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Performance management using management control tools in RAET

Le pilotage de la performance par les outils de contrôle de gestion dans les AREF.

Auteur 1 : FEKKAK Azzeddine.
Auteur 2 : HASNAOUI Rachid.

FEKKAK Azzeddine
PHD student, Economy and Management faculty in Kenitra, IBN Tofail Morocco, Organizations Economy and Management Laboratory (LEMO),

HASNAOUI Rachid
Teacher-researcher, Economy and management faculty in Kenitra, IBN Tofail Morocco, Organizations Economy and Management Laboratory (LEMO),

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Abstract:

Performance management within the Regional Academies of Education and Training (RAET) in Morocco is a necessity to improve the efficiency of the public education sector. Management control tools must be adapted to the specificities of these public organizations, which have different characteristics from the private sector. The central question is to what extent these tools can be adjusted to improve the performance of RAET in the Moroccan education system. To do this, it is crucial to examine how to adapt these tools to the specificities of the public education sector, by transforming informal control mechanisms into a structured and efficient management system. Our methodological approach is based on a qualitative analysis focused on documentary research. We conducted a literature review on the emergence of integrated performance management systems and the BSC as a strategy deployment approach. We subsequently suggested an approach to implementing the Balanced Scorecard adapted to the specificities of RAET.

Keywords:

RAET, Balanced Scorecard, management control tools, adaptation, performance indicators

Résumé :

Le pilotage de la performance au sein des Académies Régionales d'Éducation et de Formation (AREF) au Maroc constitue une nécessité pour améliorer l'efficacité du secteur public éducatif. Les outils de contrôle de gestion doivent être adaptés aux spécificités de ces organisations publiques, qui présentent des caractéristiques différentes du secteur privé. La question centrale est de savoir dans quelle mesure ces outils peuvent être ajustés pour améliorer la performance des AREF dans le système éducatif marocain. Pour cela, il est crucial d'examiner comment adapter ces outils aux particularités du secteur public éducatif, en transformant les mécanismes informels de contrôle en un système de gestion structuré et efficace.

Notre démarche méthodologique repose sur une analyse qualitative centrée sur la recherche documentaire. Nous avons procédé à une revue de la littérature de l'émergence des systèmes intégrés de pilotage de la performance et du BSC en tant que démarche de déploiement de la stratégie. Nous avons suggéré par la suite une démarche d'implémentation du Balanced Scorecard adapté aux spécificités des AREF.

Mots clés :

AREF, Balanced Scorecard, outils de contrôle de gestion, adaptation, indicateurs de performance.

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Introduction

The RAET are tasked with implementing the educational policies defined by the Ministry of National Education, while integrating national priorities and objectives. Although the Ministry maintains strategic direction, the RAET are responsible for translating these policies into concrete actions on the ground, adapting to local realities. With the extension of their responsibilities, it becomes crucial for the RAET to equip themselves with modern management tools, such as the BSC and cost accounting. These performance management instruments make it possible to evaluate, control and monitor the performance of provincial directorates and institutions, while comparing them to national trends to detect gaps. They also help monitor the effectiveness of the RAET in achieving the priority objectives set by the Ministry.

The literature review indicates that although these tools, initially designed for the private sector, are promising for management control in the education sector, adoption within the RAET presents challenges. These challenges are mainly related to the adaptation of tools to the specificities of the Moroccan public education sector. This leads to the following question: To what extent can management control tools from the private sector, such as the BSC and cost accounting, be adjusted to improve the performance of RAET within the Moroccan education system?

To address this question, it is essential to examine how these tools can be adjusted to meet the specificities of RAET, by transforming informal organizational control mechanisms into a structured management control system, adapted to the specific challenges and objectives of the education and training sector in Morocco.

In this chapter, we will first analyze the evolution towards integrated performance management systems. Then, we will deepen the reflection on the implementation of cost accounting within RAET. Finally, we will examine the approach to adopting the Balanced Scorecard within RAET.

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1. Evolution towards integrated performance management systems

Modern performance management systems

Anthony (1988) identifies three levels of control within organizations: strategic planning, management control, and operational control. The first level involves planning and setting strategic objectives, the second level focuses on implementing action plans and monitoring progress, while the third level involves evaluating performance and results, leading to rewards or sanctions. Management control involves creating an information system for decision-making that allows agents to act effectively before, during, and after actions. The control process includes three phases: the finalization phase, where objectives are set and action plans are developed; the action phase, which focuses on implementing these plans and monitoring progress; and the post-evaluation phase, where results are measured and performance is evaluated, leading to rewards or sanctions based on the results. This control framework ensures consistency between strategic objectives and daily operations, promoting effective and efficient management practices aligned with the organization's strategy.

An organization's steering system is essential to guide collective actions toward its objectives. It consists of two main elements: the goals to be achieved and the tools for measuring progress. According to Burlaud et al. (2004), the primary function of the system is to assess gaps and make corrections. This ensures that objectives can be adjusted as needed based on performance evaluations and decision-making processes.

Management control tools: Steering strategies and optimal allocation of resources

Research on management control tools as levers of organizational performance is experiencing increasing expansion. These devices are not limited to measuring and evaluating performance, but also contribute to steering strategies and optimal allocation of resources. They align individual and collective objectives with the overall strategy of the organization, while strengthening the accountability of managers. Many studies highlight that the integration of these management tools promotes optimization, by stimulating innovation, facilitating adaptation to environmental changes and improving internal processes.

In the public sector, with the introduction of new public management reforms, these tools have become important drivers for transforming management practices and promoting administrative innovation. They are capable of adopting a results-oriented approach that aims to achieve ambitious performance objectives while embodying the principles of transparency and accountability to stakeholders.

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Management control tools are essential levers for achieving an organization's strategic objectives. They enable decision-makers to transform data into actionable information to improve resource management and overall performance.

Performance Management Systems (PMS): A Systemic Approach

Performance management systems are integrated organizational frameworks that aim to align the organization's activities and resources with its strategic objectives. They allow performance to be measured, analyzed and improved according to predefined criteria, and include monitoring, evaluation and feedback processes. A PMS is a coherent set of tools, methods and practices to improve organizational performance, while taking into account the specificities of the sector of activity, human resources and institutional environments.

These systems are based on several management tools, such as key performance indicators, internal audits, or management by objectives. A PMS helps to establish a culture of performance within the organization by encouraging a participatory approach where each actor is responsible for achieving the set objectives. For example, in a public organization, a PMS could include a set of indicators to measure the effectiveness of public services, combining both quantitative and qualitative data to assess citizen satisfaction and the impact of public policies.

The main functions of the PMS are[1]:

• Strategic alignment, common purpose of organizational processes;

• Transparency, access of stakeholders to information on performance;

• Responsiveness, rapid reaction to observed gaps between objectives and results.

Performance management systems track the progress of organizational results while helping to continually evolve the strategy; they are intended to create a framework of collective responsibility in the organization and are supposed to ensure that resources are used optimally.

The synergy between management tools and performance management systems

Management tools are essential components of performance management systems, forming a symbiosis between the monitoring of operational activities and the achievement of strategic objectives. Management tools provide concrete mechanisms to collect and analyze the data needed by the PMS, while the latter offers a global vision of organizational performance.

For example, a Balanced Scorecard can be used in an PMS to track specific performance indicators, such as project completion times or stakeholder satisfaction, while integrating financial and non-financial aspects into the overall assessment. Similarly, a performance audit

[1] Guillaume Ducret, 2015, Développer sa PME grâce au contrôle de gestion, les outils pour piloter efficacement son activité

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can be used to identify gaps between actual performance and set objectives, thus allowing corrective actions to be proposed within the PMS.

Thus, performance management relies on an effective use of management tools to monitor results and strengthen accountability, while ensuring flexibility in adjusting actions to changing objectives and internal and external environments. The two concepts are therefore interdependent and essential for the good governance and sustainability of organizations, whether public or private.

The definition of management tools and performance management systems reveals the importance of their complementarity to ensure organizational success. While management tools provide practical and technical solutions for daily management, performance management systems create a coherent and systemic framework to align operational efforts with strategic objectives. In a context where organizational performance is increasingly scrutinized, this synergy becomes a key factor in achieving desired results and ensuring the effectiveness of actions undertaken.

This section of the research emphasizes the importance of understanding the interactions between different conceptions of performance and performance management systems in organizations. It highlights the need for a theoretical framework that aligns with the management tools approach, which links performance concepts to management tools. The study will use the performance management analysis framework developed by Bouckaert and Halligan to interpret the results, focusing on the organizational implications of performance measurement rather than on the measurement itself. This approach aims to analyze systems and their practical applications, thus contributing to a deeper understanding of public management practices at the RAET levels.

Management control tools: towards integrated performance management systems

From the 1960s to the 1980s, the emphasis was on global management, with the introduction of management by objectives that aligned individual and organizational goals. Management control tools gradually evolved towards approaches that integrated strategic and non-financial dimensions. One of the major developments of this era was the advent of Management by Objectives, attributed to Peter Drucker. It revolutionized the way organizational objectives were defined and measured. MBO did not focus solely on tasks but, in its logic of evaluating performance by achieving specific objectives, inaugurated a more strategic management style.

The Dashboard initially appeared as a tool for monitoring financial indicators, it gradually became a tool for monitoring non-financial indicators, making it possible to measure not only profitability but also quality and customer satisfaction.

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These changes reflect the evolution towards a more integrated management, in which performance is not defined solely on the basis of financial results. The emphasis on different criteria, including product quality (and customer satisfaction as well as the efficiency of internal processes), created a foundation on which to build integrated performance management systems.

The 1990s saw the rise of integrated performance management systems that unify resources, information and activities, thereby improving organizational coherence and accountability.

Integrated management tools allow an organization to control and integrate everything in a single system: resources, information and activities. These tools offer the possibility to control processes within an organization more effectively and to monitor performance at any time, and then to modify the strategy with greater flexibility.

One of the main advantages of integrated performance management systems is certainly their ability to improve organizational coherence. Such systems unify the strategic, operational and tactical levels of an organization through shared objectives and common indicators. This implies that performance is under continuous observation while accountability improves and the capacity for change improves.

The BSC has allowed organizations to evaluate their performance according to four main perspectives: financial, customer, internal processes, learning and growth. This has made it possible to further balance the performance management system by integrating both financial and non-financial dimensions. An application that aligns operational actions with an organization's strategic goals to another possibility created by the BSC and other integrated systems: the use of information technology to automate data collection and performance analysis.

Tools such as the Balanced Scorecard have enabled a comprehensive assessment of performance in both financial and non-financial dimensions, facilitating real-time monitoring and strategic flexibility.

The Balanced Scorecard, developed by Robert Kaplan and David Norton in the early 1990s, is a widely used performance management system that emphasizes a holistic view of organizational performance beyond simple financial indicators. It links strategy to operations, ensuring alignment at all levels.

The evolution of management control tools has been oriented towards integrated performance management systems, driven by the need for organizations to adopt strategic and balanced management approaches.

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The evolution of management control tools towards integrated performance management systems is achieved through the gradual transformation of the organizations themselves towards strategic, balanced and integrated management. From analytical accounting to dashboards, then to ERP and Balanced Scorecard systems, a new level of management tools responds to new organizational challenges with each customization moving further and further towards a global approach to performance management. Performance management systems must evolve towards the integration of predictive intelligence.

Some expected effects of the introduction of performance management systems on the management of RAET

The transition to integrated performance management systems in RAET, improving strategic decision-making through reliable data integration, promoting transparency and accountability in the use of public funds and promoting a performance-oriented culture. In addition, it facilitates better collaboration and communication between departments, thereby reducing inefficiencies in large public organizations. These systems improve decision-making by providing a comprehensive overview of organizational performance, allowing managers to identify gaps and effectively adjust strategies. They also optimize resource allocation by integrating data on resource use and performance, which is crucial during change management processes. In addition, performance management systems promote accountability by providing quantifiable data on team performance, promoting transparency and linking results to resource use, thereby improving governance and management practices. The emergence of information systems has made management systems more efficient, more responsive and better adapted to the needs of RAET. These information systems automate the collection, analysis and reporting of data, thus facilitating decision-making based on precise and real-time information.

Information systems are at the heart of the evolution of performance management systems. Technological solutions such as Enterprise Resource Planning (ERP) make it possible to integrate the different dimensions of organizational management (financial, operational, human) in a single framework. These systems not only centralize data, but also improve its analysis and use for strategic management purposes. Thanks to the ability of ERPs to manage vast quantities of data from different branches of the organization, it becomes possible to identify trends, evaluate the performance of different units and make better-informed decisions. In addition, data analysis tools, such as Big Data and artificial intelligence, have made it possible to go even further in the sophistication of performance management systems. These technologies offer the possibility of exploiting massive data and developing predictive analyses, thus allowing organizations to anticipate future developments and better adapt their strategy.

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The introduction of these technologies has also transformed performance management by facilitating the interconnection between the different actors of the organization. Collaborative platforms and interactive dashboards, for example, allow real-time monitoring of performance at all levels of the hierarchy, thus making management more participatory and transparent.

The limits of adapting management control tools to RAET

Adapting management control tools to RAET is not without practical difficulties. Steering the education system is not easy, we highlight the limitations that could hinder the adaptation of these tools as follows:

- Education has very broad and very complex objectives;
- Education is a non-profit activity of an intangible nature, hence the difficulty of measuring intangible aspects;
- The performance of a regional academy is also conditioned by the training and accountability of human resources;
- Other limitations are related to the strategic design, perspectives, strategic themes and the choice of reliable indicators;
- The risks increase with the alignment of staff behaviors with the strategy.
- Some indicators are poorly defined, which makes it difficult to establish and exploit data;
- The external environment as an important dimension having an impact on performance.

The management control system will be built from reporting cost calculations and budget monitoring, which provide the essential indicators for developing dashboards[2].

2. Study methodology

The methodological approach is based on a qualitative analysis focused on documentary research. The data used come mainly from official sources, such as legislative texts, reports, performance audits and institutional publications.

In addition, an in-depth case study is conducted within the AREFs, with qualitative data collected through semi-directive interviews with different stakeholders.

The data collected is based on thematic coding techniques. They are then grouped into thematic categories, constituting the basis for structuring the analysis and interpreting the results.

[2] Dupont, J. (2021). *Gestion des systèmes de pilotage*. Éditions Gestion

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3. The process of implementing the Balanced Scorecard within the RAET[3]

The Balanced Scorecard: An Integrated Approach

Since its creation in 1992 by Norton and Kaplan, the BSC has attracted a lot of attention in both the academic and professional worlds. Many organizations have adopted and implemented the BSC in various ways.

It is an integrated vision of performance beyond financial indicators alone. It is based on the conviction that the management of organizations must have a global vision and be approached according to several interdependent dimensions. The Balanced Scorecard makes it possible to trace the strategy to operations, ensuring the cohesion of actions at all levels of the organization.

The concept of the balanced ScoreCard

"... The BSC is a new framework that allows the integration of strategic indicators: in addition to financial indicators of past performance, it proposes determinants of future performance... The BSC breaks down the mission and strategy into objectives, these are listed on four axes: the financial axis, that of performance with respect to customers, that of internal processes and that of organizational learning"[4].

Kaplan and Norton design a multidimensional dashboard that is composed of indicators of past performance and determinants of future performance. According to these authors, the BSC is an integrated management system to monitor the implementation of the organization's strategy. It facilitates the transition from a simple accounting vision to a more global vision of performance that focuses on the sources of performance (customers, processes and the company's growth dynamics) instead of financial indicators.

The BSC allows the strategy to be communicated to all stakeholders in the organization on the strategic steps to follow in order to guide the organization's actions, make the most of opportunities and counteract certain threats.

The overall performance of a material activity is often measured by financial and non-financial indicators, however, measuring the performance of an intangible activity such as education can only be achieved based on its purposes.

In Caplan and Norton's theory, these four axes have cause-and-effect links: the results of the learning axis must have effects on the process axis, as well as on the customer axis and finally effects on the financial axis.

[3] Hasnaoui R.et Fekkak A. (2021) « Balanced Scorecard, outil de Pilotage de la Performance des organisations : Cas des académies de l'éducation et de formation au Maroc », Revue Internationale des Sciences de Gestion « Volume 4 : Numéro 2 » pp : 397- 411.

[4] R.S. Kaplan & D.P. Norton (1996), The Balanced Scorecard - Translating strategy into action, Harvard Business School Press, Boston, Massachusetts, page 15.

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It is balanced and covers all areas of the company (finance, customers, processes and products, human resources), and links the measures by cause-and-effect relationships (lever indicators and results indicators).

The prospective scorecard is presented as an instrument for monitoring overall performance, organized around four axes: finance, customers, internal processes, organizational learning. It translates the company's strategy into a set of performance indicators that form the basis of the management system. It offers an integrated approach to operational and financial dimensions, short-term and long-term visions. It is in this sense that it deserves the term "balanced". Its axes are balanced and interdependent.

In all cases, the indicators can be quantitative or qualitative. Any performance measurement allows the results obtained to be compared with the initial objectives. The identification of significant deviations must lead to corrective decisions being taken.

A multidimensional performance control tool

If the BSC allows to redefine the strategic vision of the organization and its measurement, the four dimensions taken into account by the BSC implicitly require adopting a balanced vision of the organization's activities with regard to its stakeholders; however, not all of them are taken into account.

Within the dashboards, we synthesize the measures relating to the expected results and the actions that have been taken to contribute to the achievement of the key success factors (Bréchet and Mevellec, 1997). The dashboard has characteristics that make it relevant for controlling and managing a multidimensional performance taking into account the stakeholders, in this it is a management tool appropriate to our representation of the overall performance approach of the RAET because it allows to reach the last level of the performance scale, when this objective is made possible.

Kaplan and Norton (1998), their general model is based on causal links, they consider that good financial performance depends on customer satisfaction, which itself depends on the proper execution of the company's processes, which itself depends on the efficient mobilization of the organization's human resources.

The Balanced Scorecard in the Public Sector

In the context of public administrations, the BSC can help translate strategic objectives into actions, measurable performance indicators, measure performance in a more balanced way, and improve transparency and accountability. It also helps improve the performance of public services and meet the expectations of citizens and stakeholders.

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- The performance objectives pursued are clarified, they are multidimensional and take into account the expectations of stakeholders;
- The dialogue is extended to all stakeholders
- The expectations of internal stakeholders have been collected, they have been taken into account in the prioritization of strategic orientations and their declination in the realization of the action plan

Financial perspective: Public bodies do not have profits as their main objective, they can use financial measures to assess the efficiency in the use of budgetary resources. This can include cost management and measuring the social profitability of programs.

Customer perspective: The "customers" are often the citizens. Indicators may include citizen satisfaction, ease of access to public services, and the quality of services provided.

Internal process perspective: The quality of decision-making processes, human resource management, implementation of public policies, and project management.

Learning and growth perspective: Staff training for skills development and innovation.

Meyssonnier (2011), The multidimensional characteristic of the BSC makes it possible to adapt to service contexts and respond to the wide variety of elements to be controlled in service activities. Dashboards are, generally speaking and more than other management control tools, at the heart of performance management in service activities.

“In the service sector, dashboards are at the heart of performance management (probably more than budgets) and the link between operational indicators (advanced measurement of performance being built) and financial indicators (lagged measurement of observed performance) is particularly well done in the context of the balanced scorecard. In this way, strategic control is linked to operational control without using the usual central tool of management control: financial modelling of budgets is relegated to the background." In the more specific case of administrations, Kaplan and Norton (2001) consider that the clients of these organisations are citizens in general and that the three higher axes must correspond to the three objectives that will enable the mission to be accomplished: creating value, at a minimum cost, and increasing the ongoing support and commitment of its financing authority.

Reflection on the BSC design hypotheses

Choffel and Meyssonnier (2005) produce a synthesis of the theoretical propositions that fuel the debates around the construction of BSC. By seeking to situate the implementation of a BSC in the context of control and steering of the education and training mission in the AREF, through the different stages structuring these propositions, we can better identify the framework that is ours. To do this, we take up the stages of design, implementation and structure, presented by

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Choffel and Meyssonnier (2005). These authors break down these stages through seven propositions, but we only retain in our analysis the four that concern the adaptation of the BSC to our context. For each proposition, we retain the principle that should allow the construction of a BSC that meets our objectives.

The articulation of the balanced scorecard with the strategy

Two situations can arise at the start of the process, the dashboard is either the tool for the implementation of the strategy, or the tool by which the strategy emerged.

the need to have initial strategic orientations to develop the dashboard and the dashboard intervenes from the design of the strategy.

The deployment of the balanced scorecard

Since the dashboard is both a strategic alignment system and a cause-effect modeling tool, the approach must combine ascending and descending phases (a top-down approach and a bottom-up approach).

The number of indicators

The SBSC must be designed as a steering tool to observe whether, at regular intervals, the performance objectives are being achieved and whether corrective actions must be taken. In this sense, it must allow cybernetic control, but also promote the emergence of new strategies and new objectives in an interactive dimension leading to learning. The control system as a whole will participate, in both the diagnostic and interactive dimensions, in organizing the actions to achieve the performance objectives but also in redefining these objectives. The logic of the SBSC that we propose is that of a dashboard, while the Green Plan reference is built in a logic of reporting and dissemination of numerous indicators, in the sense of H. Bouquin.

Flexibility of indicators

"When a company has a complex strategy that evolves with its environment and when it has a management system that takes into account learning effects, this should result in greater flexibility of indicators" (Choffel and Meyssonnier, 2005).

Adjusting the BSC for the public sector

Public organizations have distinct characteristics from private organizations, requiring an adaptation of the original BSC model to better meet their particularities.

The process proposed by Kaplan and Norton

According to Kaplan and Norton, the BSC process begins by positioning the organization's strategy at the heart of the system, then translating it into strategic objectives on the four performance axes, which are then broken down into operational measures and indicators at all levels of the organization. In a context similar to that of public administrations, Kaplan (2001)

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explored the application of the BSC in non-profit organizations. He proposes that these organizations place at the top of the dashboard an objective linked to their fundamental mission, that is, their responsibility to society, rather than emphasizing the customer axis. This higher objective must be of a long-term nature, and the sub-objectives associated with the other axes of the BSC must be oriented towards the improvement of this priority objective.

Towards an adaptation of management control to the specificities of RAET

We rely on the theoretical framework of the BSC established by Kaplan and Norton, as well as its adaptation to the public sector, to design a BSC specifically adapted to regional academies of education and training.

While the financial axis is not the most relevant for a public organization, particularly in the education and training sector, the other three axes respond to essential issues of management and organizational performance. In the general sense, the beneficiary of the education and training sector is society and in the strict and direct sense the beneficiary is the student. This particularity makes it possible to transform the "customer" axis into a "student" axis.

The customer axis for the education and training sector is to be replaced by the expectations expressed by students in terms of the quality of teaching and teaching conditions, it can also correspond to the expectations of other stakeholders. The internal process axis allows us to ask the question of the allocation of resources, this axis is strongly linked to the last one, the organizational learning axis, which assumes that mechanisms are implemented to train both administrative and teaching staff.

The internal process axis and the organizational learning axis seem adapted to education and training academies. On the other hand, the customer axis could be replaced by the student and stakeholder axis, and finally the financial axis could become the resource/expenditure axis.

Consequently, it is possible that the diagram presented below is a BSC model for the strategic management of education and training academies.

This results, based on the theoretical framework of the BSC by Kaplan and Norton, in a schematic representation of the priority themes structured around four perspectives of the BSC. In Figure 4, we grouped the themes in each sub-dimension of the perspectives, then represented the logical links of cause and effect. Also, after prioritizing the themes of the strategic map, we proceeded to prioritize the themes contained in the strategic map by taking into account, first, the link with the strategy of the academies of education and training, then the number of recurrences of the strategic objectives, the alignment of these objectives with the priority strategic themes of the Ministry of National Education and finally, the identification of key performance indicators.

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The SBSC axes and the strategic map

Presentation of the RAET strategy

Based on the new requirements imposed by the various changes in the sector, RAET must implement, in accordance with the new vision of the Ministry, an ambitious strategy that aims to contribute actively and effectively to the development and promotion of the sector. The strategy implemented by RAET is composed of three strategic axes. It is part of the Government's overall strategy for the development of the sector. These axes are as follows:

Diagram : Strategic axes of RAET

Source: the authors

BSC performance axes

Based on the results of the interviews, the documentary research and the literature review, we identify to build the RAET BSC in four performance axes:

- Student and Stakeholder Perspective (at the top of the table) to highlight the importance of social responsibility and student expectations. Students and stakeholders, often assimilated to "customers", are at the heart of this perspective which focuses on student satisfaction and performance. This axis measures indicators such as the success rate, student and parent satisfaction, as well as student engagement and the quality of teaching.

- Governance and Financial Perspective (placed below) to ensure efficient and transparent management. This axis encompasses the management of financial resources and governance, with an emphasis on transparency, budget efficiency, and compliance with regulations. Educational institutions must optimize the management of their financial resources. Indicators may include cost per student, per program, per action, and per project. Indicators: Budget efficiency, financial transparency, cost per student, regular audits and controls.

- Internal Process Perspective (center) to optimize administration and procedures. This axis measures the efficiency of internal processes, including administration, human resources

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management, and educational processes. Continuous evaluation is carried out to identify inefficiencies and opportunities for improvement, in order to create a more efficient and student-centered environment. Indicators: Modernization of administration, simplification of procedures, allocation of resources, continuous improvement cycles. - Learning and Development Perspective (bottom) to foster innovation and staff development. This axis focuses on strengthening human resources skills, pedagogical innovation, and the integration of new educational technologies. It includes indicators such as continuing teacher training, professional development, pedagogical innovation, adoption of new educational technologies.

Themes of commitments and performance axes of the RAET BSC

By integrating these four axes, the AREF BSC will be able to align its activities with its 2015-2030 strategic vision, framework law no. 51-17 and the 2022-2026 roadmap.

The table below recalls the commitments of the 2015-2030 strategic vision, framework law no. 51-17 and the 2022-2026 roadmap and their positioning with respect to the four performance axes that we identify in the RAET BSC

Table 1: Themes of commitments and performance axes of the RAET BSC

AREF BSC Performance Axes	**Thématiques des engagements**
Students and stakeholders axis	- Promoting equity and inclusion - Improving educational outcomes - Improving the quality of education
Governance and financial axis	- Increased budgetary efficiency - Strengthened financial transparency - Regular audit and control
Internal process axis,	- Modernization of the administration - Simplification of procedures - Implementation of new methods
Learning and development axis	- Continuing training of staff - Professional development of teachers - Educational innovation

Source: the authors

This table visualizes how the commitments of the strategic vision, the framework law and the roadmap are aligned with the performance axes of the RAET BSC.

By then identifying the causal relationships between the axes to fulfill this mission, we can order them in order to establish a representation of the education and training strategy.

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This representation visualizes the priorities and relationships between the different axes to achieve the AREF strategic objectives.

The other axes must support this objective by creating a favorable environment and optimal conditions for students.

Efficient administration and simplified processes allow better management of resources and focus on essential educational activities.

Staff skills development and pedagogical innovation are essential to improve internal processes and, consequently, the quality of teaching and student outcomes.

Good financial management and transparent governance are crucial to support training and growth initiatives, improve internal processes, and ultimately ensure optimal results for students.

Causal relationships between BSC performance axes

A schematic representation linking the axes to show how improving learning and development leads to more efficient internal processes, which in turn improve student satisfaction and performance, supported by good governance and financial management.

Between the four performance axes that we identify, a balance must be established so that the dashboard is precisely "balanced". But causal relationships will also exist between the axes.

Berland and De Rongé (2013), these cause-and-effect relationships between the different axes and their variables are not automatic because there are rarely mechanical relationships between them, "the relationships are rather assumed than statistically significant."

If we follow Gibert (2009), "for management to be forward-looking within each of the axes, the orientations (goals) chosen must all be stated, specified in concrete terms, that is to say by means of an indicator, a numerical representation of the goal [...]. With regard to each indicator, the target level to be achieved for the coming period and the action plan chosen to achieve this target level must be explained.

Figure 2 : The sequence of axes and the achievement of goals

Strategy

Axe

But	indicator	Target	Actions

Source: the authors

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We can also represent in more detail the causalities appearing between the performance axes of the strategic map, by showing these cause and effect relationships between the objectives to be pursued themselves or between groups of objectives.

Board 2 : Examples of strategic projects according to the four perspectives of the BSC

Student perspective and stakeholder		
Students		
Accessibility and continuity	Efficacy	Quality
Generalization, Extension	Reduce the number of repeaters and of failures. The apprenticeship quality for all.	The individual's and society's promotion. A human capital that answers to society's aspirations.
Stakeholder		
Satisfy environment's requirements. The positive interaction with its environment.	Build-manage the institutions.	Transparency in the financial management. A resources mobilization capacity.

Resources/expenses perspective		
Resources mobilization	Innovative sources of financing	Expenses optimization

Intern processes perspective		
Operational management process	Innovation	Quality process
Educational reform and governance	-Promotion on merit -Management per project -Educational innovation -results evaluation	Education's quality improvement depends on flexibility and innovation

Apprenticeship and development perspective		
Skill	Technology	Information
Fill skill gaps	Introduction of information and communication technologies	Group work

Source: Authors

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BOARD 3 : Examples of indicators associated to strategic projects

Resource/expense perspective : **Examples of objectives :** -Improve educational tools -Improve costs structure **Examples of indicators :** -Charges optimization degree -Budget part -Number of financed projects	**Internal process perspective :** **Examples of objectives :** -Improve the institutional and juridical framework -Improve the processes which create value **Example of indicators :** -Degree of the process computerization -Degree of the strategy implementation -Degree of the program achievement
Student and stakeholder perspective : **Examples of objectives :** -Welcome all the students and guarantee their opportunities' equality during their training journey. -Improve success rate -Improve the quality of acquaintances **Examples of indicators :** -The rate of joining institutions with limited access -The rate of languages mastering skills (in increasing order of mastering skills) -Success rate = number of qualified candidates/ candidates number	**Apprenticeship and innovation perspective :** **Examples of objectives :** -Develop the management and the factors of motivating the employees -Improve employees' skills -Access rate of staff member to the training = staff members' number in training/staff total number -% of continuous training budget = % of the budget dedicated to the continuous training/ Total budget

Source: Authors

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Conclusion

Performance management within RAET is a lever to optimize their operation and achieve their objectives. This approach requires a fine adjustment of management control instruments, harmonized with the structural and functional characteristics of the organizations. The combination of cost accounting and budgetary control has proven to be of particular strategic importance: it has not only ensured strict management of financial and material resources, but has also improved their allocation according to the specific priorities and constraints of the AREF. In addition, these systems provide the indicators necessary for the design of effective dashboards, as well as key tools for monitoring and evaluating overall performance.

However, the specific characteristics of RAET, such as the diversity of educational activities, require adapted management tools. These tools must go beyond simple numerical data to offer a systemic and relevant vision, integrating the qualitative dimensions of the educational mission. Thus, a well-designed monitoring system can not only identify deviations from set objectives, but also propose avenues for continuous improvement, taking into account local contexts and challenges encountered on the ground.

Ultimately, effective performance management within RAET relies on a judicious combination of technical rigor and operational flexibility. It is not only about monitoring, but also about supporting informed and proactive decision-making to achieve educational excellence and optimize results. This strategic approach based on a vision is essential to meet the growing needs of an evolving education sector.

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