IMPLEMENTING THE BALANCED SCORECARD IN PUBLIC ORGANIZATIONS: AN ANALYSIS BASED ON CASE STUDIES

Luiz Renato de Souza Justiniano¹, Daniele Fernandes Rodrigues², Jaqueline Maria de Almeida¹ ¹Programa de Pós-Graduação em Cognição e Linguagem – PPGCL, Universidade Estadual do Norte Fluminense, Cidade Campos dos Goytacazes, Rio de Janeiro, Brasil. <u>professor.justiniano@gmail.com, jaquelinemalmeida@gmail.com</u> ²Departamento de Administração, Universidade Federal Fluminense, Cidade de Macaé, Rio de Janeiro, Brazil. <u>danielefernandes@id.uff.br</u>

Corresponding author: <u>dani.uenf@gmail.com</u>

ABSTRACT

In times of financial imbalance in the State and amid the Fiscal Recovery Regime, it is even more urgent to study and develop public management models that allow public institutions to acquire financial management autonomy so that it is possible to promote the efficient use of public resources. This article aims to analyze the implementation of the Balanced Scorecard in public organizations based on case studies that reveal the main contributions of this methodology. The differential of this approach is based on the great challenge of thinking about management within public organizations due to the need to improve organizational performance through the optimization of available resources and the execution of their activities with efficiency, efficacy, and effectiveness. In this sense, the aim is to present a vision of implementing the Balanced Scorecard in public organizations based on a study of Public Management models established on financial efficiency and effectiveness in increasing social well-being (effectiveness).

KEYWORDS: Balanced Scorecard in public organizations; efficiency, efficacy, and effectiveness; organizational management.

I. INTRODUCTION

The tendencies to change in the political, economic, and social spheres have manifested ever more intensely and at breakneck speed. New ways of interacting with the environment, new technologies, new societal demands, and, consequently, new public policies characterize an extremely volatile scenario. All of this involves changing cultural patterns, redefining power relations, and making public administration pursue performance improvements, and this requires significant changes, especially in the measurement and management systems used by organizations.

The management of an organization, whether public or private, is currently a significant challenge due to the need to improve organizational performance by optimizing available resources and carrying out activities with efficiency, efficacy, and effectiveness.

According to Matias-Pereira (2010), efficiency is related to the method with which we carry out the intended actions; efficacy refers to the result of the action to know whether the intended objective was achieved, while effectiveness corresponds to the degree of quality of the outcome obtained.

When there has been a previous effective change in the social conditions of a population, it is possible to evaluate the effectiveness of a given program (ARRETCHE, 2009). Efficacy evaluation is concerned

with the actual results achieved, and efficiency is the evaluation of the relationship between the effort put into implementation and the results conducted.

Lack of foresight leads to poor distribution of financial resources. Often, a particular area that needs resources to improve a service or innovate ends up being compromised because another sector has accumulated monetary reserves in the wrong way, demonstrating that even if the resource is made available to the place that is believed to be the most appropriate, there may be difficulties in applying it to specific procedures within the organization (CHIAVENATO, 2009). Financial resources are fundamental in feeding an effective system for achieving social well-being.

Therefore, the availability of financial resources, aligned with an effective model for applying these resources, is essential in any institutional sphere and can be transformed into a powerful public administration tool when used efficiently. It is therefore necessary to apply public financial resources, which are often scarce, to generate good results, promoting efficiency, efficacy, and effectiveness in public administration.

In public organizations, planning should be focused on improving performance, which should be observed in a set of aspects, such as quality in the services provided, accuracy and transparency of information, coherence of actions, meeting social demands, etc. (FERNANDES *et al.*, 2016), without forgetting the socio-economic-environmental issues, so important in the current context.

In this context, the organization or its managers need to know how to use the information available, constantly improving organizational performance by optimizing the resources available and carrying out the activities they set out to do in the best possible way.

There is a pressing need to align the state management model with the dynamic characteristics of the new contexts, which requires greater flexibility, an emphasis on results, a focus on the client-citizen, and *accountability* (MARTINS, 2002). According to Matias-Pereira (2010), *responsibility* can be considered the set of mechanisms and procedures that lead government decision-makers to render accounts of the results of their actions, ensuring greater transparency in the exposure of public policies. As it is a management methodology that allows the direction to be taken by the organization to be established, with a view to more significant interaction with the environment, strategic planning makes it possible to visualize the direction to be given to the decision-making process to allocate resources effectively. This process defines the organization's mission, vision for the future, objectives, and even intervention projects in the face of possible threats that may arise.

To this end, it is essential to have a measurement tool that allows managers to use indicators on various aspects of the environment and organizational performance, which will enable them to set goals and draw up an action plan that will lead the organization to achieve its primary objective with greater chances of success.

II. THEORETICAL BACKGROUND

According to Martins (2002, p. 2), "public resources should be seen as a means of promoting well-being and sustainable human development, and not just as a necessary ingredient in the operation of the government machine." To this end, strategic planning is essential, as it provides "a vision of the future that allows the organization to maximize its strengths and minimize its weaknesses, as well as making it possible to take advantage of opportunities and prevent threats that may arise" (FERNANDES *et al.*, 2016, p. 220).

From this perspective, it is essential to emphasize that "any reform effort should aim to improve the quality of public service provision, from the point of view of those who use it, and to enable the social learning of citizenship" (MATIAS-PEREIRA, 2010, p. 2). A practical example of this theoretical proposal is implementing a basic sanitation program. It is necessary to understand the difference between the actions carried out because it is one thing to supply the population with water and sewage

systems, providing products such as water taps and waste disposal systems (efficiency evaluation); another thing is the quality of this service (efficacy evaluation) and finally the analysis of the impact on the population's health conditions (effectiveness evaluation) (ARRETCHE, 2009).

Just as in any other social environment, goals are the beacon of a public administration, and achieving these goals makes it possible to solve problems and, consequently, reach the final objectives. When there are no goals, there is no possibility of management. An excellent example of this is the education sector in Brazil, which, after the indicators of the Basic Education Development Index - IDEB, the National High School Exam - ENEM, and the International Student Assessment Program - PISA (an international indicator) have shown improvements (albeit still small), due to the possibility of measurement and comparison, which allows the Ministry of Education - MEC, to set targets for these indicators (CAMPOS, 2014). This reinforces the thesis of the authors Kaplan and Norton that what cannot be measured is challenging to achieve.

Professors Robert S. Kaplan (Harvard Business School) and David P. Norton (president of Balanced Scorecard Collaborative, Inc.) are the creators of the organizational performance measurement methodology called Balanced Scorecard - BSC, a performance measurement system that emphasizes the pursuit of financial objectives but also includes the performance vectors of these objectives (KAPLAN; NORTON, 2000).

But how can indicators and targets be established to achieve an efficient and effective management system for public organizations? For Arretche (2009), evaluating efficiency is the most necessary and urgent action, given the scarcity of public resources, which requires increasing rationalization of spending, i.e., increasing available resources without increasing spending.

In an analysis carried out by Matias-Pereira (2003), the author points out that two positions are essential to fulfill the function of planning for the execution of organizational policies, which must be considered: 1) an activity oriented towards obtaining a rational result, since it is subject to a situation of scarcity of resources, which induces the rationalization of their use; 2) thinking of planning as a decision-making process, since planning involves the practice of deciding in advance.

Chiavenato (2009), on the other hand, states that planning should maximize results and reduce the institution's shortcomings. To do this, managers need to have the technical competence and responsibility to understand the main problems and needs of the area where they operate.

In 1992, Kaplan and Norton from Harvard Business School created the Balanced Scorecard - BSC to meet this demand. This methodology combines a balanced range of indicators, allowing managers to view the organization from several perspectives simultaneously. This makes it possible to translate the organizational mission and strategy into a set of performance measures that serve as the basis for a strategic measurement and management system (KAPLAN; NORTON, 1997). Therefore, the BSC was developed from a study funded by the Nolan Norton Institute, as its creators believed that accounting and financial performance indicator systems were becoming obsolete. In this context, the BSC emerged as a strategic tool for balancing different perspectives of professional performance evaluation (VITÓRIA, 2017).

The BSC has become an essential strategic management tool for many companies. The characterization of the objectives is based on four perspectives: financial, customers, internal market, and growth and learning. The strategic initiatives, targets, and indicators also follow the same orientation. The cause-effect relationships between these perspectives allow for more effective management.

Ten years after the BSC was introduced to the academic and management community, it has been studied and used by more than 60% of the organizations on the Fortune 1000 list (REZENDE, 2003) and was chosen by the renowned Harvard Business Review as one of the most critical and revolutionary management practices of the last 75 years (KALLÁS, 2005). The First Thematic Committee of the National Quality Award - PNQ chose the BSC as one of the management tools for business excellence,

as it contributes directly and indirectly to achieving approximately 580 points in the PNQ excellence criteria (KALLAS, 2005). According to contact with the FNQ Portal - National Quality Foundation, on 30/07/2019, the National Quality Award (PNQ) changed its name in 2017, having been reformulated to Best in Management.

For Kaplan and Norton (1997), several improvement programs have been created over the decades to prepare organizations for success and good organizational performance. However, the goals of many of these programs were not incremental improvement but discontinuous performance, almost always isolated initiatives dissociated from the corporate strategy, which ended up not generating specific financial and economic results.

Some public organizations that use the BSC consider that this tool makes it possible to improve strategic planning since it makes it possible to establish a link between the mission and strategy statement and the performance measures of the organization's operations (FERNANDES *et al.*, 2016).

The BSC minimizes the effect of incoherence between strategy formulation and implementation, breaking down the main barriers created by traditional management systems, from the necessary definitions of where the organization wants to go (Mission, Values, Vision, and Strategy) to the operational plans that will make it possible to achieve the strategy, as Kaplan and Norton (1997) point out:

 \checkmark Non-executable strategy - Creating and communicating the strategy and directions for action;

✓ Strategy not linked to goals - Setting goals and directions for departments, teams, and people;

 \checkmark Strategy not linked to resource allocation - Alignment of resource allocation with strategy implementation programs and plans.

 \checkmark Operational feedback only - Provide tactical and strategic feedback, ensuring that the contribution to the strategy is visualized at all levels of the organization.

The BSC was a methodology explicitly created for the corporate world. However, the method proved so productive that Ghelman and Costa (2006a) adapted the BSC methodology for measuring and evaluating organizational performance for the public sector, using the concepts of effectiveness, efficacy, and efficiency. The authors adapted the evaluative methodological proposal to preserve the public sector's specificities, using the tool's benefits to create modern, results-focused, citizen-oriented general management. The BSC adapted for the public sphere encompasses effective, efficacious, and efficient actions. Nevertheless, it is worth emphasizing that to provide services with excellence; the institution needs to perform its social function (effectiveness), with quality in service provision (efficacy), and with the lowest possible consumption of resources (efficiency) (GHELMAN; COSTA, 2006b), as shown in Figure 1:

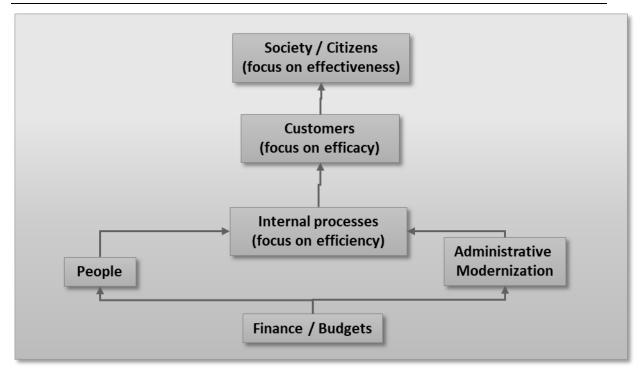


Figure 1: BSC adapted to the public service. (Source: GHELMAN; COSTA, 2006b).

Figure 2 shows the adaptation proposed by Ghelman and Costa (2006b). In this proposal, the BSC is now made up of six perspectives: 1) finance/budget, 2) people, 3) administrative modernization, 4) internal processes, 5) customers, and 6) society/citizen:

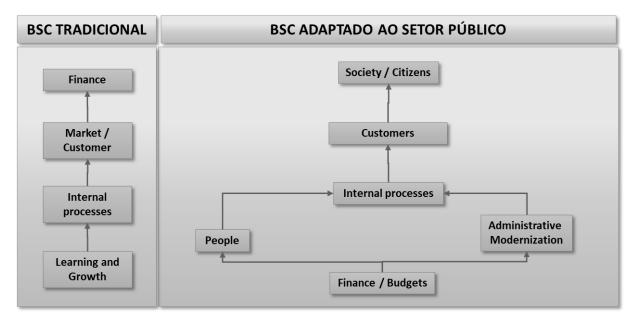


Figure 2: Comparison between the traditional BSC and the one adapted to the public sector (Source: GHELMAN; COSTA, 2006b).

The first adaptation was made to the financial perspective since, in public organizations, this perspective is no longer the end goal but a means of obtaining the resources needed to fulfill their social function through budgets. In this way, the financial perspective was removed from the top and placed at the bottom to sustain a more solid public organization capable of fulfilling its mission since it is the foundation that supports the other perspectives.

The learning and knowledge perspective includes employees (people) and all the administrative modernization (information technology, improved management practices) that are essential for achieving the organizations' results (KAPLAN; NORTON, 2004). The subject of people management in public administration is of great importance and complexity, given that the development of people is the anchor of this process (GHELMAN; COSTA, 2006a).

Internal processes in the public sector are the organization's critical processes that need to be identified by managers, plus a vital element, which is the innovation process (KAPLAN; NORTON, 2004). Improving existing processes and identifying new ones are linked to increased efficiency, one of the central issues for improving public management and the only possible path to a real management shock (ARRETCHE, 2009).

In public administration, the client perspective is entirely different from that of the private sector, as there are two types: the direct client who consumes the service, which we'll call the public service user here, and an indirect client who is the beneficiary of this service (society/citizen). For example, in providing a public higher education service, the direct customer is the student as the user of the public service. This service will benefit society by increasing economic growth and competitiveness in the country and reducing crime (GHELMAN; COSTA, 2006a).

In Figure 3, Cuzzuol (2020) highlights the main differences between the BSC proposed by Kaplan and Norton and the BSC adapted for public entities by Ghelman and Costa (2006a):

BSC Perspective	Public sector	Private sector
Financial	Raising funds Expanding fundraising	Increased economic value added Increased operating revenue
Learning and Growth	Investing in people and providing suitable working conditions	Investing in people and providing suitable working conditions
Internal processes	Development of innovative, efficient and effective processes	Development of innovative, efficient and effective processes
Costumers	Guarantee of direct customer satisfaction	Ensuring satisfaction, retention and winning new customers

Figure 3: Differences between the traditional BSC and the one adapted to the public sector. (Source: CUZZUOL, 2020).

In any institution, whether public or private, measuring the quality of service provision is indispensable. The same applies to feedback on citizen/society satisfaction with the requirement of public services. In the case of a BSC focused on the State's assistance, it is essential to carry out performance measures on citizen/society satisfaction. In addition, this model must verify whether the public action provides quality service to the client who uses this service (efficacy) and whether there is an optimization of the shared resources spent on fulfilling this action (efficiency).

III. ANALYSIS AND DISCUSSION: BSC IMPLEMENTATION SUCCESS STORIES

The *Balanced Scorecard* - BSC is an organizational performance measurement methodology that has been successfully applied in hundreds of private and public sector organizations, as well as non-governmental organizations around the world (KAPLAN; NORTON, 2004; GHELMAN; COSTA, 2006a; 2006b). Several case studies reveal successful experiences, providing riches for implementing

the BSC in public organizations nationally and internationally (KAPLAN; NORTON, 2004; GHELMAN; COSTA, 2006a; 2006b).

The Department of Administration and Economics at the Federal University of Lavras is an example of how the *Balanced Scorecard* helped formulate the strategic planning of the University's Department of Administration and Economics (DAE), providing a systemic view of the organization and visualizing the strategy through cause-effect relationships between the proposed objectives. The implementation of the BSC in the department took place in 4 stages (FERNANDES *et al.*, 2016), as follows: 1) Establishment of the organizational profile, mission, vision, and values; 2) Formulation of a strategic plan using the SWOT management tool (Strengths, Weaknesses, Opportunities, and Threats, also known as SWOT Analysis or SWOT Matrix) to carry out scenario analysis and environment verification; 3) Formulation of objectives for the BSC perspectives; 4) Structuring of the organization's strategic map.

Although the planning culture was not incorporated into the DAE, the *Balanced Scorecard* methodology provided a systemic vision of the institution, which made it possible to "structure objectives that can be linked to the development of strategic planning" (FERNANDES *et al.*, 2016 p. 242).

Another successful case of applying the *BSC* in public management was that of the São Paulo State Treasury Department (SEFAZ-SP), a pioneering process for implementing the BSC in SEFAZ-SP's Tax Action Coordination (CAT), which is responsible for inspecting and collecting state taxes, judging administrative tax cases and managing systems related to tax management.

SEFAZ's objective is to serve the interests of the State and society, summarized in its mission through the attributes of values, which must be perceived by society as 1) Respect for citizens, 2) Ethics, 3) Commitment to results, 4) Transparency in actions; 5) Strategic vision; 6) Valuing civil servants; 7) Innovation and creativity; 8) Fiscal responsibility; 9) Socio-environmental responsibility; 10) Partnership with the private sector. These values permeate all of SEFAZ's efforts to implement its strategy to achieve its future vision and, consequently, its mission (NOBESCHI *et al.*, 2012).

According to Nobeschi *et al.* (2012), the use of the BSC began in only one of SEFAZ's seven coordinating departments. However, due to the good results reported, it became a matter of interest for the entire secretariat. At SEFAZ, it was concluded that despite the difficulties encountered in implementation (a problem also experienced in the private sector), Kaplan and Norton's (2000) concepts adhere well to the reality of public management.

At the Federal University of Ceará (UFC), it was decided to develop the BSC due to the heterogeneity and low degree of interdependence of the various units of the institution (MONTEIRO PESSOA, 2000). The accounting department was chosen to develop the pilot project because its teaching qualifications were below the desired level. The first step was to identify the causes that compromised the department's qualitative progress and then define the strategies that would eliminate these causes. The original BSC perspectives established the cause-effect relationships between the various strategic objectives. The indicators, values, and strategic actions that would enable the University's mission to be fulfilled were then defined. Thus, the development of the BSC in the UFC's Accounting department took place by first identifying the causes that compromised the department's qualitative progress and then defining the strategies that would allow these causes to be eliminated.

According to Monteiro Pessoa (2000), the use of the BSC at the UFC has brought numerous advantages, among which it is worth highlighting: 1) a preventive approach to problems and failures; 2) a more integrated vision, which prevents improvements in one area from being achieved at the expense of others; 3) the implementation of adequate strategic planning, which enables the mission to be fulfilled.

Internationally, we have the case of the implementation of the *Balanced Scorecard* at the *Escola Superior de Tecnologia e de Gestão de Bragança - ESTIG* (public institution), part of the *Instituto*

Politécnico de Bragança (IPB) in Portugal. In 2004/2005, the institution offered nine courses, seven in technology and two in management and administration, with 2072 students enrolled. The BSC was implemented at ESTiG in an attempt to create a mechanism for clarifying, communicating, and evaluating its strategy, with the starting point being the preparation of an empirical study that would allow the strategic culture of ESTiG to be studied to define the leading indicators (RIBEIRO, 2005).

According to Ribeiro (2005, p. 259), several conclusions have been drawn from implementing the BSC. It is essential to highlight a few:

- High number of teachers and staff who are unaware of the strategic culture;
- Staff and students are unaware of the mission and vision;
- Differences in the importance given to scientific indicators by the academic community.

Because of the above, the development of this methodology for ESTiG made it possible, with everyone's involvement, to create a tool to change the organizational culture, as it introduced fundamental concepts such as: 1) the student (client) is the main element of the entire management process; 2) efficient management must be based on financial and budgetary responsibility; 3) recognizing the relevance of the social aspect. After implementing the BSC, it is essential to study the impact of ESTiG's activities on society in general (employers, professional associations, families, etc.), and improving internal processes and qualifying human resources will be indispensable for fulfilling the mission (RIBEIRO, 2005).

Another international case is the Fulton County School System (FCSS), which brings together 77 public schools in Atlanta, an example of excellence in planning and management. FCSS implemented the BSC based on performance in six categories: 1) leadership; 2) strategic planning; 3) focus on students, *stakeholders*, and the market; 4) information and analysis; 5) focus on faculty and staff; 6) process management and organizational performance. The institution then launched the Excellence Model quality initiative, obtaining the following results, reactions, and short-term impacts from the implementation of the BSC:

✓ 22% improvement in math test pass rates in one year;

 \checkmark one of the school principals developed a tool to monitor students' progress throughout the year instead of waiting for the end-of-year results;

 \checkmark another principal said: "I want 90% of my students to pass all the tests. That's what I included in my plan";

 \checkmark an administrative department superintendent noted: "The plan forced us to ask difficult questions about some budget items."

 \checkmark Students exceeding performance expectations in reading and math grew by 5%;

✓ 76% of the students who took the Advanced Placement exam obtained a score of 3 or more (an increase of 39%);

 \checkmark Only 7% of parents expressed concern about safety issues compared to the national average of 31%.

As we have seen, the implementation of the BSC in the public sector has contributed to a practical fulfillment of its social function (society/citizen - indirect client), efficiency in the services provided to the public service user (direct client), and more efficient management of

available public resources, through the establishment of indicators and targets (MONTEIRO PESSOA, 2000).

In this way, the use of the BSC is justified because it is a management tool that brings together various, apparently disparate, elements of an action plan that allows for meeting the objectives of society/citizens effectively, offering quality to the public service user and using public resources efficiently and effectively. Thus, the BSC reduces information overload by using several essential measures, forcing managers to focus on factors fundamental to achieving the organization's mission.

So, what started as a performance evaluation system has now become a powerful tool in an organization's management systems, as it allows the strategy to be managed, clarified, and communicated while also enabling the organization to define the path it wants to follow and ensure that it doesn't deviate from it.

IV. CONCLUSION

Seeking to contribute to efficient public management, it is believed that using Public Management Models based on financial efficiency and efficacy in increasing social welfare can improve the quality of public service provision.

In this sense, it is essential to highlight the extent to which a methodology that was initially defined as a performance measurement system has been transformed into a Strategic Management System, enabling public organizations to transform their *mission, values, vision,* and *strategies* into *tangible objectives* and *measures*, something that was previously considered impossible in the public sphere.

The application of the methodology in national and international institutions corroborates that a more strategic posture in the management of public organizations favors the development of tools that optimize the improvement of the performance of all employees in the quality of service to social demands, accuracy, and transparency of information, and coherence of actions.

The results shown in the examples analyzed with the application of the BSC in public organizations reveal that it is possible to establish effective general management modeling at levels of excellence. When applied to public institutions, the BSC makes it possible to set goals to develop strategic planning that optimizes the fulfillment of the organization's mission.

The cases presented also revealed that implementing the BCS can achieve a preventive approach to problems and failures and a more integrated vision, preventing improvements in one area from being performed at the expense of others.

The use of the BSC as a tool to create modern, results-oriented, citizen-oriented public management has introduced fundamental concepts into the strategic planning of public institutions, such as the student (client) being the central element of the entire management process; efficient management is based on financial and budgetary responsibility; and the quality of public service provision must be focused on social well-being. This culture change has an impact, directly or indirectly, on society in general (employers, professional associations, families, etc.) and on improving internal processes and the qualification of human resources to fulfill the institutional mission.

In this way, the use of the BSC is justified because it is a management tool that brings together various elements, apparently disparate, of an action plan that allows for meeting the objectives

of society/citizens effectively, offering quality to the user of the public service and using public resources efficiently and effectively.

REFERENCES

[1] MATIAS-PEREIRA, J. (2010). Public Administration Course - Focus on Government Institutions and Actions. 3rd edition. São Paulo. Ed. Atlas.

[2] ARRETCHE, M. T. S. (2009). Trends in the study of evaluation. In: RICO, Elizabeth M. (Org.). Avaliação de políticas sociais: uma questão em debate. São Paulo: Cortez.

[3] CHIAVENATO, I. (2009). Planejamento Estratégico. 2ª. edição. Rio de Janeiro: Elsevier.

[4] FERNANDES, A. G. FURTADO, R. P. M. PERREIRA, P. A. (2016) Application of the Balanced Scorecard to help formulate Strategic Planning in the Public Sector: The DAE/UFLA case. R. E&G Economia e Gestão, Belo Horizonte, v. 16, n. 42, Jan/Mar.

[5] MARTINS, H. F. (2002). Gestão de recursos públicos: orientação para resultados e *accountability*. Seminar "Rethinking the State in Cape Verde". Republic of Cape Verde.

[6] CAMPOS, V. F. (2014) Total quality - standardization of companies. Belo Horizonte: Editora Falconi, 2nd ed.

[7] KAPLAN, R. S.; NORTON, D. P. (1992) The Balanced Scorecard: Measures that Drive Performance. Harvard Business Review 70, no. 1 (January-February): p. 71-79.

[8] KAPLAN, R. S.; NORTON, D. P. (1997). Balanced Scorecard: strategy in action. 7th ed. Rio de Janeiro: Campus, 1997.

[9] VITÓRIA, F. S. (2017). Undergraduate Project Balanced Scorecard: a literature review (2000 - 2017). Department of Production Engineering, Faculty of Technology, University of Brasília. Brasília.

[10] REZENDE, J. F. de C. (2003). Balanced Scorecard and the Management Of Intellectual Capital. Editora Campus, 2003. 304 p. ISBN 8535213201

[11] KALLÁS, D. (2005). What is the Balanced Scorecard? Symnetics: from strategy to action. *Copyright*, *Symnetics*.

[12] GHELMAN, S.; COSTA, S. R. R. (2006a). Adapting the BSC for the public sector using the concepts of effectiveness, efficacy, and efficiency. Anais... III Symposium on Excellence in Management and Technology. Resende-RJ.

[13] GHELMAN, S.; COSTA, S. R. R. (2006a). Adoption of the Balanced Scorecard in Public Organizations. Anais... III Symposium on Excellence in Management and Technology. Resende-RJ.

[14] KAPLAN, R. S.; NORTON, D. P. (2004). Strategy Maps: converting intangible assets into tangible results. 8th ed. Rio de Janeiro: Campus.

[15] CUZZUOL, F. L. (2020). Balanced Scorecard applied to Brazilian public construction projects: an analysis of critical success factors. Graduate Program in Civil Engineering at the Federal Technological University of Paraná. Paraná.

[16] NOBESCHI, L. SIQUEIRA, A. I. LUGOBONI, L. F. (2012). Aplicação do Balanced Scorecard *na* Gestão Pública - O caso da Secretaria da Fazenda do Estado de São Paulo. Revista de Ciências Gerenciais, v.16, n. 24, p. 221-234.

[17] KAPLAN, R. S.; NORTON, D. P. (2000). Strategy-oriented organization: how companies that adopt the Balanced Scorecard thrive in the business environment. 10th ed. Rio de Janeiro: Campus, 2000.

[18] MONTEIRO PESSOA, M. N. (2000). Management of Brazilian Federal Universities - A model based on the *Balanced Scorecard*. PhD Thesis in Production Engineering, Federal University of Santa Catarina, Florianópolis.

[19] RIBEIRO, N. A. B. (2005). The Balanced Scorecard and its application to public higher education institutions. Master's dissertation in Accounting and Auditing. University of Minho - School of Economics and Management. Braga.

AUTHORS' BIOGRAPHIES

Daniele Fernandes Rodrigues

(55-022)99834-4090

Daniele Fernandes Rodrigues is a Professor of Finance in the Business Administration Course at the Universidade Federal Fluminense - UFF in Macaé/RJ, with a Post-doctorate and PhD in Cognition and Language from the Universidade Estadual do Norte Fluminense - PPGCL/UENF. Master's degree in Business Economics from the Candido Mendes University - UCAM/RJ and a degree in Business Administration. E-mail: danielefernandes@id.uff.br

Luiz Renato de Souza Justiniano

(55+022) 998245515

PhD student in Cognition and Language and Master in Production Engineering at the State University of Northern Rio de Janeiro - UENF. Specialization in Accounting from Fundação Getúlio Vargas - FVG and a degree in Accounting from Universidade Candido Mendes - UCAM. Professor of the Technical Administration Course at the Faetec Network of the Rio de Janeiro State Department of Science and Technology. Accountant at Petróleo Brasileiro S.A. - PETROBRAS. E-mail: professor.justiniano@gmail.com

Jaqueline Maria de Almeida

(55+031) 984911878

Professor on the Pedagogy course at CEDERJ-UENF, with a PhD and Masters in Cognition and Language from the State University of Northern Fluminense - PPGCL/UENF. Degree in Languages from the State University of Viçosa - UFV. Experience in consultancy and corporate training.