Evaluation of the Alignment of Branches in a Private Education Network: A Process Modeling (BPMN) and Key Performance Indicators (KPIs)-Based Approach

Waldir Siqueira Moura, Federal University of Rio de Janeiro, Brazil
Edgar Delbem, Federal University of Rio de Janeiro, Brazil
Juliana Baptista dos Santos França, Federal University of Rio de Janeiro, Brazil
Angélica Fonseca da Silva Dias, Federal University of Rio de Janeiro, Brazil

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Abstract

This article presents a study on the alignment of branches in a private education network with the foundational project. Using a BPMN and KPI-based approach, data were collected on student retention, graduation rates, average grades, and parent satisfaction. The results revealed a positive correlation between higher KPI scores and stronger alignment with the foundational project. The findings emphasize the importance of KPIs in monitoring and improving branch alignment. Strategies such as sharing best practices and providing ongoing training can enhance alignment across all units. This study contributes to understanding branch alignment in a private education network and underscores the value of KPIs and the BPMN approach.

Keywords: organizational alignment, private education network, key performance indicators (KPIs), business process modeling (BPMN)

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Introduction

The efficient management of branches within a private education network is a fundamental component to ensure a high standard of education and maintain competitiveness in an increasingly globalized and competitive educational environment. However, this is a complex task that requires efficient tools and management methods. In this context, the Business Process Model and Notation (BPMN) and Key Performance Indicators (KPIs) emerge as effective strategies to evaluate and improve the alignment between branches, contributing to the overall effectiveness of the education network.

BPMN is a standardized graphical notation that allows the modeling and visualization of business processes. It is a powerful tool to understand, communicate, and improve processes within an organization, as demonstrated by Evangelista et al. (2024). In the context of an education network, BPMN can be used to map educational and administrative processes, identify bottlenecks and inefficiencies, and suggest improvements.

KPIs, on the other hand, are quantifiable measures that help assess an organization's performance in relation to its strategic objectives. In the educational sector, KPIs can address a variety of aspects, including teaching quality, student satisfaction, operational efficiency, among others (Parmenter, 2015). Combined with BPMN, KPIs offer a comprehensive approach to evaluating and improving the alignment between branches of a private education network.

The importance of this research lies in exploring how BPMN and KPIs can be combined to assess the alignment of branches in a private education network. Although both are widely used across various sectors, their application in the educational sector is still underexplored. Therefore, this research fills an important gap in the existing knowledge and provides valuable insights for education institution managers and researchers interested in this field.

Importance of Research

Ensuring consistency and quality in education across branches of a private education network is a critical issue that directly impacts the organization's reputation and overall effectiveness. This alignment involves not only the curriculum and teaching methodology but also administration, organizational culture, teacher training, and student satisfaction. However, it is a complex and challenging task due to the diversity of variables involved and the lack of effective management and evaluation processes (Davenport, 1993).

The adoption of efficient process and performance management tools, such as BPMN and KPIs, emerges as a promising solution to this issue. BPMN is a standardized graphical notation for describing business processes. It allows for the modeling and visualization of business processes in an intuitive way, facilitating the understanding, communication, and analysis of complex processes (Moura et al., 2022). In the context of an education network, BPMN can be used to map teaching and administrative processes, identify inefficiencies, and suggest improvements.

On the other hand, KPIs are quantitative indicators used to evaluate an organization's performance concerning its strategic objectives (Parmenter, 2015). They provide an objective and measurable way to monitor progress and identify areas needing improvement. In the

educational sector, KPIs can be adapted to measure various aspects, such as teaching quality, student satisfaction, operational efficiency, and the effectiveness of educational processes.

The combined use of BPMN and KPIs, therefore, offers a comprehensive and effective strategy for evaluating and improving alignment among branches of a private education network. This research aims to explore this approach in-depth, providing a practical guide for its implementation and contributing to the existing knowledge in the field.

Academic Relevance

In the current academic landscape, the application of business process management techniques and performance indicators in the educational sector represents a developing field of study. This study, therefore, fills a significant gap in the existing literature by exploring the application and effectiveness of BPMN and KPIs in the specific context of private education networks (Davenport, 1993; Parmenter, 2015).

The existing literature has largely focused on the application of BPMN and KPIs in sectors such as manufacturing, logistics, and healthcare (Parmenter, 2015; Silver, 2011). However, the dynamics and specific challenges of the educational sector—such as teaching quality, student satisfaction, and operational efficiency—require an adapted approach. This study offers exactly that, by proposing a new model to evaluate and improve the alignment between branches of an education network using BPMN and KPIs.

Furthermore, the study has the potential to influence academic practice and future research. By establishing a connection between business process management techniques, performance indicators, and the management of education networks, it paves the way for new lines of investigation and academic discussions (Moura et al., 2025a). The findings of this study can serve as a starting point for future research, which could explore, for example, how to adapt and implement the proposed model in different educational contexts or how to enhance it with the use of emerging technologies.

Model to Evaluate and Improve the Alignment of School Branches

The proposed model in this study seeks to combine the application of BPMN and KPIs in the educational context to evaluate and improve the alignment of branches within a private education network. The proposal consists of the following steps:

I. Process Mapping: We use BPMN notation to map the main educational and administrative processes of each branch. This includes processes such as curriculum planning, teacher training, student assessment, staff recruitment, inter-unit communication, and financial management.
II. Identification of KPIs: Relevant KPIs adapted to the educational sector are selected to assess the performance of each branch in relation to strategic objectives. Examples of KPIs include student approval rates, parent satisfaction, classroom occupancy rates, average response time to student requests, and resource allocation efficiency.
III. Data Collection and Analysis: Data related to the selected KPIs for each branch is collected. A comparative analysis among the branches is conducted to identify patterns, strengths, weaknesses, and areas with the greatest need for improvement.
IV. Identification of Bottlenecks and Opportunities: BPMN process mapping and KPI analysis are used to identify bottlenecks and opportunities for improvement in the educational and administrative processes of the branches. Improvement areas are

prioritized based on their potential impact on branch alignment and the quality of education.

V. Implementation of Improvements: Improvement strategies are developed and implemented based on the identified opportunities. These may include adjustments to processes, organizational structure, inter-branch communication, or staff training and development.

VI. Continuous Monitoring and Adjustments: The progress and impact of the implemented improvements are monitored using the selected KPIs. Adjustments are made as necessary, aiming to maintain a continuous process of evaluation and improvement of branch alignment.

The application of this model in the context of private education networks can significantly contribute to improving branch alignment, increasing operational efficiency, and enhancing the quality of education offered. Additionally, the model is flexible and can be adapted to the specific needs of each network, allowing for its application in different educational contexts.

Related Works

Although the existing literature on BPMN and KPIs does not specifically focus on the educational sector, there is a body of work that provides applicable insights. (Dumas et al., 2013) highlight the utility and versatility of BPMN in modeling and improving business processes across a variety of sectors, indicating its potential application in the educational context. Similarly, the discussion by (Cardoso et al., 2009) on the importance of aligning KPIs with business strategic objectives serves as a crucial reminder for educational institutions in their pursuit of performance improvement.

The integration of BPMN and KPIs in business process management was explored by Sinur et al. (2013). This integration can be particularly useful in the educational sector, where process efficiency is vital to ensure the delivery of quality teaching and learning.

Turetken et al. (2019) provided valuable insights into the adoption of BPMN in medium-sized companies, emphasizing the capability of these tools to foster more efficient and adaptive organizations — ideas that are equally relevant to the educational sector.

Complementing this perspective, addressed the role of automation and data analysis in BPMN implementation, suggesting a potential increase in the effectiveness of business process modeling with technological support.

When viewed together, these works suggest a convergence of ideas on the importance and value of BPMN and KPIs in optimizing business processes, with significant implications for the educational sector. However, there remains considerable room for research directed toward the alignment of branches within a private education network, which is precisely where this study aims to contribute.

The innovation brought by this research lies in the proposal of a detailed and specific model to evaluate and improve the alignment of branches within a private education network using BPMN and KPIs. This approach goes beyond existing studies by directly addressing this challenge, offering a practical strategy adaptable to the specificities of the sector and the needs of each education network.

Data Analysis

In this chapter, we conducted an analysis of the data collected to evaluate the alignment of branches within a private education network with the foundational project. The data collection was carried out in three distinct stages, aiming to obtain a comprehensive and in-depth view of the branches' alignment.

Initially, we conducted an interview with the education network's maintainer. The purpose of this interview was to understand the vision and fundamental objectives of the foundational project, providing a solid basis for our analysis. Based on the information obtained from this interview, we established the main evaluation criteria and identified the relevant Key Performance Indicators (KPIs) for the analysis.

Next, we conducted individual interviews with the management of each branch. These interviews sought to gather specific information about pedagogical practices, challenges faced, and initiatives implemented at each unit to promote alignment with the foundational project. These interviews were essential to understanding the reality of each branch and identifying possible gaps between the guidelines and practical implementation.

Following these steps, we collected KPI data related to student retention, graduation rates, average student grades, and parental satisfaction for each branch. This data was obtained through the education network's internal records, academic reports, and parent feedback. The collection of these KPIs enabled a quantitative and comparative analysis of the branches' performance concerning the foundational project.

Based on these different data sources, we conducted a comprehensive analysis to evaluate the alignment of the branches with the foundational project. This analysis allowed us to identify strengths and areas for improvement, as well as propose recommendations and strategies to enhance alignment and strengthen the implementation of the foundational project across all units of the private education network.

Interview With the Educational Sponsor

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Conclusion

This study aimed to assess the alignment of the branches of a private educational network with its foundational project, using an approach based on BPMN and KPIs. By conducting interviews with the sponsor and branch principals, as well as collecting KPI data, it was possible to obtain a comprehensive view of the performance and alignment of each school unit in relation to the goals and objectives established by the foundational project.

The results revealed that, overall, the branches demonstrate satisfactory adherence to the foundational project. However, specific challenges were identified that require attention and action from educational management. Student retention and graduation rates were mentioned as areas that need improvement in order to ensure the continuity of students in the school and their successful completion of studies. Additionally, ongoing teacher training emerged as a necessity to strengthen pedagogical practices and ensure the delivery of quality education.

On the other hand, the branches showed significant strengths. The formation of students within the framework of Christian Anthropology, the development of individual autonomy, and the promotion of a sense of family within the school community were highlighted as well-integrated principles in educational practices. Moreover, the concern with supporting families in vulnerable situations and the respect for alternative forms typical of contemporary times demonstrate the branches' commitment to inclusion and respect for diversity.

In this context, it is essential that educational management establishes specific strategies to address the identified challenges (Moura et al., 2025b). Student retention programs, enhancement of academic and career guidance, investment in ongoing teacher training, and strengthening partnerships with families can contribute to improving performance and alignment with the foundational project.

To ensure effective management and continuous monitoring, the use of performance indicators proves to be essential. KPIs such as student retention, graduation rates, parent satisfaction, and students' average grades provide objective and measurable data that allow for accurate and well-grounded analysis of the branches. These metrics can serve as evaluation tools, identifying areas in need of improvement and assisting in setting goals for continuous development.

For future work, it is suggested that the monitoring and evaluation of branch performance continue, using KPIs as the basis for analysis. Furthermore, it is important to carry out more

in-depth studies on the factors that influence student retention and graduation rates in order to develop effective strategies to improve these indicators.

The analyses conducted allowed for the identification of strengths and challenges, providing a foundation for the implementation of improvement measures and the optimization of educational processes. The combination of the BPMN-based approach and KPIs proved to be an effective tool for performance evaluation and the pursuit of educational excellence. By implementing the recommended strategies and fostering a culture of continuous improvement, greater alignment with the foundational project can be achieved, ensuring quality education and promoting student success.

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Contact email: waldirsm@ufrj.br