rule, what can be concluded from the authors' inputs is that conception and composition of these educational systems seem to depend on the setting of goals regarding students and their profile, the pedagogical project and technical-operational factors, such as learning mediation resources and the technology that facilitates it.

3. ORGANIZATIONAL STRUCTURE

The search for an understanding on the organizational structure idea finds in Hatch (2006) a quite wide definition, where the concept was conceived in a systemic way, as the relationship among the parts of an organized whole. In a specific manner, Stoner and Freeman (1999, p. 230) define structure as the "way through which the activities of an organization are divided, organized and coordinated". In the same direction, Mintzberg (2003, p. 10), states that the organizational structure can be understood as "the total sum of the ways through which work is divided into different tasks and how the coordination among those tasks is done". However, Bowditch and Buono (2011, p. 167) accept that organizational structures are like

"patterns of work and hierarchical dispositions that are used to control or distinguish the parts that make up an organization".

In light of these definitions, it can be concluded that the mentioned authors understand structure as an organizational component capable of fully promoting the relationship among the parts of a whole, and that adding up the ways through which the work is divided, organized and coordinated, results in a interdependent entwinement of individuals and activities in the workplace. This thought will be considered for a possible operationalization of this analysis category, whose objects correspond to the different organization configurations taken by institutions that provide distance-learning programs.

The many types of organizational structures are always the result of the different arrangements and combinations between these components (WAGNER III; HOLLENBECK, 2009). For that reason, it has been observed that within the organization, none of the elements have a relationship of dichotomy: present or absent. They are, however, observed in gradual levels of presence, organized in a *continuum* (BOWDITCH; BUONO, 2011). Therefore, for the purpose of analysis within this work, the following subcategories in organizational structure are considered: *complexity, coordination/control and centralization*.

Complexity as a component is identified in the reproduction of organizational differentiation, which can be noticed by the process of labor division and number of hierarchical levels. For Hatch (2006) and Bowditch and Buono (2011), complexity is associated to the concept of differentiation, whether it is horizontal or vertical. In addition to these meanings of differentiation, Hall (2004) also accepts special dispersion as another dimension for complexity. Therefore, the more differentiated the horizontal and vertical organization, the more complex it will be.

Coordination and control refer to the formal or informal instruments used, in order for tasks undertaken within the organization are properly integrated, inserting direct or indirect control of results among varied forms of work. For stoner and Freeman (1999, p. 237), coordination refers to "the process of integrating objectives and activities from separate work units (departments or functional areas) with the purpose of effectively achieving the organization's goals". Wagner III and Hollenbeck (2009, p. 301) however, state that coordination "is a process in which actions, otherwise disarranged, are integrated in order to produce a desired result".

Centralization is directly associated to the decision-making process of the organization. Therefore, it is connected to the concentration and distribution of power among the organizational levels (HALL, 2004; HATCH, 2006). In that perspective, the possibility of centralization or decentralization of a structure will depend on how much power will be centralized in the hands of a few or distributed amongst many. Quite similarly, Wagner III and Hollenbeck (2009, p. 316) see centralization as "the concentration of authority and decision at the top of an enterprise", and in the same way Bowditch and Buono (2011) refer to this organizational component as the authority place in the organization where decisions are made.

4. ANALYSIS MODEL

The theoretical background displayed here have made possible the construction of an analysis model built on two reference tables, which correspond to the two analytical categories objects of this work. In both cases, three columns are presented containing, in this order, the dimensions of the studied category, its respective components and constitutive attributes.

4.1. Operational definition for Organizational Structure

The operationalization of this analysis category takes place with the description of the complexity dimensions, centralization and coordination of areas responsible for DE in the analyzed institutions. Each one of them brings a set of distinguishing marks that can be verified in a real-life scenario with the understanding of its expressed attributes. Table 1 shows the configuration of these dimensions according to the details of their components and respective attributes.

Table 1: Operational definition of the organizational structure

Dimensions	Components	Attributes	
Complexity	Labor division	Generates horizontal differentiation from the dismemberment of complex tasks among members of the organization	
	Hierarchy	Generates vertical differentiation from the stratification of authority in different organizational levels	
	Departmentalization	Concentrates grouping of work activities that are similar or logically connected	
Centralization	Decision Making	Shows the authority level and the degree of participation in decision-making processes of organization members	
	Evaluation of Results	Indicates the hierarchical competence for definition of parameters and evaluation of performance	
Coordination	Control Systems	Mutual Adjustment	Favors work relations through the change of information using varied channels of communication
		Direct Supervision	Sets an individual's responsibility to control the activities of a certain functional group within the organization
		Standardization	Establishes referential and procedures for work processes, considering necessary abilities and expected results
		Formalization	Shows the degree in which rules, norms, policies and procedures that coordinate the positions' activities are standardized.

The adopted analysis model, in the case of organizational structure category, attributes references to each component of the analytical dimensions that will mark the evaluation of the structuring level of areas responsible for DE in each of the investigated universities. For the purpose of acknowledging such variables, Table 2 was created showcasing its dispositions related to the marked and established values.

Table 2: Analytical references for the analyzed structural dimensions

Dimensions	Components	References
Complexity	Labor Division (Horizontal Differentiation)	Low
		Medium
		High
	Hierarchy (Vertical Differentiation)	Few
		Medium
		Many
	Departmentalization	Functional
		Divisional
		Matrix
Centralization	Decision Making Evaluation of Results	Centralized
		Decentralized
		Centralized
		Decentralized
Coordination	Control Systems	Mutual Adjustment
		Direct Supervision
		Standardization
		Formalization

4.2. Operational Definition of the DE System

This work considers DE system as a group of integrated and interrelated processes whose management variably erupts in higher education institutions. Such category will be implemented from a reference matrix, formed by a few selected dimensions from those dictated by the Ministry of Education in accordance with the document on *quality references for distance-learning higher education* (BRASIL, 2007). Each dimension brings with it a certain number of components that define its own main characteristics which, consequently, are identified by function of attributes, which allows for the perception of evidences of the depicted reality, as shown on Table 3.

Table 3: Operational Definition of the DE System

Dimensions	Components	Attributes
Instructional Design	Conception	Contextualizes curriculum and emphasizes interdisciplinary approach of content from means of offering subjects and adopted methodologies
	Didactic Material	Allows for the convergence and integration of different didactic mediations while maintaining cohesion between unites worked previously and creating new knowledge, skills and behavior in students
	Evaluation	Promotes a systematic follow up of learning processes in students, considering conception and didactic-pedagogical organization of the program
Resources	Multidisciplinary Team	Responsible for academic management to teaching-learning process development, through the work of different professionals in the DE field
	Communication	Allows for the interaction and interactivity through the use of available technology in democratic spaces accessible to all in the program
	Support Infrastructure	Favors the development of academic practices conceived in the program's pedagogical project, according to the availability of physical resources

Once all the data has been broken down, analyzed and interpreted, it will be possible to proceed with the appraisal process of the group of indicators in each dimension of the DE systems investigated. Criteria have been assigned and associated with nominal grades from 1 to 5, similarly to procedures set by INEP[4] in the application of its evaluation instruments. Table 4 portraits this reference in descending order of quality in five different degrees of complexity and detail.

[4] TN: INEP – Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, *or Anísio Teixeira National Institute for Educational Studiesand Research*

Table 4: Appraisal criteria for evaluation of higher education programs

Appraisal	Level	Criteria
Full/Fully (Excellent)	**5**	In qualitative indicators, the adjective "full" or the adverb "fully" qualify a situation as deserving of notoriety and excellence. On a percentage scale of 0 to 100, the concept placed on the "full" level is in the highest quality rank (100%)
Adequate/Adequately (Very Good)	**4**	In qualitative indicators, the adjective "adequate" or the adverb "adequately" qualify a situation as above average, deserving of acknowledgement and importance, however undeserving of notoriety and excellence. On a percentage scale of 0 to 100, the concept placed on the "adequate" level reaches a minimum of 75%
Sufficient/Sufficiently (Good)	**3**	In qualitative indicators, the adjective "sufficient" or the adverb "sufficiently" qualify a situation as of a satisfactory level, that is, one that surpasses minimum approval level. On a percentage scale of 0 to 100, the concept placed on the "sufficient" level reaches a minimum of 50%
Insufficient/Insufficiently (Regular)	**2**	In qualitative indicators, the adjective "insufficient" or the adverb "insufficiently" qualify a situation as a level below the minimum level for approval. Although the situation is not entirely devoid of merit, the attained level is not satisfactory. On a percentage scale of 0 to 100, the concept placed on the "insufficient" level reaches a minimum of 25%
Non-existent/Precarious/ Precariously (Bad)	**1**	In qualitative indicators, the adjectives "precarious" and "non-existent" or the adverb "precariously" qualify a situation as precarious, nearly or totally devoid of merit. On a percentage scale of 0 to 100, the concept placed on the "precarious" level reaches a level below 25%

Source: Adapted from INEP

The results have provided the researcher with the means for a careful analysis and direct allocation of an appraisal that is related to the quality level of indicators, which as a whole integrate each dimension of the DE system. After the conclusion of the appraisal, it was possible to conduct a broader reading of the DE system of the distance-learning Business Administration program in each of the researched higher education providers. It will be possible to analyze the program in terms of approximation or adherence level to quality references for distance-learning in higher education, set by MEC, the Ministry of Education.

5. METHOD

Taking as reference a few categories and typologies for classification of scientific studies proposed by Richardson (1989), Gil (1991), Babbie (1998), Yin (2007) and Vergara (2008), and with the purpose of achieving the goals hereby established, this investigation is defined as a qualitative basis, *ex-post facto*, cross-sectional, descriptive and explanatory study, characterized by the case study method approach.

The analysis level of this investigation will be organizational (CHANLAT, 1993).

Therefore, so that the object of research would not be compromised, from the 22 public higher education institutions part of UAB's pilot project, all the universities with students evaluated as freshmen through the National Performance Examination of Students in 2009 were intentionally considered. From this delimitation emerged the research *census character*, whose survey based on the electronic system of processes follow-up that regulate higher education in Brazil (e-mec), points towards the following analysis units and their respective appraisals from Enade: State University of Maranhão (Appraisal 4), State University of Paraíba (Appraisal 3) and Federal University of Ceará (Appraisal 2).

As defined by Babbie (1998), forming units of observation within this research, subjects occupying positions of management or coordination, among them directors and coordinators responsible for the DE area in the organization, institutional coordinators from the Open University of Brazil (UAB), coordinators of the pilot program at UAB and coordinators of areas connected to DE, personally interviewed at the head offices of each of the analyzed institutions. In addition, and with the purpose of obtaining new perceptions, other teachers, tutors and distance-learning students of the Business Administration program (UAB's pilot) were also considered as subjects, who have either voluntarily answered the online questionnaire or have also joined the focal group, which is specifically the case of Maranhão University UEMA's (eight) and Paraíba University UEPB's (ten) students. Table 5 specifies the number of subjects in the research within each institution, divided by observation unit categories and by the form used for gathering information.

Table 5: Amount of research subjects per observation unit

Analysis Units	Observation Units						Total
	Interviews			Online Questionnaire			
	UAB Coordination	Program Coordination	Tutoring Coordination	Tutors	Teachers	Students	
UEMA	01	01	01	19	12	81	115
UEPB	01	01	01	7	8	24	42
UFC	01	01	01	55	6	43	107
Totals	**03**	**03**	**03**	**81**	**26**	**148**	**264**

This approach has allowed the collection of data and evidence concerning the relevant issues, whether by obtaining detailed answers or by collecting actions and perceptions from the subjects, especially according to their own experiences in the field of study. Therefore, the data collected through interviews, including focal groups, as well as the documental share from the Inep/MEC reports, were all treated and analyzed under the qualitative approach, while data from questionnaires and documents related

to performance coefficient of students throughout the pilot program have received the proper quantitative treatment to the objectives of this examination.

It should be noted that, at the same time, the document analysis of reports published by Inep regarding the mentioned distance-learning business administration programs was being conducted, which is an ideal tool for interpreting secondary data. The multiplicity of interconnected sources (interviews, focal groups, questionnaires, documents) have made possible the use of the *triangulation technique* as a way to describe, broaden and better understand the focal point of this study. Said technique has enabled several evaluations of the same phenomenon and has evaluated the consistency (validity and reliability) of obtained data (TRIVIÑONS, 2006)

6. RESULTS AND DISCUSSIONS

This section intends to synthetize the analysis obtained within the scope of the three examined organizational units in order to gain comparative knowledge of them. While searching for simultaneity in the examination of multiple cases, analysis that take place separately are placed on a parallel with the purpose of explaining correspondences between organizational structures and the described DE systems, in relation to different appraisals given by the National Performance Examination of Students to distance-learning programs of Business Administration within the context of the Open University of Brazil's pilot project.

On Organizational Structure

Three organizational structures responsible for intermediation of distance-learning programs within the examined education providers were found. At the State University of Maranhão, UEMA: the Technology Nucleus for Education (Uemanet); at the State University of Paraíba, UEPB: the Institutional Coordinating Body for Special Projects (CIPE); and at the Federal University of Ceará: the Virtual University Institute. The first two organizations are formally linked to the university's Dean's Office and the third is an autonomous academic unit. In common, they share the history of having developed a group of activities in administrative mediation, didactics, methodology, technology and operation which favor the distance-learning Business Administration program (UAB's pilot project). They also act together with other classic and distance-learning programs with similar molds.

With regards to **labor division**, results obtained for this approach have shown relative approximation, as well as significant differences among the examined organizations. In general terms, by force of the Open University of Brazil's institutionalization process and especially by the requirements set by the Resolution CD/FNDE number 26/2009, also known as the scholarship bill, all institutions have shown the same minimum composition in their groups of work. Mostly, tasks concerning the pilot program were subdivided in two levels. One was the coordination level, distributed among the UAB's coordinator, the program coordinator, and the tutors' coordinator. The other was the pedagogical level, distributed among teachers

and tutors of the classic and distance-learning models. The exception was UEPB that, despite having the necessary resources, opted for a model of tutorial function were those two roles are the responsibility of one single tutor.

Therefore, it can be concluded that the high horizontal differentiation at UEMA and UFC, compared to the low levels of task distribution at UEPB, may have contributed for the results these institutions have obtained at the National Performance Examination of Students. Then, it is reasonable to believe that the investments made in multidisciplinary teams and the greater capillarity in distribution of tasks within the areas responsible for DE intermediation inside the education institutions might be factors of relevance for performance when they are subjected to external evaluation.

Regarding **hierarchical levels** identified in the examined structures, all analyzed unites were found with low levels of vertical differentiation. That is also the case of UEMA and UFC, which can have up to 120 people available if all of their groups of work are considered, and whose horizontal differentiations suggest high rate of hierarchical rise. In general terms, hierarchical distribution levels in DE intermediating sectors in each institution are not higher than four. Therefore, no evidence was found that the assessment of subordination relations might influence or be able to affect in any way the results obtained by UEMA, UEPB and UFC at the National Performance Examination of Students for UAB's pilot program.

From what was found, the divisions by similarities of outputs found at Uemanet and Virtual University Institute indicate these organizations' concern with the standardization of results, including as a form of control. With that perspective, it can be assumed that the relatively similar performance of their students at the Enade could also have been influenced by the way in which their technical groups were configured. On the other hand, in the case of UEPB, the distribution of roles devoid of follow-up mechanisms may have compromised the performance of their work teams, and consequently their results against external evaluations, such as the ones promoted by Sinaes.

On processes and competences for **decision making** within the examined institutions, there were many indications of a democratic and participative management found at UEMA and UFC. Generally, they have acted according to what Oliveira (2006, p. 4) claims, when he states that subjects involved in the educational process are considered "co-participants who collaborate with thinking, doing, responsibilities, evaluations, decisions, rethinking, re-signifying not only a program, but the relationships, the institution". Systematized actions of strategic planning were identified in these two organizations, with a strong sense of sharing and participation of representatives from all segments and organizational levels. Such representation was also proportional in the case of the UFC's Virtual University Institute Deliberative Council, whose constitution takes place in order to chair the organizations top office.

On the other hand, in the case of UEPB, evidences point towards a single authority spot for decision-making inside the organization, as predicted by Bowditch and Buono (2011)

or Wagner III and Hollenbeck (2009, p. 316), when they described a centralized structure from the "concentration of authority and decision at the top of an enterprise". Particularly, due even to the low complexity of the structure, at CIPE no decision is made without the direct participation of its general coordination. Besides the organization's size, another explanation for UFPB centralization, on some level, is the lack of confidence on subordinates to make decisions or self-evaluate, as explains Hall (2004).

On competence for **evaluation of results**, verifications have shown that the same logic present in the decision-making process of institutions is also decisive in the context of evaluation. Once again, in the case of UEMA and UFC, evaluation procedures permeate the different sectors and are divided among them within their structures, with no concentration of this action on any level or person. An opposite finding was identified at UEPB, where evaluation actions are centered in the role or person of most power in the sector.

Regarding the results obtained by Enade, taken into consideration Hatch's (2006, p. 169) statement that "studies on centralization show that the amount of communication, commitment and satisfaction tend to be higher in decentralized organizations", it is believed that UEMA's and UFC's decentralized decision-making and evaluation procedures have directly and positively reverberated on the performance of their students in the appraisal. As a consequence, it accepted that the opposite is also true – less participation in decision-making and evaluation, which is UEPB's case, influence the institution's performance, decreasing its chances of success in evaluation of students' performance.

The **mutual adjustment** resource was identified in all analyzed units. The immaturity of the DE field, which impacts the examined sects, the deficiency in professional training, low level of formality and the very size of structures might be among the reasons for this generalized occurrence. Uemanet is a case that deserves to be highlighted, as it makes informal relations and exchanges among its collaborators into one of the most important means for creation of technical competences in its sectors.

The mechanism of **direct supervision** was also found in all cases, possibly due to flows of orders and tasks derived from the departmentalization types of each organization. For this reason perhaps, none of the three organization has explored this resource for coordination and control as much as UEFB, whose functional structure has more strongly favored the relationship between commander and commanded. This evidence confirms a tendency of approximation between the Institutional Coordinating Body of Special Projects and Burns and Stalker's (1961) type of mechanical structure, marked by the high dependency of collaborators, low flexibility and direct command. Also at UEPB, but with less intensity, were found evidence of systemized application of **standardization of skills** as a training resource, especially for teachers and tutors working for UAB's pilot program.

At last, **standardization of outputs**, partly favored by divisional departmentalization, was identified at

UEMA and at UFC as well. However, the specification of expected results and the value of task fulfillment, according to Mintzberg (2003) and Wagner III and Hollenbeck (2009) were much more pronounced in the context presented at the UFC's Virtual University Institute, for which this has become the primary form of coordination and control for the integration of its many configurations of work.

As noted in the case of departmentalization, the results suggest that the mechanism for standardization of outputs, favored by divisional structures at UEMA and UFC, may have effectively contributed for the performance of its students in Enade. This would be the only coordination and control mechanism noticeable between the analysis units and if absent could negatively impact UEPB's performance compared to the other universities.

On The DE System

In discussions on education **conception** and curriculum in the teaching-learning process, a lot of emphasis was put on issues concerning curricular context and organization, aiming at identifying *theinterdisciplinarity* between subjects from the way they are offered. Table 6 synthetizes the answers obtained with teachers, tutors and students from online questionnaires. The results are expressed in percentages, by institution, observation unit and value in the adopted scale.

Table 6: Approval of program curriculum according to interdisciplinarity in universities

Subjectsof Research	**UEMA**			**UEPB**			**UFC**		
	Teacher	**Tutor**	**Student**	**Teacher**	**Tutor**	**Student**	**Teacher**	**Tutor**	**Student**
Scale	%	%	%	%	%	%	%	%	%
Never	0	0	1	6	4	0	5	4	2
Sometimes	8	5	6	**17**	**35**	4	22	7	7
About half of times	**30**	26	19	**50**	14	8	17	24	23
Many times	**58**	**37**	**41**	13	**20**	**38**	**33**	**38**	**42**
Always	4	**32**	**33**	14	18	**50**	**23**	**27**	**26**

As can be noticed, the highest approval rates for curriculum concerning the interdisciplinarity factor can be observed at UEMA, where results that recognize this action "many times" or "always" are from 74%, 69% and 62% for students, tutors and professor, respectively. In the case of UCF, with the second highest percentage ratings, the results for the same subjects of research and levels previously considered are 68%, 65% and 56%.

The largest percentage differences were identified at UEPB. While 88% of students have recognized the program curriculum in terms of inderdisciplinarity as *many times or always*, only 27% o teachers and 38% of tutors

seem to have the same point of view. With these findings and the results each one of the examined universities achieved in Enade, it is accepted that the systemic component of interdisciplinarity, when minimally developed with the practices of the program, might have some influence on students' performance in external evaluations.

Discussions around the conception of the systemic component of **didactic material** have covered three aspects. The first aspect aims at finding how much of the instructional material used has correspondence to the students social-economical context and whether it fulfills the program's needs. The second ponders if these didactic resources complement each other and are properly integrated. The third explores the contribution of the material for student's acquisition of new competences.

As far as these approaches are concerned, the didactic material used in the three universities does not present much variation. More specifically, it is a conjugation of available resources in a collaborative and virtual learning environment, especially with the exploration of forums and chat rooms, satisfactorily integrated with the use of a printed textbook, which is the case of UEMA and UEPB. It is believed that diversity of instructional alternatives, translated into different resources for learning mediation, is not what would singly be enough to promote better or worse results in students' performance. Table 7 synthetizes the results of the three aspects previously considered, showing percentages of research participants combined with levels on the scale for each one of the approaches, divided by institution.

Table 7: Assessment of didactic material used at the universities

DM	Sujeitos de Pesquisa	UEMA			UEPB			UFC		
	Scale	Teacher	Tutor	Student	Teacher	Tutor	Student	Teacher	Tutor	Student
		%	%	%	%	%	%	%	%	%
Approval	Never	0	0	0	0	0	0	2	2	4
	Sometimes	8	5	5	0	0	0	16	2	14
	Abouthalfof times	17	**32**	**30**	0	29	8	16	**26**	**28**
	Many times	**50**	**42**	**44**	**62**	**42**	**33**	**33**	**45**	**42**
	Always	**25**	21	21	**38**	**29**	**59**	**33**	25	12
Integration	Never	0	0	0	0	0	0	0	2	2
	Sometimes	8	0	11	0	0	4	17	5	21
	Abouthalfof times	**42**	21	17	25	**29**	12	16	20	9
	Many times	**33**	**47**	**37**	**50**	**57**	**42**	**50**	**53**	**59**
	Always	17	**32**	**35**	**25**	14	**42**	**17**	**20**	9

Aquisition	Never	0	0	0	0	0	0	0	2	0
	Sometimes	8	0	5	0	0	0	6	2	0
	Abouthalfof times	8	16	9	13	29	0	17	5	5
	Many times	**67**	**47**	**30**	**38**	**42**	**29**	**50**	**51**	**42**
	Always	**17**	**37**	**56**	**49**	**29**	**71**	**27**	**40**	**53**

Corresponding to the aspects outlined during the data collection phase, Table 7 differentiates the results from the online questionnaire in three handling levels (approval, integration and acquisition). It was verified that in the first approach, most prospected teachers, tutors and students have approved the didactic materials at least *about half of times*, considering them to be compatible to the social-economical context of students and meet their needs. Generally, despite teachers show higher approval rate of didactic resources, a negative contrast to highlight is the fact that 18% of UFC's teachers and students perceive a sharp inconformity in didactic materials concerning the issue raised.

For the second approach, data indicates that the majority of the participants in the research has considered the didactic materials available to students as properly integrated. In this case, in opposition to the previous approach, teachers at UEMA and UFC have taken a more critical stance on the matter, followed by UEPB's tutors. Lastly, concerning the treatment related to acquisition of new competences, the uniformity of results among all subjects of the research becomes evident. They confirm that the material used in the program have allowed for the accumulation of knowledge, skills and behavior previously unknown.

As for the formative strategy for student learning used as means for conception of **evaluation**, a debate took place on the variety of alternatives for verification and recovery of knowledge, highlighting the impressions that subjects of the research have on the complexity of examinational issues. Table 3 discriminates the general impressions that teachers, tutors and students have of each of the examined universities under the mentioned approaches.

Table 8: Formative strategies of learning evaluation in universities

EV	Subjectsof Research	UEMA			UEPB			UFC		
		Teacher	Tutor	Student	Teacher	Tutor	Student	Teacher	Tutor	Student
	Scale	%	%	%	%	%	%	%	%	%
Variety	Never	0	0	4	0	0	0	0	0	2
	Sometimes	0	5	5	0	0	0	8	4	9
	Abouthalfof times	17	26	21	13	**43**	13	9	20	9
	Many times	**50**	**32**	**39**	**62**	14	**25**	**50**	**56**	**40**
	Always	**33**	**37**	**31**	**25**	**43**	**62**	**33**	**20**	**40**

Recovery	Never	0	0	2	0	0	0	0	0	9
	Sometimes	0	0	7	0	0	0	15	9	9
	Abouthalfof times	8	11	20	2	14	8	0	**29**	**23**
	Many times	**59**	**32**	**39**	**10**	**57**	**25**	**50**	**44**	**47**
	Always	**33**	**57**	**32**	**88**	**29**	**67**	**35**	18	12
Complexity	Never	0	0	0	0	0	0	0	0	2
	Sometimes	5	11	8	0	0	4	0	5	7
	Abouthalfof times	15	5	17	13	**29**	0	0	15	12
	Many times	**33**	**47**	**42**	**49**	**57**	**33**	**67**	**51**	**58**
	Always	**47**	**37**	**33**	**38**	14	**63**	**33**	**29**	**21**

Answers to the online questionnaires reveal that in all units of analysis, as far as variety of evaluation of learning, 90% of the research participants have admitted the existence of evaluation alternatives in *about half of times* at least, except for the 11% result found among UFC students, which consider this has either *never* happened or has only *sometimes* happened. When the approach deals with recovery of knowledge, once again the majority of observation units admits that the programs provide mechanisms for this purpose and similar to the previous case, UFC students (18%) also have dedicated the harshest criticism towards the issue. In both these contexts and possibly for having participating directly in the conception of the evaluative tool types in all institutions, teachers were the ones providing the best ratings for this item.

However, when the perspective of complexity of questions is considered, it is noticeable that the institutions are concerned in submitting their students to approaches of similar standards to Enade. The interviews conducted suggests some important evidence that might indicate a direct relationship between the result obtained in the examination and the way in which questions are submitted to students in their routine evaluations. In interviews, participants of the UEPB focal group have emphasized the great difference between the tests have become accustomed to and the one used by MEC for their evaluation. Added to this evidence is the fact that UEMA and UFC have systematically developed mock examinations throughout the semester prior to the Sinaes examination in 2009, which has probably build up the students conformity on the type and standards of questions present in the test.

With regards to the **multidisciplinary team**, the treatment of data has taken into account, in general terms, the way the many professionals that make up the technical/ pedagogical group of the program were selected. As for tutors, it was discussed the development of activities for the tutor training activities and necessary autonomy in the management of its subjects and contents.

As a general rule for all institutions, the parameters for scholarship grants at UAB were considered as requisites for establishing the profile of professionals (technicians, tutors or

teachers) receiving payments from this kind of financial aid. Scholarship holders aside, in compensation to the subsidies provided by CAPES[5], each institution still had at its disposition several other technical groups available in favor of the pilot program, and in this regard, UEPB was the least structured one. In this context, each university has established its own selection criteria, which varied from peer appointment to analysis of curriculum and interview. UFC's selection of tutors deserves to be highlighted: teachers choose from their own *stricto senso* graduate students.

In light of the configurations observed regarding the multidisciplinary teams in each of the analyzed universities, the evidences that surface lead to the conclusion that there is a strong connection between this systemic component and the final appraisal obtained by students from UEMA, UEPB and UFC in the 2009 Enade. The first indication of this connection can be observed in the tutoring model adopted by the institutions. UFC –which has achieved the highest appraisal –, unlike UEMA and UEPB, was the only one to make available two tutors with distinct roles at the students disposal, as described in UAB's national guidelines, in addition to allowing their teachers to select their own tutoring team and agreeing with periodical meetings between academic counselors and students in prep meetings for the tests.

Given the indispensability of the principle of interaction and interactivity, as highlighted by the Ministry of Education's *Quality Guidelines for Distance-Learning in Higher Education*, **communication** was the second component in allocation of resources brought to surface in the description of DE systems at UEMA, UEPB and UFC. Generally, all of them have provided many different forms of access and maintained democratic spaces favoring internal and external communication within UAB's pilot program. In most cases, academic interactions of students were not limited to one form of communication, becoming evident the massive use of available resources in the programs' virtual environment as the main point of convergence in all institutional contexts.

The last component approached in the dimension of resources approach deals with **support infrastructure**. Specifically, the intention was to confirm if the development of conceived academic practices in the pedagogical project of the pilot program were favored by their on-site facilities. It has become evident that in all of the examined institutions a relative convergence of stance among the subjects of research. In general terms, interviews have let it show that there are significant differences between on-site support centers located within the institution's headquarters and those maintained by the institutions or partners elsewhere. Presented below is Table 9, with the results from the online questionnaires submitted to teachers, tutors and students.

[5] TN: CAPES – Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – freely translated as Coordinating Body for Development of Higher Education Personnel, is an organization from the Ministry of Education. Its mission statement includes the "expansion and consolidation of *stricto sensu* (master's and doctorate degrees)" as part of the institution's objectives.

Table 9: Satisfaction in relation to the center's structural condition in universities

Subjects of Research	UEMA			UEPB			UFC		
	Teacher	Tutor	Student	Teacher	Tutor	Student	Teacher	Tutor	Student
Scale	%	%	%	%	%	%	%	%	%
Strongly disagree	0	16	19	12	14	0	17	7	5
Partially disagree	17	**37**	10	0	0	0	17	13	9
Neither agree nor disagree	**25**	16	15	0	0	0	**33**	**31**	26
Partially agree	**58**	**26**	**34**	**63**	**57**	**12**	**33**	24	**28**
Strongly agree	0	5	**22**	**25**	**29**	**88**	0	**25**	**32**

Although the results are not uniform, a general tendency can be noted of greater satisfaction among students than among tutors and teachers, showing a more favorable acknowledgement of the structural condition of the centers in terms of physical spaces and overall facilities. The higher acceptance rate among UEPB's students must be highlighted, which confirms the argument that better infrastructure is found in centers located within the institution's headquarters, which is the reality of this specific interviewees. In the remaining scenarios, low satisfaction rate with the overall condition of their centers among teachers and tutors is confirmed. When confronted with the students' performance results in the 2009 Enade, these results lead to the conclusion that the centers of on-site support, in the specific case of UAB's pilot program, were not as influential in the final results obtained by each institution as could be speculated.

7. CONCLUSIONS

This work considers that the management configurations of DE in the examined institutions greatly influenced these results. In general terms, the results from Enade have revealed that there is a reasonable distance between UEPB's continuous concepts in relation to UEMA and a strong approximation of the latter to UFC's concept. The conclusions on the matter, exclusively in the context of the UAB's pilot program in the examined universities, are listed as follows:

i. The high horizontal differentiation at UEMA and UFC compared to the low distribution level of tasks at UEPB has somehow contributed for the results obtained by these institutions at the National Performance Examination of Students.

ii. The relatively similar Enade performance results obtained by UEMA and UFC students were influenced by the way with which their technical groups were configured. In both cases, labor

divisions have occurred by similarity of product and standardization of outputs, indicating that the adopted divisional departmentalization maintained concerns with standardization of results as a form of organizational control.

iii. Decentralized decision-making and evaluation procedures at UEMA and UFC have had direct and positive impact on the students' performance in Enade. As a consequence, it is accepted that the opposite is also true: less participation in decision and evaluation, which is the case of UEPB, reverberate and decrease the chances of receiving higher appraisals from the students.

iv. The systemic component of interdisciplinarity, when developed at least to the minimum within the program's practices, has had some influence on the students' performance in Enade, which is the case of UEMA and UFC.

v. The diversity of instructional alternatives, translated into different mediation resources for learning, is not singly enough to promote better or worse results from students; the determinant factor is the existence of focused media that has adequate correspondence to the social-economical context with the student public and their expectations.

vi. The percentage weight attributed to the types of tests do not show signs of influence on the Enade results obtained by the institutions; proof of this is found in how UEPB and UFC share the same values but have obtained different results in the examination.

vii. The teachers' competence in creating evaluation questions has proved to be of much higher relevance for Enade results than the actual responsibility of correcting them. UEMA and UFC have shown similar behaviors, with teachers participating in the creation of evaluations of learning at a greater rate than UEPB.

viii. Investments in multidisciplinary teams and greater capillarity in the distribution of tasks in the areas responsible for DE intermediation within the education providers indicate a relationship with students' performance in Enade, see horizontal differentiation at UEMA and UFC in contrast to UEPB's case.

ix. The tutoring model adopted by the institution has had great influence on the results obtained in Enade, evident either by the selection process of tutors or by the roles they play when providing support to students. When provided in a specialized manner, tutoring has shown to be more effective than when approached from a generalist perspective.

x. Interactions between teachers of the program did not seem to be influential in the student's performance in Enade, which was also found to be true for the lack of interdisciplinarityin contents in all three universities.

xi. The centers that offer on-site support have not shown signs of influence on institutional results in Enade, mostly because they were not fully used. However, their relevance is not disregarded in the

Enade context, considering it is one of the CPC [6] criteria for inspection and award, which is proven to have affected the final appraisals for UEMA and UFC.

xii. The adequacy level to the quality guidelines for distance-learning in higher education in the examined university were proportional to the results they obtained in Enade.

This is a study of multiple cases and was such, it was restricted to the descriptions of the organizational structures and DE systems configured for the Business Administration distance-learning program (UAB's pilot project) at UEMA, UEPB, and UFC, according to the operational definitions of the used analysis categories. Therefore, although analogous reproductions are possible in different contexts, the results and conclusions expressed here cannot be generalized or extended to the other universities part of the same pilot program, or any other UAB program, much less to other segments or educational organizations.

REFERENCES

ARETIO, Garcia L. *La educación a distancia*: de lateoría a lapráctica. Barcelona: Ariel Educación, 2001.

BABBIE, Earl. *The pratice of social research*. California: Wadsworth Publishing company, 1998.

BELLONI, Maria Luiza. *Educação a distância*. 5.ed. Campinas: Autores Associados, 2009.

BERTALANFFY, Ludwig Von. *Teoria Geral dos Sistemas*. Petrópolis: Editora Vozes, 1975.

BOWDITCH, James L.; BUONO, Anthony F. *Elementos de comportamento organizacional*. São Paulo: Pioneira, 2011.

BRASIL. Ministério da Educação. Secretaria de Educação a Distância. *Referenciais de qualidade para educação superior a distância*. Brasília: MEC, 2007.

BURNS, T.; STALKER, G.M. *The management of innovation*. London: Tavistock, 1961.

CHANLAT, Jean-François. *O indivíduo na organização*: dimensões esquecidas. São Paulo: Atlas, v.3, 1993.

DAFT, R. *Organizações*: teoria e projetos. 2. ed. São Paulo: Cengage, 2008.

GIL, Antônio Carlos. *Como elaborar projeto de pesquisa*. São Paulo: Atlas, 1991.

HALL, Richard H. *Organizações – Estruturas, Processos e Resultados*. 8ª ed. Rio de Janeiro: Prentice-Hall, 2004.

HATCH, M. J. *Organization Theory*: modern, symbolic and postmodern perspectives. Oxford: Oxford University Press, 2006.

MINTZBERG, Henry. *Criando organizações eficazes*. São Paulo: Atlas, 2003.

MOORE, M; KEARSLEY, G. *Educação a distância*: uma visão integrada. São Paulo: Thompson, 2007.

OLIVEIRA, GLEYVA, M. S. de. *A gestão no sistema de educação a distância*. Cuiabá: NEAD/UFMT, 2006.

[6] TN: CPC – *Conceito Preliminar de Curso*, or Prelimary Course (Program) Appraisal. An índex created by Inep that gives newly established programs appraisal ratings of 1 to 5, based on criteria that includes facilities and scheduled visits by inspectors.

RAPOPORT, A. Aspectos matemáticos da análise geral dos sistemas. In: *Teoria dos sistemas*, BERTALANFFY, L. Von. *et al.*(Org.). Rio de Janeiro: Fundação Getúlio Vargas, 1976.

RICHARDSON, R. J. *Pesquisa Social*: métodos e técnicas. São Paulo: Atlas, 1989.

STONER, J. A. F.; FREEMAN, R. E. *Administração*. Rio de Janeiro: Prentice-Hall, 1999.

TRIVIÑOS, Augusto N. S. *Introdução à pesquisa em ciências sociais*: a pesquisa qualitativa em educação. São Paulo: Atlas, 2006.

VERGARA, Sylvia C. *Projetos e relatórios de pesquisa em administração*. 8ª.ed. São Paulo: Atlas, 2008.

WAGNER III, J. A.; HOLLENBECK, J. R. *Comportamento organizacional*: criando vantagem competitiva. São Paulo: Saraiva.

YIN, Robert K. *Estudo de caso*: planejamento e métodos. 3ª.ed. Porto Alegre: Bookman, 2007.