Organizational Culture and Strategy: the nature of relationships between constructs in Institutions of Higher Education in Brazil

Miler Franco D’ANJOUR
Campus Zona Norte, Instituto Federal de Educação, Ciência e Tecnologia – IFRN
Natal, Rio Grande do Norte, 59015-300 Brazil

and

Patricia Whebber Souza de OLIVEIRA
Departamento de Administração, Universidade Federal do Rio Grande do Norte – UFRN
Natal, Rio Grande do Norte, 59072-70, Brazil

ABSTRACT

The main objective of this study is to analyze the nature of the relationships between organizational cultures and the strategies used at the Institutions of Higher Education in the state of Rio Grande do Norte, Brazil. Noting the importance given to organizational culture in relation to the formulation of strategies this study arose from the need to initiate a discussion on new parameters and guidelines of the strategies in the management of higher education institutions, identifying the organizational culture is related to typologies of generic strategies used by these organizations. The reach this goal it was used an explicative study of qualitative nature applied to 31 Institutions of Higher Education to enable the identification of the relationships between the cultural styles and the strategic typologies used by the researched Institutions. To analyze the data it was used the canonical correlation predictive model and quantitative analysis. The results of the present study indicates the existence of an entrepreneur cultural style and a prospective strategic typology predominating in most of the researched Institutions. Finally this study confirms the relationships between organizational cultural styles and the typologies of the organizational strategies of the researched Institutions.

Keywords: Organizational Culture. Organizational Strategy, culture and strategy. Institutions of Higher Education.

1 INTRODUCTION

In seeking to gain competitiveness and increase efficiency, the present study highlights the current period of expansion experienced by higher education organizations in the country. It is observed, according to data from INEP (2009), that there was a significant increase in the number of Higher Education Institutions (HEIs) in the country between the years 1997 and 2007 totalling a number of 2281 Higher Education Institutions nationwide.

Contextualizing this to the numbers of Higher Education Institutions in the state of Rio Grande do Norte - RN, according to data from INEP (2009), in 2000 this state registered a total of 8 HEIs with the Ministry of Education - MEC. These numbers of HEIs in the state of RN according to data from E-MEC (2010) increased to 45 Higher Education Institutions that develop their activities in the classroom as well as in distance education. This increase in the number of HEIs in the state of RN followed the national trend of expanding higher education in Brazil.

Thus, it is important to affirm the need for HEIs, operating in the state of RN, to seek differentials in managerial efforts of conduct in order to provide educational services that have low costs of operation and are also effective in generating results. Mintzberg and Rose (2003) argue that higher education institutions, "are organizations that continually respond to environmental demands because they have many internal agents capable of independent responses which react to the interests, demands and pressures of the community that surrounds it."

For this reason, it is necessary that the managers of these HEIs get to know their cultural patterns so that they are capable of developing strategies which can integrate the power of the internal needs of the organization with the external demands of their environment (Vizeu, Gonçalves, 2010).

Within this context, this study seeks to answer the following central research question: What is the relationship between organizational culture and strategies of Higher Education Institutions in the State of Rio Grande do Norte?

As an objective this study seeks to: establish the causal relationships between culture and organizational strategies adopted by the HEIs of RN.

With this understanding therefore, the different levels of the culture of the organization express a set of values that have been constructed throughout the company's history which were developed by the process of internal and external adaptation. The culture has deep roots that, in some ways, represent the organization's DNA (Dutra, Fleury and Fleury, 2006).

Porter (1986), emphasizes the importance of adding the knowledge of beliefs and other cultural characteristics to management tools applied as business strategies. He also affirms that to add the knowledge of the culture surrounding the organisations is both fortuitous and desirable for the establishment of organisational conditions appropriate to better administrate the changes arising from strategies, their impacts and resonances.

In this way, Schein, (2009) recognizes the importance of corporate culture on organizational management. This author highlights the influence of cultural elements in the way the company operates, the way people behave, and in the establishment of organizational strategies.

Based on the previously proposed aspects of the discussion related to culture and organizational strategy Mintzberg:
Ahistrand and Lampel (2000) allow for the creation of a relationship based on structural typologies of organizations relating them to the cultural styles proposed by Mendes and Paz (2008) and the typologies of generic strategies of Miles and Snow (2003).

Thus, it is observed that the relationship between culture and strategy is perfected in the organizational form which defines the configuration of structure and of power. Thus, Mintzberg (2003) presents seven forces that are delineated in organizational configurations that include: leadership, efficiency, proficiency, focus, innovation, cooperation and competition. The imbalance between these forces allows for the formation of the six organizational configurations proposed by the author: simple structures, mechanized bureaucracy, professional bureaucracy, a divisional form, ad-hocracy and a hybrid approach called the missionary configuration.

Of the six configurations identified, four types have the capacity to demonstrate the theoretical relationship between cultural styles and strategic types. These were conducted and analysed for results that will be identified by an empirical intervention in this study. Table 01 presents in each type of organizational configuration a cultural style and a strategy typology adequate for that culture.

<table>
<thead>
<tr>
<th>Organizational Configurations: Mintzberg</th>
<th>Ad-hocracy</th>
<th>Machine Bureaucracy</th>
<th>Professional Bureaucracy</th>
<th>Missionary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Styles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mendes and Paz (2008)</td>
<td>Entrepreneural</td>
<td>Bureaucratic</td>
<td>Affiliative</td>
<td>Individualistic</td>
</tr>
<tr>
<td>Generic Strategies: Miles and Snow (2003)</td>
<td>Prospective</td>
<td>Defensive</td>
<td>Analyzer (Prospective or Defensive)</td>
<td>Reactive</td>
</tr>
</tbody>
</table>

Table 1: Organizational Settings: combining cultures and strategies
Source: Danjour (2010)

As observed in Table 1 the organizational settings and their cultural styles and respective typologies of generic strategies are identified. For construction of the table there was a perception by Mintzberg; Ahistrand and Lampel (2000) claiming that "the typology of Miles and Snow is reduced to two basic forms (which seem to correspond to the machine’s organization and ad-hocracy) with the third being a hybrid, and the fourth a collection of inadequate responses.” Based on the prior alignment made by Mintzberg it sought to relate the cultural styles proposed by Mendes and Paz (2009) with the strategic typology of Miles and Snow (2003).

Thus, Ad-hocracy seconded by Mintzberg (2003) has a structure that is highly organisational and rather informal. It has a team of staff specialists divided into small project teams and makes investments in training and has groupings of staff based on market requirements. This structure enables the alignment of the entrepreneurial style of organizational culture with the prospective strategy typology. Mechanized Bureaucracy in turn, is characterised by a large amount of rules and procedures and by organizational communication which is developed in a formal way. The decision-making is predominantly centralized and routine operational tasks have highly specialized staff. This configuration identifies a bureaucratic cultural style and defensive generic strategy typology.

The professional bureaucracy presents itself as a hybrid form, i.e a transitional stage between the mechanized bureaucracy and ad-hocracy or vice versa. Thus this organizational configuration is characterized by an emphasis on staff training processes, horizontal specialization of labor and decentralization of decisions both vertically and horizontally. Therefore, this configuration allows a direct affiliative cultural style. This cultural style is in favor of implementing an analyzer strategic typology and can also present either predominantly or secondarily prospective strategic typologies or defensive strategies.

Finally, the missionary configuration has its own characteristics which are dominated by a system of beliefs and values that unite individuals on the basis of an ideology. This structure is characterized by: the absence of direct supervision, a lack of a standardization of work and a lack of technical structure. It has a minimum of hierarchy, an intermediate line and a virtual absence of formalization. This form identifies itself as a cultural style associated with the individualistic typology configuration and attempts to create emotional bonds with people in the organization and its ideologies. Also tied to this cultural style is the reactive strategy (Mintzberg, 2003).

2. METHODS

As for its objectives, the research is classified as explanatory. According to Collis and Hussey (2005) this kind of research "aims to understand phenomena and to discovering and measuring causal relations between them.” With regards to procedures, this study is classified as being an analytical survey, which according to Collis and Hussey (2005), is a positivist methodology that, from a representative sample of the population, allows inferences and "determines whether there is any relationship between different variables” thereby requiring the researcher to identify the independent and dependent variables of the study. Finally, the study is quantitative in nature with respect to the classification of generic strategies, the organizational culture typology and the establishment of possible relationships between these variables.

The study population was composed of 32 managers from 32 higher education institutions that have their physical headquarters in the state of Rio Grande do Norte. By covering all higher education institutions that have their physical headquarters in the state of Rio Grande do Norte, the present study was classified as a type census and did not use just one sample.

The data in this study was collected through questionnaires, with a total of 74 questions on a Likert Scale. This instrument was divided into 30 questions drawn up based on the model proposed by Mendes and Paz (2009) – called a Scale of styles of organizational functioning – EEFO and validated with accuracy rates of Cronbach's alphas ranging from 0.79 to 0.83 , aimed at identifying cultural typologies. The other 44 questions were developed based on the theoretical model of Miles and Snow (2003), adapted from the instrument developed by Conant and
Monkwa Varadajan (1990) to assess the existing generic strategies in the organizations studied and validated with accuracy rates of Alfa Cronbach exceeding 0.7.

Questionnaires were administered in person to 23 managers of HEIs that have headquarters in the Metropolitan area of Natal and by mail to the other 99 managers whose HEI headquarters are outside the Metropolitan area of Natal.

Analyses performed in this study was to identify the relationship between organizational culture and the types of strategies present in IFRN. With this in mind, we used multivariate canonical correlation analysis. For Hair Jr. (2009) canonical correlation is a "multivariate statistical model that facilitates the study of interrelationships among sets of multiple dependent variables and multiple independent variables." For purposes of this study, the dependent variables considered were types of generic strategies namely: prospective, defensive, reactive and analyzer. The independent variables considered were the styles of organizational culture, namely: entrepreneurial, affiliative, individualistic and bureaucratic.

Finally, the results with the implementation of canonical correlation are confirmed using the correlational statistical technique of Pearson's second order by Collis and Hussey (2005) which made it possible to identify and confirm the extent of the strength of association between each pair of factors of culture and organizational strategy. The last analysis performed in this study tried to correlate cultures and strategies found in HEIs with a theoretical proposal presented in Table 1's theoretical framework, identifying unconformities and conformities in relation to the proposed model.

3. RESULTS AND DISCUSSION

The analysis conducted in the study sought to identify by means of the canonical correlation technique and Pearson's correlation, the relationships that exist between the types of organizational culture proposed by Mendes and Paz (2009) and the proposed strategic typologies by Miles and Snow (2003).

For the choice of canonical functions that will be interpreted, Hair Jr (2009) proposes to examine three fundamental criteria:

1. The level of statistical significance of the function,
2. Magnitude of the canonical correlation and
3. Redundancy measure for the percentage of variance explained from the two data sets

With this in mind, we observe that the canonical analysis allows the researcher to measure the strength of associative relationships between two sets of variables. Thus, we chose the function significant at 1% and identified a p-value of 0.0004 and the other factor observed was the R canonical of 0.8825, indicating a strong positive and significant correlation. When squared, this coefficient represents the amount of variance in a linear composite of the canonical function assigned to another compound of the same function and this is the canonical R². Thus, one can say that 77.88% of the variance in a linear composite of the first function is influenced by a variation in another compound that composes it.

Looking at the influence percentage of 77.88% that the second compound linear (cultures) exerts on the first compound (strategies) presents in the first instance, that it can be confirmed that there is a significant degree of influence of organizational culture in the strategic position of the HEIs studied. In this way, the influences will be identified when analyzing the canonical loads and Pearson correlation.

From the identification of function to be analyzed, canonical loads or canonical structural correlations were identified. According to Hair Jr (2009) the index "measures the simple linear correlation between an observed variable in the original set and the dependent or independent statistical variable canonical ensemble". Therefore, because it is a predictive analysis technique, it will be conducted by observing a scale ranging from -1 to 1, in which the measurements closest to 0 indicate a weak influence on a determined factor, and the measurements closer to -1 or 1 indicate a strong influence determining the relationship of one factor to another. Based on the analysis criteria used by Puente-Palacios (1995) the present study considered a canonical load equal or greater than 0.4 to the interpretations of all correlations.

Therefore it is observed that in the first group the four dependent variables that are strategic typologies proposed by Miles and Snow (2003) can be identified as Y1 respective, Y2 defensive, Y3 analyzer and Y4 reactive. The second group consists of four independent variables that are the cultural styles proposed by Mendes and Paz (2009) that can be identified as X1entrepreneurial, X2 affiliative, X3 individualistic and X4 as bureaucratic.

When analyzing the canonical charges it is observed that the style of entrepreneurial culture (0.8922) strongly and positively influences the forward-looking strategy (0.9573) while still exerting a moderate and positive influence on the analyzer strategy (0.4188).

The affiliative cultural style (0.6871) shows a strong positive influence on prospective strategic typology (0.9573), also exerting a moderate and positive influence on the analyzer strategy (0.4188).

However, the individualistic cultural style (-0.7866) has a strong negative influence on the prospective strategy (0.9573) and a moderate and negative influence on the analyzer strategy typology (0.4188).

The last cultural style, in which was analysed a canonical load, was the bureaucratic style (0.7887) that exerted a strong negative influence on the prospective strategy (0.9573) and a moderate negative influence on the analyzer strategic typology (0.4188).

As a way of reaffirming the results identified in the predictive model of canonical correlation, we analyzed the Pearson correlation between the cultural styles and strategic typologies of the HEIs of RN. Unlike the canonical correlation analysis, Pearson's correlation identifies just the significance of the correlation with the p-value visualization and the identification of the strength of correlation and therefore it is not possible to affirm the existence of multiple influences among the factors, as was done in discussions of the canonical correlation.

Thus, considering a significance level of 1%, there is a strong positive correlation between the entrepreneurial and affiliative cultural styles with the prospective strategy typology and a strong negative correlation between the prospective strategy and
the bureaucratic and individualistic cultural styles. These results reaffirm the identified in the analysis of canonical loads and reaffirm the existence of relationships between culture and organizational strategy.

Other indices of Pearson correlations, significant at 5%, which reaffirm the relationships found in the canonical correlation analysis, were correlations between the bureaucratic cultural style and the analyzers and reactive strategies, showing a moderate and negative correlation between the bureaucratic cultural style and the analyzer strategy, and a moderate and positive correlation between the bureaucratic cultural style and the reactive strategy.

We also identified that the sum of the percentages found for each cultural style and organizational strategy for HEI formed a 84% compliance with the theoretical model proposed in table 1 of the theoretical reference and only 16% did not comply with the theoretical proposal.

Thus, we identified a significant percentage of agreement between the theoretical proposals in figure 2 with the results found in this present study that reaffirm the results of the canonical correlation.

However, it is important to reaffirm the posture that is predominantly innovative, flexible and focused on the learning process, identified in HEIs in the state of RN. One way it identified itself was as a 48.4% prevalence of entrepreneurial culture associated with prospective strategy in HEIs, as well as with affiliative cultural style strategies and prospective analyzer which contributed to this analysis.

In relation to the percentage of non-conformities identified in Figure 3, it can be justified as a possible lack of understanding by the Administration regarding the possibility that the cultural style present in their organization aids in the development of a typology that enables an organization to better match its environment.

Finally, it is important to highlight that the alignment identified between the three analyses performed for this present study contribute to the identification of the relationships between cultural styles of Peace and Mendes (2009) and the competitive strategies of Miles and Snow (2003).

4. CONCLUSION

After the analysis and discussion of results, you can make some conclusive considerations and achieve the overall objective proposed by this study that sought to link the cultural styles of Peace and Mendes (2009) with the generic strategy typologies of Miles and Snow (2003).

By studying the cultural styles present in the HEIs you can identify the predominance of three of the four cultural styles proposed by Mendes and Paz (2009). The cultural styles that stood out were the entrepreneurial and affiliative styles. These results demonstrate a cultural openness of these HEIs and the level of maturity of its employees perceived through their policies that foster growth and innovation in their respective institutions.

Regarding strategic typologies studied that were adopted by HEIs, we observed the occurrence of the four strategies proposed by Miles and Snow (2003). Among these strategies the predominance of the prospective and defensive strategies was clear. This result demonstrates the predominance of two groups of HEIs each with different characteristics. On one side you have organizations that are positioned in an innovative way to focus on the learning process and a second large group of HEIs that are more conservative, with centralized decision-making and focus on the efficiency of internal processes.

Finally, the results of the predictive analysis of canonical correlation indicated a strong relationship between cultural styles and strategic typologies. These results confirmed the correlation that shows, beyond the influence of culture in relation to strategies, the influence of the strategy on culture, demonstrating causality between the two dimensions that can identify the statistical model. Other statistical analysis in the study to demonstrate the relationship between culture and strategy were the Pearson correlation and comparison between the theoretical proposal presented in this study with the findings in the survey that indicated 84% compliance.

REFERENCES

[15] K. E. Puente-Palacios Influências das características
pessoais e ambientais na avaliação do clima social do trabalho. 

