



The Engineering of E-governance and Technology in the Management of Secondary Schools: Case of the Nouaceur Delegation

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Abstract

The purpose of this research study is to measure the impact of governance on the organizational performance of schools in administrative, financial and pedagogical aspects. This governance approach will be approached using a methodology respecting several principles in terms of participation, transparency, accountability and evaluation (CSEFRS, 2015). Furthermore, we added in our frame of reference the primordial aspect of good governance, which is the new technologies. Considering the difficulty of an etymological and polysemic consensus on the concept of governance. It would be wise to set up operational indicators for applying this notion

of governance with a perspective to enhance management skills, multi-stakeholder strategic planning, internal collaborative management, effective and efficient steering, control and evaluation. Methodology / approach: Our methodological approach based on a descriptive exploratory study. The researcher carried out an empirical study involving 20 principals of qualifying secondary schools from the Nouaceur-Casablanca region. Our measurement instrument is related to a survey which is appraised as one of the five principles of effective governance (transparency, accountability, participation, evaluation and technology). Findings: data analysis shows difficulties in applying governance principles, influencing organizational performance in administrative management. Additionally, the educational management and financial management of these establishments have seen a positive application of these governance mechanisms. It would be wise to apply the multidimensional aspects of governance, through the harmonious, complete and balanced integration of the three management mechanisms: administrative, pedagogic and financial management. The relationship between the study variables is demonstrated by the application of the five principles of governance, the results of the study recommended that we apply them to contribute significantly to improve the effectiveness of strategic planning, collaborative management and community steering.

Keywords: E-governance, Digitalization, Organizational Performance and Management.

Introduction

The historical study of the quality of education shows that schools have experienced remarkable development over time, and an eventful evolution, mainly linked to the various reforms of the education system.

This education system will be permanently subject to continuous monitoring, control and steering evaluation relating to its internal and external profitability, and affecting all educational, administrative and financial aspects (La charte nationale de l'éducation et la formation, 2000-2013). A process of strategic management, effective monitoring of administrative management and accountability according to the governance principles mentioned by the organization for economic cooperation and development (OCDE, 2004).

The principal and the board of management are the main drivers of good governance in public schools. The legislative and regulatory authorities of the Ministry of National Education have implemented the guidelines and the basic foundations of quality autonomous management, good governance and decentralized decision-making. Furthermore, (Huddleston, 2007) define the governance of schools as « all aspects of the way a school is led, managed and run, including school rules, procedures, decision-making structures and the behavior of its personnel and how

they relate to each other».

Schools as a public organization constitute a privileged space for the integration of management principles, in the quest for educational profitability and organizational performance. (Ahmed, 2000) mentioned that health and education are two areas of activity essential for national development. The development of national education is closely related to the coordination between three management logic: administrative, educational and financial (PAGESM, 2012-2015). Consequently, these establishments must respect a set of managerial principles by which they can ensure an optimal level of governance for the proper functioning.

Currently and with the reform of the system experienced by the Moroccan education sector, schools have integrated and established governance and management systems. This device was able to influence their structures, missions and mode of management, monitoring and steering. This reform will have an impact on educational performance, (Rey, 2013) asserted that the choice of the institutional variables of an education system as well as the management methods of schools constitute a powerful vector of educational performance.

The aim of this study is to assess the impact and effects of school governance on financial, educational and administrative performance. The ultimate objective is to make judicious use of their material resources and their human potential in a perspective of equity and democracy as expressed by (Bäckman & Trafford, 2006). These authors described the school as "laboratories of democratic freedom", in order to increase its performance (the failure of their performance). In addition, this research allows us to describe the effects of governance principles on the structural and functional efficiency of public schools:

- Establish a clear and transparent structure for the community management of the different stakeholders
- Improve the transparency of the objectives and performance of public schools
- Strengthen the role of the institution's boards of management
- Monitoring, control, management and effective regulation of organizational objectives.

Problematic

Governance is a modern organizational approach to management that guarantees the development and continuity of public and private organizations and institutions. (Du Bois de Gaudusson, 2004) define the governance by the ability to effectively manage any form of organization and activity. In the same perspective, the (UNESCO, 2008) report in 2008 states that "Governance is about the distribution of decision-making powers at all levels of the education system, from the ministry to the school and to the community. «Besides, all actors must apply themselves to set up a system in line with the vision of public policies for effective and efficient management according to the 2015-2030 strategic vision.

Our study is at the heart of the issue of governance in institutional systems, in its multifactorial aspects. During the past decade, we note that the Moroccan education system has continued to use new managerial approaches in the search for innovation and modernization of the public administrative sector. Therefore, it seems opportune for us to analyze the impact of governance in improving organizational performance. The research problem therefore lies in the central question: how can the application of governance principles in public schools contribute to upgrading performance (administrative, educational and financial)?

In other words, schools are seeing, as institutions required guaranteeing an optimal level of governance to achieve the best organizational performance in its multidimensional aspects.

Hypotheses

With the aim of understanding the impact of governance in improving organizational performance in Moroccan schools, our review of the literature provided some answers to the problem of our research, from which we put the emphasis on the existence of internal and external governance system.

We defend the idea that the application of governance in public institutions improves administrative, educational and financial performance. From where five sub-hypotheses derive from this hypothesis:

- H1: The application of the principle of transparency leads to a significant improvement in the performance of establishments.
- H2: The application of the principle of accountability leads to a significant improvement in the performance of establishments.
- H3: The application of the principle of participation leads to a significant improvement in the performance of establishments.
- H4: The application of the principle of evaluation leads to a significant improvement in the performance of establishments.
- H5: the integration of management technologies leads to a significant improvement in the performance of establishments

Literature Review

The key reference concepts of the study build from the cross and conjugate analysis:

- Moroccan Code of Good Practices in Corporate Governance and Public Establishments (2012) (CNGE, 2012).
- Institutional and praxeological data of the governance code "Morocco"

- Managerial principles of the strategic vision and of the national education and training charter (report).
- Standards, Methods and Assessment Tools of the OECD "Morocco educational assessment framework"

Methodology

In this part, we will try to explain in a detailed and reasoned way the approach we adopted to conduct our investigation, to clarify, it is about presenting the type of study chosen, the working approach adopted, the target population, the methods and tools used for data collection.

After checking the quality of the measurement items (factor analysis, reliability and creation of the independent variable and dependent variable), we will proceed to the description of the sample and the data collected through descriptive and exploratory statistical studies of the research variables (mixed types: qualitative and quantitative).

The data was collected from a sample of qualifying secondary schools: representing 20 public school principals from the Nouaceur delegation during the 2019-2020 school year.

The measurement instruments of our study are mainly based on a questionnaire comprising 32 questions relating to the application of governance mechanisms in schools, as well as the items of this questionnaire are developed from a focus group, which is found on the central question of the principles of school governance, and other sources which are: (GPGRPE, 2014; ONDH, 2016; OCDE, 2013).

Results and Discussion

Field of the intervention of governance

The evaluation of governance in its multifactorial aspects examines the effectiveness of administrative, pedagogical and financial management approaches in the challenge of identifying information that will help school heads to understand and identify the nature of managerial strategies, leadership, and management influencing organizational performance.

Table 2. Satisfaction of directors in the field of intervention of governance

	Very unsatisfied		Rather unsatisfied		Neither satisfied, neither unsatisfied		Rather satisfied		Very satisfied	
	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%
A M	9	11%	23	29%	16	20%	17	21%	15	19%
EM	3	4%	11	14%	11	14%	28	35%	27	34%
FM	4	5%	20	25%	16	20%	18	23%	22	28%

1. Administrative Management

The results obtained show a negative influence of governance mechanisms on the administrative management of investigative institutions, 29% of school heads felt that they were dissatisfied with the application of these mechanisms in their practices to manage their institutions. It is clear from the analyses that the principle of transparency is the only principle that the majority of directors are estimated to have a high degree of positive satisfaction is thanks to the sharing of information with the school's stakeholders at the educational level and financial. Thus, their parts are present in the whole process of the elaboration of the project of establishments. The centrality in the decision-making by the directors seems strong in our analysis, which is due to almost individual management by the head of the school focused on the mobilization of resources (human, material and financial), the management of unforeseen, the management of school life and internal evaluation through means of control and regulation. The same high level of dissatisfaction with the administrative evaluation is related to the number of administrative inspections who spend each school year (one inspection).

2. Instructional Principles

An analysis of the principles of the effectiveness of governance at the pedagogical level indicates a positive influence, as long as 35% of respondents say they are rather satisfied and 34% are very satisfied. In addition, we also find that this is not only the cause of the strong collaboration of principals with teachers to improve student performance, but also the number of inspections that teachers face each school year (2 inspections per teacher). Thus, using the results of the inspections to make adjustments at the pedagogical level.

3. Financial Principles

The contributions of governance mechanisms to financial management are presented in Table 1. The results show that its principles have a positive influence on the effectiveness of the management of this register, 28% of respondents are very satisfied with the governance mechanisms, and therefore this satisfaction is the result of the improvement of the management of the institution's financial resources by the directors using CTBT in managerial practices. Unlike financial practices, schools do not have a strong autonomy in decisions concerning the preparation, approval and implementation of the school's operating budget. The principal has only the allocation of these resources for the operation of the school.

The results of our research lead us to confirm our hypothesis, "the application of governance to public institutions improves administrative, educational and financial performance." The adoption of a resource management steering system by the schools studied in order to achieve their objectives shows that governance mechanisms are of paramount importance in the development of organizational performance.

3. Administrative Technologization

Analysis of the results of the questionnaire and of the semi-structured interview reveals that administrative technologization is limited to the MASSAR project, which manages attendance data and student assessment results.

In addition, the national strategy (AA (ADD)) which aims to: Accelerate the digital transformation of Morocco as a "regional digital hub" by tackling the issue of e-governance.

The current major trends in the information and knowledge society call on public schools to meet the challenges of technical and technological globalization. The last-mentioned have to review their internal and external information management system to offer and diversify their services to various stakeholders.

The achievement of this technological objective requires the establishment of a reliable, accessible, instantaneous and profitable electronic administration.

Conclusion

The school governance system has given us a clear idea of the quality of the holistic management of its schools, of which this system is always in search of its effectiveness and efficiency. Moreover, the results show that the application of school governance principles in administrative management is weak, which influences the organizational performance of schools, unlike other management levers in which we find their impact is positive. Our country's vision aims to lead public establishments towards self-management based on quality skills to ensure professional harmonization between establishment managers and their stakeholders. The combination of the three management registers while ensuring an optimal level of application of governance mechanisms, namely transparency, accountability, participation and evaluation leads to a better organizational performance.

Recoomendations

Through the main lessons from our study, we opted for 5 recommendations to improve the good governance of schools in the Nouaceur region:

- Development of the leadership style of directors through the adoption of collaborative participatory management. Furthermore (OCDE) in improve the management of schools note that School leadership is now a priority in government education programs internationally
- Grant more autonomy to schools, similarly (Eurydice, 2007) indicates that the choice to grant more autonomy to schools is based on the desire to increase school performance
- "Give more transparency to political, administrative, technical and financial decision-making mechanisms" (Pierre Rocca, 1998)

- Increase in the number of organizational inspections, as it allows analysis of the system and processes to ensure continuous improvement of the establishment.
- Improving the use of new technologies to facilitate the management of establishments.
- Offer refresher training for managers who have gaps in areas related to the application of governance mechanisms.

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