

DATA-DRIVEN PERFORMANCE EVALUATION, GOVERNANCE, AND ANTI-CORRUPTION MEASURES IN THE PUBLIC SECTOR: STRATEGIES FOR ENHANCED ORGANIZATIONAL PERFORMANCE IN GHANA'S EDUCATION SECTOR

Grace Owusu ^{1*} and Patrick Dede Nyarkoh ²

¹ Doctoral School of Public Administration, Ludovika University of Public Service, Budapest, Hungary
<https://orcid.org/0009-0004-3490-7628>

² Doctoral School of Public Administration, Ludovika University of Public Service, Budapest, Hungary,
<https://orcid.org/0009-0006-2524-9920>
<https://doi.org/10.47833/2025.2.ART.009>

Keywords:

Anti-corruption Measures
Data-driven
Ghana Education Sector
Integrity
Organizational Performance
Evaluation.

Article history:

Received 9 June 2025
Revised 1 September 2025
Accepted 2 October 2025

Abstract

The Ghana public education sector has been facing performance inefficiencies and corruption issues. This paper focuses on using data-driven performance assessment, proper structures of governance, and anti-corruption measures to improve organizational effectiveness within Ghana's education system. By exploiting qualitative data (through comprehensive document analysis, that is, a review of existing literature, official reports and case studies), the study aims to identify key performance indicators (KPIs) that effectively measure educational outcomes and institutional integrity, determine the current performance gaps in the education sector, evaluate the effectiveness of existing governance frameworks, propose anti-corruption strategies and the essence of implementing anti-corruption measures that hinder misconduct and promote a culture of integrity within the public educational sector and, likewise, present applicable strategies for stakeholders, including government agencies, educational institutions, and civil society organizations (CSOs), to enrich performance metrics and governance practices.

By addressing the prevalent corruption and inefficiency, Ghana's public education sector can improve its organizational performance, support its development, and improve student quality and outcomes.

1 Introduction

The assessment of performance is an important process for private and public sector organizations. Organizations can register performance, monitor progress and demonstrate accountability through performance assessment [1][2].

Education is one of the sectors in the world that has become the focus of global emphasis on data-driven performance assessment. The public service generally faces various threats and challenges that make the need for a data-driven approach to governance, performance assessment and anti-corruption an inevitable trend, especially in developing countries like Ghana, which is plagued with structural and institutional challenges that are responsible for poor service delivery [5].

* Grace Owusu.
E-mail address: owusu.grace@stud.uni-nke.hu

Governance issues are mostly linked to inadequate accountability frameworks that contribute to inefficiencies and corruption [6].

Due to the weak and inefficient performance assessment systems and processes in Ghana's public service, performance assessment should be enhanced to address challenges in service delivery, particularly in the education sector. In fact, the fact that there is no robust assessment process to monitor and enhance the performance of services has made it difficult to assess and enhance learning [7].

Within the education sector in Ghana, corruption is one of the main challenges in the education sector, including bribery and favouritism. These unethical practices have contributed to poor qualities and access to educational services, thereby eroding public trust and widening inequalities [8]. There are efforts to combat corruption, but these issues persist because of sociocultural and institutional factors [9][10]. These factors contribute to the challenges in the provision of quality education and other public services, requiring substantial reforms, and stronger governance frameworks can promote transparency and accountability in the Ghana Education Sector.

Corruption in Ghana has been a persistent issue that has plagued the nation and its education system. Corruption is an insult to the rule of law and undermines the efficient and effective rendering of services to the people. The National Pre-tertiary Learning Assessment Framework (NPLAF) in Ghana under the Ministry of Education has established the National Council for Curriculum and Assessment (NaCCA). The framework details the principles and practices of pre-tertiary assessment in a quest to measure performance of the different learning areas based on the new standard-based curriculum introduced in 2012. The framework provides data on learning and teaching to inform decisions on learner performance, teacher assessment, school assessment and overall assessment of the system [11].

A shift to data-driven approaches is important in managing the challenges in Ghana's education sector. Data analytics and evidence-based decision-making give sector stakeholders the ability to identify inefficiencies, track progress and implement targeted intervention to improve the education system in the country. Such an approach becomes imperative because the education sector experiences systemic challenges and there is a need for practical solutions to enable Ghana to move towards the attainment of its educational objectives. Therefore, there is a need for comprehensive reforms and strong governance frameworks in the country's education sector to enhance transparency and accountability.

In this research paper, the specific research questions are to identify current performance gaps, assess governance frameworks and models and provide strategies to fight corruption.

2 Underpinning Theories

This paper synthesized existing theories from organizational performance, governance, and corruption, and evidence that is relevant. It outlines the ways in which data-driven performance, strong governance, and effective anti-corruption measures can be combined to improve the organizational performance of the Ghana public education sector collectively.

Public sector performance evaluation differs from that of the private sector because of the nature of public goods and the diversity of goals and stakeholders involved [12]. Unlike private companies, which are driven by profit, public agencies are driven by the desire to provide public value and meet the needs of citizens.

Public value theory, which was coined by Mark H. Moore, describes numerous ways in which a public agency or its activities can provide value for society. It is an outcome that can be achieved from two sources: first, making government more effective and useful to society, and second, contributing to society by providing specific, positive benefits to individuals and groups [13]. For the Ghana Education Sector, this means that performance evaluation must evolve to include qualitative outcomes, civic satisfaction and the perceived value of educational activities to society, rather than relying solely on easily measurable inputs or outputs. It requires a fundamental reorientation of what constitutes success and how it can be measured in the public education sector. In traditional public sector evaluation, especially within the New Public Management paradigm, there is a heavy emphasis on quantifiable outputs, efficiency gains and financial control. [14];[15]. The Public Value theory, however, redirects the focus to a much broader contribution to society and to what citizens

experience. [16]. For the Ghana Education Sector, this means going beyond just measuring things like enrollment rate and number of trained teachers.

Evidence-Based Policy (EBP) is a recent approach in public administration that takes the data-based process seriously by using data, research findings, and effective analytics to inform and guide decision-making [17]. The overarching aim of EBP is to ensure that public policy is not only effective and efficient, but that it works better and has a better impact on the lives of citizens and other stakeholders. Greater transparency and accountability are important within government operations and activities [18];[19]. Transparency and accountability are motivating factors for increasing the data-driven nature of public administration.

3 Method

3.1 Research Design

The research methodology for the study was a qualitative descriptive method. This was due to the use of secondary data from publicly available documents. It included the Education Sector Performance Report (ESPR) and the National Pre-Tertiary Learning Assessment Framework (NPLAF). This was to ensure a sound review of education sector performance evaluation in Ghana. This study also used the trend analysis of key performance indicators (KPIs) to find out what metrics can be used to measure the level of performance and show the level of integrity of Ghana's education sector.

3.2 Document analysis

Reviewed documents were publicly available and were retrieved from published and unpublished documents, namely, Ministry of Education's NaCCA 2020 assessment frameworks, Education Sector Performance Reports from 2014 to 2018, Ghana Education Service (GES) 2022 Report and relevant UNICEF publications. They were supplemented with electronic databases such as Google Scholar and Scopus to search for English publications on Ghana's education system performance carried out between 2018 and 2024. The studies were selected using key phrases such as "education system performance assessment", data-driven performance evaluation and "key performance indicators."

3.3 Trend analysis

The data for the trend analysis were obtained from the Ministry of Education. The Education Sector Performance Report (2014–2018) and the National Pre-tertiary Learning Assessment Framework (2020) were reviewed. We then used 2014 as the base year to analyze the time trend to compare the performance indicators within the 6 years (2014–2020). We hypothesized that if the Ghana Education Sector is constantly being assessed, then it will continue to improve with any minor gaps being closed by data-driven performance evaluation.

4 Results and Discussion

4.1 Performance Evaluation in Ghana Education Sector (KPIS)

According to the National Pre-Tertiary Learning Assessment Framework (NPLAF), the assessment covers:

1. **Learner assessment** systematically evaluates student performance against curriculum standards and key competencies.

2. **Teacher Appraisal** assesses teachers' effectiveness and performance to improve their practices by identifying gaps in content delivery and other educational activities. This involves self-appraisal (reflective practices), supervision from external bodies (GES), and the use of appraisal tools (Public Services Commission (PSC) staff appraisal forms).

3. **School evaluation** assesses the performance and effectiveness of educational institutions, providing reliable data on student and teacher performance, leadership, resource allocation, and infrastructure.

These evaluations take different forms, such as school, district, national and international levels.

The KPIs in the NPLAF are mostly related to the assessment of core competencies, practical skills and performance levels at various key stages [12].

However, the 2018 Education Sector Performance Report by Ghana's Ministry of Education projects the levels of academic performance between 2014/15 and 2017/18 academic years. It reflects a detailed backdated analysis of performance trends over a period of three to five years. The following are some of the intervention KPIs identified:

1. **Parent-Teacher-Ratio:** The report states that the pupil-teacher ratios across all levels of education, ranging from kindergartens, primary, and junior high schools, are critical indicators of performance data.

Table 1: Parent-Teacher Ratio (PTR)

	National (PTR)				Deprived (PTR)			
	2014/15	15/16	16/17	17/18	2014/15	15/16	16/17	17/18
KG	35	34	30	29	52	53	43	42
PRIMARY	34	34	30	29	40	40	33	32
JHS	16	16	14	14	20	19	16	15

Source: Derived from Education Sector Performance Report, 2018

The trend in PTR sheds more light on the distribution of teachers and resource mobilization. The nation as a whole for KG improved from 35 in 2014/15 to 29 in 2017/18, indicating that the class sizes are moving towards smaller sizes for effective teaching and learning. For the deprived areas, the PTR had dropped from 52 to 42 within the same period, suggesting improvements with possible teacher shortages, although it was above the national rate (Table 1).

The PTR of primary at the national level was 34 in 2014/15 to 29 in 2017/18, showing that there were more teachers for better teaching and learning as desired by the National Policy on Education. At the deprived areas the ratio reduced from 40 in 2014/15 to 32 in 2017/18 indicating that a better teacher distribution was being practiced to serve the deprived areas and to provide better quality education.

There was a stable and no change in the PTR for JHS at the national level between 2016/17 and 2017/18 (14), indicating that the capacity of teachers relative to pupil numbers was highly balanced. For the deprived areas, the PTR was narrowed down from 16:1 to 15:1. This indicates that efforts were being made to provide better teaching and learning at the deprived areas through better teacher distribution.

The trend of the PTR shows that there were serious efforts by the government to distribute teachers optimally and to improve access to education in deprived areas.

2. **Percentage of Trained Teachers:** This KPI is a key indicator of educational quality and performance, reflecting the percentage of teachers with formal training.

Table 2: % of trained teachers

	National (% of trained teachers)				Deprived (% of trained teachers)			
	2014/15	15/16	16/17	17/18	2014/15	15/16	16/17	17/18
KG	62	66	65.1	75.2	47	52	54	57.5
PRIMARY	75	78	76	83.8	56	61	65	67.6
JHS	87.8	90	88.1	91.5	78	82	83	80.8

Source: Derived from Education Sector Performance Report, 2018

From Table 2, the percentage of trained teachers in KG has risen at the national level, increasing from 62% in 2014/15 to 75.2% in 2017/18. This improvement reflects efforts to boost teacher qualifications at the basic level of education. However, in deprived areas, the percentage of trained KG teachers increased from 47% in 2014/15 to 57.5% in 2017/18. Although there is progress, the rate remains below the national average, highlighting some challenges in these areas that need to be addressed.

For primary education, the percentage of trained teachers increased from 75% in 2014/15 to 83.8% in 2017/18, which indicates improvement in primary teachers' training. While in deprived districts, the percentage of trained primary teachers increased from 56% in 2014/15 to 67.6% in 2017/18. For JHS, the percentage of trained teachers remains high at the national level, increasing from 87.8% in 2014/15 to 91.5% in 2017/18, indicating that there were enough trained junior high-level teachers for JHS education. However, in deprived districts, the percentage of trained JHS teachers decreased from 83% in 2016/17 to 80.8% in 2017/18. So, there is still a challenge to keep enough trained teachers in deprived districts, and there is a need to continue training teachers with better incentives to encourage them to work in such areas.

4.1.1 Effective KPIS for Educational Outcomes and Institutional Integrity.

From the researcher's perspective, effective KPIs identified include the utilisation of core competencies, performance indicators, PTR, and Percentage of Trained Teachers that may be linked to quality of education, while inclusiveness and equity, legal, institutional and regulatory framework, and teacher deployment systems are elements of institutional strength of the sector that point to areas of success and opportunities for improvement. These indicators collectively form a comprehensive framework for measuring educational outcomes and maintaining institutional integrity.

4.1.2 Current Gaps in the Ghana Education Sector Performance Evaluation.

Based on the National Pre-Tertiary Learning Assessment Framework and the 2018 Education Sector performance report, the current gaps in performance evaluation within the Ghana education sector are shown in the table below.

Table 3: Current Gaps in Education Sector Performance Evaluation

NPLAF

Performance Report (2018)

<i>Assessment Practices and Data Utilization</i>	<i>Teacher Training and Distribution</i>
<i>Inclusivity and Fairness:</i>	<i>Completion Rates</i>
<i>Teacher Appraisal and Professional Development</i>	<i>Textbook Availability</i>
<i>Alignment with Curriculum Standards</i>	<i>Infrastructure and Resources</i>
<i>International Benchmarking:</i>	<i>Financial Allocation</i>
<i>Core Competencies and Skills Development</i>	<i>Regional Disparities</i>

Source: Researchers construct from NPLAF and Performance Report, 2018

The NPLAF and Performance Report 2018 emphasise the vital role of technology in assessing Ghana's education system. To close data utilisation and assessment gaps, a new online assessment system and technological innovations will be introduced at the SHS level to enhance data recording and integration. This strategy will support effective, data-driven evaluation of learners, schools, and the education system. Ghana participates in international assessments such as the Trends in Mathematics and Science Study (TIMSS). However, no specific policy directs its involvement in

international large-scale assessments (ILSAs). This omission represents a missed opportunity to utilise international benchmarks for advancing national educational outcomes [20].

There is a wide disparity in the percentage of trained teachers with respect to the type of education and regions, which shows there is a need for special teacher training and deployment programmes targeting the deprived districts. There is also an underrepresentation of public primary schools in Greater Accra and other regions, where only 27.7% of the primary schools are public schools. This shows a dependency on private education, which may not be accessible to all, given a free public education system.

These performance gaps signal areas where targeted interventions and policy reforms are needed to improve the overall quality and equity of education in Ghana.

4.2 Governance and Accountability

4.2.1 Governance Structures in Ghana's Education Sector Performance Evaluation

The decentralized approach adopted by the Ghana government at the regional, district and local levels allows for more tailored and context-specific reviews. The governance structures in Ghana's education sector performance evaluation encompass:

- The Ministry of Education: The ministry is the body that provides policies and standards for performance evaluation of the education sector as a whole. It develops a framework and guidelines for the evaluation of educational outcomes and institutional performance [21]. The Ghana Education Service (GES) acted as the institution implementing Ministry of Education (MoE) activities. The service takes on the responsibility of operational performance evaluation in pre-tertiary education, assessing schools and ensuring that they conform to the national standards.
- The National Inspectorate Board: This board carries out inspections and evaluations of schools to ensure that they meet national standards in education. The National Inspectorate Board (NIB) plays an integral role in performance assessment by objectively evaluating school effectiveness and educational quality.
- Education Sector Performance Reports (ESPR): This report acts as a benchmark for this research. It provides a comprehensive overview of the performance of the education sector through an analysis of data on educational outcomes, resource allocation, and the impact of policy implementation. They help in identifying areas for improvement as well as success stories

These governance structures aim to establish a robust system for assessing education performance, striving to enhance educational outcomes and accountability throughout Ghana's education sector. At the same time, the integration of Information and Communication Technology (ICT) and data-driven decision-making comes with advantages and disadvantages in this area [22]. These technologies can improve good governance through transparency and citizen participation in public service performance. However, inadequate infrastructure and low digital literacy can limit their efficiency [23]. Thus, protection of the integrity of these governance structures is very relevant to secure sustainable educational success in Ghana. While these systems in Ghana's education sector provide a foundation for performance review, their impact can be increased by utilising data progressively, consistent accountability, and increasing the participation of the community.

4.3 Anti-Corruption Measures

4.3.1 Corruption Challenges in the Ghana Education Sector

Educational corruption significantly damages the integrity and fairness of institutions. The Ghana education sector faces serious challenges, including bribery, illegal payments, and extortion [24]. These corrupt practices diminish public trust and create a system of inequality where individuals with financial resources gain unfair advantages over deserving candidates. The identified challenges include:

1. Malpractices associated with student admissions into educational institutions.
2. Irregularities in the implementation of special programmes such as the School Feeding Programme (SFP), the capitation grant, and the Ghana Education Trust Fund (GETFund).

3. The education sector also faces corruption risks, such as collusion with suppliers, teacher absenteeism and chronic lateness, ghost workers, academic dishonesty (including inadequate invigilation, the sale of examination questions, and bribery for grades), as well as embezzlement and other financial misconduct.

The misuse of technology worsens these issues, as online tools intended to encourage transparency can be exploited for illegal purposes, intensifying the problem [23]. Strong governance and data-driven performance assessments make it easier to spot and address corrupt actions. Additionally, limited open government data impedes efforts to monitor and hold individuals accountable, hindering progress in reducing corruption in education sector [25] [26]. Consequently, targeted anti-corruption strategies should be essential in enhancing education in Ghana.

4.3.2 Data-driven Anti-corruption tools

Digital monitoring systems that promote transparency and accountability in public organisations allow real-time tracking in organisations where corruption is prevalent, like the education sector in Ghana. The tool uses sophisticated technology to capture and analyse resources, financial transactions, and performance data. Dashboards and real-time automated reports allow stakeholders to monitor resource flows, quickly identifying and addressing fraud or mismanagement. Fraud detection can play a crucial role in enabling management accountability in Ghana's education sector. They can help address unofficial payments and perceptions of corruption, which may threaten funding. Additionally, their effectiveness depends on strong governance that emphasises standards, information sharing, and accountability.

These data-driven anti-corruption tools can enhance accountability and transparency, which are essential for combating corruption in schools and can support compliance and performance metrics by fostering an environment where cheating is less likely. By utilising technology to streamline processes and strengthen oversight, Ghana's education sector can achieve better resource utilisation and improved student outcomes, demonstrating how digital solutions can bring about meaningful change.

The paper emphasises that a successful data-driven performance evaluation system in Ghana's education sector involves more than just technological solutions. It calls for comprehensive capacity building, sustained political support, and a fundamental cultural shift within institutions to move from merely collecting data to actively using it for continuous performance improvement.

5 Conclusion

Data-driven performance, governance and anti-corruption in the education sector will improve organizational performance in Ghana. Robust data management, good governance and anti-corruption measures can help improve educational outcomes and ensure fair distribution of resources.

To justify our claims on performance gap and corruption in the education sector, we have provided empirical evidence from the 2018 Education Sector Performance Report. For example, the proportion of trained teachers in the deprived areas shows a significant gap compared to the national average, showing the need for targeted interventions.

References

- [1] Taouab, O., and Issor, Z., Firm performance: Definition and measurement models. *European Scientific Journal*, Vol 15, no. 1, pp. 93-106, 2019. <http://dx.doi.org/10.19044/esj.2019.v15n1p93>
- [2] Tran, Y. T., and Nguyen, N. P., The impact of the performance measurement system on the organizational performance of the public sector in a transition economy: Is public accountability a missing link? *Cogent Business & Management*, 7(1), 1792669, 2020. <https://doi.org/10.1080/23311975.2020.1792669>
- [3] Hargreaves, A. and Braun, H., *Data-Driven Improvement and Accountability*. Boulder, CO: National Education Policy Center, 2013. Retrieved 15/11/2024 from <http://nepc.colorado.edu/publication/data-driven-improvement-accountability/>.
- [4] Mandinach, E. B., and Honey, M. (Eds.), *Data-driven school improvement: Linking data and learning*. Teachers College Press, 2008.
- [5] Ohemeng, F. L., and Akonnor, A. The new public sector reform strategy in Ghana: creating a new path for a better public service? *Public Organization Review*, Vol. 23, No. 2, pp. 839-855, 2023. <https://doi.org/10.1007/s11115-021-00600-x>

- [6] UNDP 2021, governance and politics in Ghana policy brief.
- [7] 2021 OGI Report on Education Sector Institutions, Africa Education Watch. Available: <https://africaeducationwatch.org/publication/ogi-report-on-education-sector-institutions-in-ghana>
- [8] Tanaka, S., Corruption in education sector development: a suggestion for anticipatory strategy. *International Journal of Educational Management*, Vol. 15, No. 4, pp. 158–166, 2001.
- [9] Enkins, M., Overview of corruption and anti-corruption in Ghana- U4 Anti-Corruption Helpdesk, 2019.
- [10] Desouza, M., Swanzy, E. K., and Asumeng, M., Should I Accept or Refute? Understanding the Socio-Organizational Factors Influencing Corruption in Ghana's Public Service. *Public Integrity*, pp. 1–13, 2023. <https://doi.org/10.1080/10999922.2023.2290749>
- [11] National Council for Curriculum and Assessment. National Pre-Tertiary Learning Assessment Framework (ghanaeducation.org). 2022.
- [12] Ensslin, S. R., Welter, L. M., & Pedersini, D. R. (2022). Performance evaluation: a comparative study between public and private sectors. *International Journal of Productivity and Performance Management*, 71(5), 1761-1785.
- [13] Moore, M. H., 1997). *Creating public value: Strategic management in government*. Harvard University Press.
- [14] M. Lewis, J. (2015). The politics and consequences of performance measurement. *Policy and Society*, 34(1), 1-12.)
- [15] Verbeeten, F. H., & Spek, R. F. (2015). Management control, results-oriented culture and public sector performance: Empirical evidence on new public management. *Organization studies*, 36(7), 953-978.)
- [16] Hartley, J., Alford, J., Knies, E., & Douglas, S. (2017). Towards an empirical research agenda for public value theory. *Public management review*, 19(5), 670-685.)
- [17] Head, B. W. (2008). Three lenses of evidence-based policy. *Australian Journal of Public Administration*, 67(1), 1-11
- [18] Davies, H. T., & Nutley, S. M. (Eds.). (2000). *What works?: Evidence-based policy and practice in public services*. Policy Press.)
- [19] Kay, A. (2011). Evidence-based policy-making: The elusive search for rational public administration. *Australian Journal of Public Administration*, 70(3), 236-245.
- [20] Ampiah, J. G., Kwaah, C., Yiboe, K. T., & Ababio, B. T., Improving quality basic education in Ghana: Prospects and challenges of the school performance improvement plan. *Study on international cooperation in education policy reforms that translate into qualitative improvement*, pp. 229-254, 2013.
- [21] Akyeampong, K., Accountability in Ghana's Education Sector, UNESCO: United Nations Educational, Scientific and Cultural Organisation. France. Retrieved from <https://coilink.org/20.500.12592/2jh1v5> on 20 November 2024. COI: 20.500.12592/2jh1v5, 2017.
- [22] Sachdeva, S., Gombas, A., and Arthur, A. Tackling the learning crisis: Data-driven decision-making in Ghana's education system: The impact of data-driven decision-making on learning, 2024 UNICEF Ghana. Available: <https://www.unicef.org/ghana/> <https://www.unicef.org/ghana/stories/tackling-learning-crisis-data-driven-decision-making-ghanas-education-system>
- [23] Adam, I., and Fazekas, M., Are emerging technologies helping win the fight against corruption? A review of the state of the evidence. *Information Economics and Policy*, Vol. 57, 100950, 2021. <https://doi.org/10.1016/j.infoecopol.2021.100950>
- [24] GII & GACC Policy Brief. Available: <https://tiighana.org/dmsdocument/123-addressing-corruption-risk-in-the-achievement-of-the-sdg-4-education-sector-in-ghana>
- [25] Khurshid, M. M., Open Government Data Adoption Model for Public Sector Organizations in Pakistan (Doctoral dissertation, Universiti Teknologi Malaysia), 2022.
- [26] Ussama Majeed, M., Mahmood, A., Molnar, E., & Murtaza, S. A. (2021). Social media analytics lens: A study on consumer perceived risk to share information on social media networks. *Humanities & Social Sciences Reviews*, 9(2), 258–268. <https://doi.org/10.18510/hssr.2021.9227>