



Comparative Effects of Teacher Reward Systems on Performance in Basic Education: Evidence From Sub-Saharan Africa

Abstract: This article examines how reward systems affect the performance of primary school teachers in Ghana, focusing on both financial and non-financial incentives. The quality of education is directly tied to teacher quality, yet few African nations have the financial resources to offer incentive packages that keep teachers satisfied. This study addresses an urgent need for evidence-informed strategies to recruit and retain teachers. A concurrent explanatory mixed-methods design was used, with three hundred and sixty-seven (367) teachers selected from public and private schools. Questionnaires were administered, and the data were analyzed using Structural Equation Modeling (SEM) in SmartPLS 3, supplemented by SPSS statistical tests. Convenience sampling was used to select participants. The results indicate that both financial (e.g., bonuses or merit pay) and non-financial (e.g., recognition and professional development opportunities) rewards are statistically associated with teacher motivation, a key predictor of teacher performance. Although private schools offered a wider variety of rewards, the public-school sector struggled to overcome resource constraints and bureaucratic barriers that would have ensured incentives had a greater impact on change. To address these issues, we believe that the legislator and the school director should establish a comprehensive reward package and system, adjust management fees and the non-reward system, remove administrative barriers, ensure fairness, and implement a differentiated reward system. This study provides empirical evidence from Africa that a locally adapted incentive system can effectively stimulate teacher motivation and improve learning outcomes.

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Article History:

Received Date : Jan 30, 2026

Revised Date : Feb 17, 2026

Accepted Date : Mar 05, 2026

Published Date : Mar 06, 2026

Keywords

Reward systems, teacher performance, mixed-methods approach, Ghanaian education, structural equation modeling, multi-group analysis

1.Introduction

A reward can raise performance (Armstrong & Taylor, 2020). Rewarding someone with something in return for their work or service is a common practice, used to motivate staff members (Armstrong & Taylor, 2020). Employers award it to workers whose work meets predetermined standards. Reward is crucial because it plays a significant role in the relationship between an employer and an employee (Chiang & Birtch, 2012). The term "reward system" refers to the framework and procedures used to determine employee incentive outcomes (Chiang & Birtch, 2012). The reward system establishes the basic pay, employee benefits, pay structure, salary level, and non-cash awards (Yamoah, 2020). To attract



and retain skilled, driven individuals, organizations must have robust compensation programs (Terera & Ngirande, 2014).

An organization's reward system determines how its employees' intrinsic and extrinsic needs are satisfied and how their performance is enhanced. To evaluate these intrinsic and extrinsic demands and establish efficiency and effectiveness in reward management, several businesses have developed reward systems that incorporate both monetary (direct and indirect) and non-financial rewards (Yamoah, 2020). Numerous studies on rewards and reward systems as a human resource phenomenon have been conducted by researchers focusing on both financial and non-financial reward systems (Armstrong, 2014). For instance, Wasiu (2014) claimed that over the past decade, it has become widely acknowledged that business organizations have performance-related remuneration schemes. There are still uncharted territories despite the available knowledge. Chiang & Birtch (2012) state that although some studies have concentrated on specific reward domains, such as reward systems, a large portion of reward management research has been on "financial and non-financial," "intrinsic and extrinsic," and "financial and non-financial" reward systems (Neal, 2011). However, it is essential to consider whether different types of incentive schemes motivate staff members equally. According to Chiang and Birtch (2012), scholars should expand their conceptual framework to include other activities related to reward systems, such as how reward preferences influence broader reward management procedures.

The goal of this research is to investigate the connection between various reward schemes and the effectiveness of educators working in basic education. The purpose of this study is to evaluate the effects of different compensation schemes on the overall performance of basic

schoolteachers. By comparing several compensation schemes, it will be possible to assess how effectively they enhance teacher performance and identify the most effective ways to motivate and inspire educators in Ghana. The study's conclusions will inform legislative decisions and educational reforms regarding teacher motivation and compensation. It will provide valuable insights into creating and executing incentive programs that enhance teacher effectiveness, increase job satisfaction, reduce teacher attrition, and ultimately improve the quality of instruction in Ghana's basic schools.

Statement of the Problem

In basic education, the effectiveness of reward systems in motivating and improving educator performance is a critical concern, especially in the nuanced contexts of public and private schools in Ghana. While rewarding contributions are established, the impact of different schemes on performance remains unclear, necessitating comprehensive research. Educators play a vital role in shaping young minds, but they face challenges such as resource constraints and societal expectations. Reward systems, comprising financial and non-financial incentives, aim to motivate and retain educators. Understanding how these mechanisms influence performance is crucial for optimizing educational outcomes. Public schools often struggle with limited resources, while private schools may have more flexibility. Exploring these dynamics can offer insights into educator motivation. Despite theoretical understanding, empirical research in Ghana is lacking, highlighting the need for contextually relevant studies. This research examines the relationship between reward schemes and educator performance, accounting for school ownership, to inform policy and practice in Ghanaian basic education.



Hypotheses

H1: Performance-based rewards positively influence employee performance in basic schools.

H2: Non-performance-based rewards positively influence employee performance in basic schools.

Significance of the Study

This study is significant for several stakeholders. The findings will inform policy decisions on teacher motivation and compensation, potentially improving the overall quality of education in basic schools. Insights from this study will help school administrators design and implement effective reward systems to enhance teacher performance and job satisfaction. Understanding the impact of different reward schemes can empower teachers to advocate for fair and adequate compensation, ultimately improving their morale and performance. This study contributes to knowledge of reward systems and their influence on employee performance, particularly in the educational sector.

Scope of the Study

This study focuses on basic schoolteachers in Ghana and examines the impact of different reward schemes, including performance-based and non-performance-based rewards, on employee performance. The research is delimited to public and private basic schools in Ghana, ensuring a comprehensive understanding of the reward dynamics within these settings.

2. Literature Review

Overview of Educational Reward Systems

In education, reward systems are crucial in determining teachers' motivation, output, and job satisfaction. Armstrong and Taylor (2020) emphasize the importance of reward systems in enhancing performance through effective

management practices. In the educational setting, these systems comprise a range of methods designed to incentivize educators and improve their engagement and productivity.

Merit pays, also known as performance-based compensation, is a common element of educational reward systems. Ismail et al. (2016) highlight its impact on teachers' job performance, especially in secondary schools. By linking monetary compensation to specific performance indicators, such as student learning objectives and teacher assessments, performance-based pay provides educators with concrete motivation to exceed expectations. The usefulness of performance-based compensation is still up for discussion, however. In discussing the possible repercussions of pay-for-performance programs, Neal (2011) argues that their effects can vary depending on management styles and environmental conditions. Advocates of performance-based pay argue that it enhances teachers' alignment with organizational goals, but detractors worry that it may erode intrinsic motivation and teamwork. Non-financial incentives are just as important as monetary ones for inspiring teachers. Among the non-cash benefits provided to educators are recognition initiatives, chances for professional growth, and opportunities for career progression (Yamoah, 2020). According to Pink (2009), these incentives consider internal motivating elements, such as the need for autonomy, mastery, and purpose.

According to Chiang and Birtch (2012), to meet educators' diverse demands and motivations, reward systems must adopt a balanced approach that incorporates both monetary and non-monetary incentives. They contend that an effective compensation scheme may foster an environment in which employees are highly engaged, satisfied with their jobs, and want to stay with the company. However, organizational objectives and contextual factors must be carefully considered when designing



and implementing classroom reward systems. According to Marsden (2009), obstacles to implementing performance-related compensation plans may include concerns about corporate culture, equity, and justice. Therefore, educational institutions must employ evidence-based procedures and engage with stakeholders to ensure the effectiveness and equity of incentive systems.

Educational Landscape in Ghana

Ghana's educational system comprises a combination of public and private institutions, with the government primarily responsible for providing basic education. Although progress has been made in increasing access to education, issues such as overcrowded classrooms, inadequate infrastructure, and unequal resource allocation continue to impact the quality of instruction (Asare, 2019).

Ghanaian educators are tasked with various duties, including teaching students' morals, conveying knowledge, and fostering intellectual and social growth. However, low pay, limited opportunities for professional growth, and inadequate instructional tools frequently demotivate teachers and hinder their ability to perform their jobs effectively (Djangmah, 2016). Reward systems help improve educators' motivation and job satisfaction by recognizing and rewarding their contributions. Ghana's reward systems include financial incentives, such as performance-based pay and allowances, as well as non-financial incentives, including recognition, opportunities for career advancement, and access to professional development programs (Osei, 2018).

Budgetary restrictions, administrative roadblocks, and cultural norms all hinder the successful implementation of reward systems in Ghanaian schools. The differences in finance and autonomy between public and private schools may also impact how reward systems

are created and run. Nevertheless, there are chances to overcome these obstacles and improve the efficacy of incentive systems through creative strategies, including public-private partnerships and community involvement (Akyeampong et al., 2014). Although reward systems are acknowledged as important, there has not been much empirical research on their effectiveness in Ghanaian educational settings. Previous research has predominantly focused on anecdotal evidence or small-scale interventions, underscoring the need for a thorough investigation to methodically assess the effects of various reward systems on teacher motivation, performance, and, ultimately, student outcomes.

Addressing the issues facing Ghana's education system and enhancing educational fairness and quality require an understanding of the dynamics of classroom reward systems. To support and incentivize educators and ultimately improve education in Ghana, stakeholders can develop evidence-based policies and practices by examining the distinct contextual elements that influence reward systems and conducting thorough empirical research.

Theoretical Structure of Incentive Systems

In education, reward systems are crucial for motivating teachers and enhancing their performance within teams. The theoretical framework of reward systems offers insights into the motivational processes that underlie these systems, drawing on various psychological theories and models. According to Vroom's (1964) expectation theory, people are driven to take actions they think will result in their desired results. Expectancy theory has gained educational support, with research indicating that teachers become more motivated when they perceive a clear relationship between their performance, efforts, and incentives (Latham & Locke, 2007).



For instance, Latham and Locke's (2007) study showed that motivating educators with clear performance goals and associated rewards enhanced their performance.

Deci and Ryan (1985) developed the Self-Determination Theory (SDT), which highlights intrinsic motivation, autonomy, competence, and relatedness as important factors influencing behavior. Deci et al. (2017) have highlighted the importance of intrinsic motivation in promoting educator satisfaction and engagement in recent educational research. Deci et al. (2017), for example, found that teachers who felt their work was meaningful and aligned with their values were more engaged and intrinsically motivated in their positions.

Bandura (1986) developed the social cognitive theory, which powerfully highlights the impact of social reinforcement and observational learning on behavior. Education research has explored how social modeling and recognition influence teachers' motivation (Hoy & Woolfolk, 1990). Hoy and Woolfolk (1990), for example, found that teachers were more motivated when they saw their peers honored and rewarded for effective teaching. According to Adams' (1965) equity theory, individuals seek fairness and equity in their interactions and relationships. The role of perceived fairness in incentive systems and its effect on teacher motivation has become a recent focus of educational research (Colquitt et al., 2013). Colquitt et al. (2013) discovered, for example, that teachers showed higher motivation levels when they believed their rewards were fair and comparable to those of their colleagues. Based on Locke and Latham's (1990) goal-setting theory, performance and motivation can be boosted by setting clear, challenging goals. Educational research has assessed the effectiveness of goal-oriented reward systems in motivating teachers and enhancing student performance (Hattie & Timperley, 2007). Hattie

and Timperley (2007) found, for example, that teachers who received rewards tied to specific performance goals demonstrated greater achievement and job satisfaction. Many psychological theories are incorporated into the framework to explain the motivational mechanisms behind incentive systems in education. Recent studies emphasize the importance of aligning educators' intrinsic motivation with incentive systems, providing opportunities for social reinforcement and recognition, and ensuring that rewards are distributed fairly and equitably.

Contextual Elements in Teaching

Contextual factors are crucial in shaping educational practices and outcomes, as they influence various aspects of teaching and learning within diverse institutional and socio-cultural contexts. Elements such as socioeconomic status, cultural diversity, educational policies, technological use, and teacher professional development warrant consideration considering this fundamental premise. Students from disadvantaged backgrounds often face barriers to academic success that are attributed to their socioeconomic status (SES), which significantly influences educational opportunities and outcomes (Sirin, 2005). Empirical evidence indicates a correlation between low socioeconomic status (SES) and diminished academic achievement, increased dropout rates, and restricted access to resources and support services (Reardon, 2011). Sirin (2005) observed that students from lower-income families tend to perform more poorly on standardized assessments and achieve less academic success than their counterparts from higher socioeconomic backgrounds.

Cultural diversity in educational settings requires culturally responsive teaching methods to engage students from diverse backgrounds (Gay, 2010). Research emphasizes the importance of curriculum designers and



teachers valuing and acknowledging students' cultural identities, languages, and experiences (Banks, 2015). For example, Gay (2010) advocated for inclusive learning environments and student empowerment through culturally relevant education. Educational policy frameworks shape the funding, governance, and structure of educational institutions, thereby affecting student outcomes and teaching strategies (Levin, 2012). Studies show how government initiatives, such as curriculum reforms, accountability measures, and standardized testing, influence educational practices and disparities (Lubienski & Lubienski, 2013). Levin (2012) examined how decentralization policies affected school autonomy and performance, underscoring the need for policies adaptable to specific contexts. Although integrating technology into education has the potential to be revolutionary, its success depends on a range of contextual factors, including infrastructure, teacher preparation, and curriculum coherence (Ertmer et al., 2015). Research shows that when technology integration aligns with instructional goals, it can enhance student engagement, teamwork, and critical thinking skills (Mishra & Koehler, 2006). Ertmer et al. (2015) explored, for example, how professional development and teacher beliefs influence the effective implementation of technology in education.

Although its effects vary depending on contextual factors, subject relevance, duration, and support systems, teacher professional development (PD) is crucial for improving instructional techniques and student achievement (Darling-Hammond et al., 2017). Research emphasizes the importance of tailored assistance, collaborative learning communities, and job-embedded professional development in addressing the diverse needs and situations of teachers (Guskey & Yoon, 2009). For example, Darling-Hammond et al. (2017) examined effective professional

development models that focus on ongoing support, feedback, and reflection to boost teacher confidence and student success. The enormous influence of contextual factors on educational practices and outcomes highlights the importance of considering socioeconomic, cultural, policy, technological, and professional dimensions in educational research and policymaking.

Research Gap and the Need for an Extensive Investigation

Identifying research gaps and conducting thorough investigations are essential for expanding knowledge and addressing pressing problems in a specific subject. Recognizing these gaps in education can inform research priorities and guide initiatives to improve instructional strategies and student outcomes. Although considerable research has been conducted on the factors that influence teacher motivation, a dearth of thorough studies persists, failing to consider the contextual elements unique to diverse educational contexts and to integrate multiple theoretical perspectives (Klassen & Chiu, 2010). The complex interactions among interpersonal, organizational, and sociocultural factors that shape teacher motivation and work satisfaction are often overlooked in prior research (Watt & Richardson, 2007). Therefore, a thorough investigation is necessary to elucidate the complex dynamics of teacher motivation and to offer guidance for enhancing educators' performance and well-being.

Research examining the intersectionality of involvement across varied student groups and educational environments is scarce despite the increased emphasis on student engagement as a crucial determinant of learning outcomes (Fredricks et al., 2004). Most of the work now in publication focuses on conventional metrics of engagement, such as participation and attendance, while overlooking sociocultural and motivational elements that influence



student involvement (Skinner & Belmont, 1993). Therefore, a thorough investigation is necessary to explore the complex aspects of student involvement and identify practical strategies for promoting active learning and academic achievement.

Despite recent progress in addressing educational fairness, socioeconomic and demographic inequities persist in access, opportunity, and outcomes (Reardon et al., 2019). Previous studies frequently take a deficit-oriented stance, emphasizing achievement inequalities rather than systemic obstacles that sustain inequality (Ladson-Billings, 2006). To investigate the underlying causes of educational disparities, evaluate the effectiveness of intervention initiatives, and support legislative changes that support fair access to high-quality education for all students, a thorough study is required.

Research assessing the efficacy of technology integration programs and identifying best practices for improving learning outcomes is urgently needed, given the explosive growth of technology in education (Mouza & Lavigne, 2012). Although several studies have demonstrated how instructional technology can increase student achievement and engagement, methodological flaws and contradictory results underscore the need for a thorough empirical study (Hattie, 2009). Therefore, a thorough investigation is necessary to assess the impact of technology integration on instructional strategies, curriculum development, and student learning in diverse educational settings.

Performance-Based Pay Structures

Performance-based pay schemes are a cornerstone of human resource management, designed to encourage staff members to increase their output and support company objectives. Performance-based pay plans for teachers have garnered considerable interest in

the educational setting as a potential means of enhancing student achievement.

Expectancy theory, which posits that people are motivated to exert effort when they believe it will yield desirable outcomes, often serves as the foundation of performance-based pay systems (Vroom, 1964). This theory posits that explicitly tying remuneration to performance can improve motivation by establishing a clear relationship between effort and reward (Lawler, 1971). Opponents argue that adopting performance-based pay schemes may reduce intrinsic motivation and have unforeseen effects, such as limiting the scope of education to subjects that can be tested or fostering a competitive rather than collaborative culture (Deci et al., 1999).

Mixed results have emerged from research on the efficacy of performance-based pay schemes in the classroom. According to some research, these systems can enhance student achievement, teacher motivation, and retention rates, particularly when combined with opportunities for professional growth and leadership development (Springer et al., 2016). For instance, a 2016 meta-analysis by Springer and colleagues found modest to moderately favorable effects of performance-based compensation on academic outcomes. Other research, however, has revealed little to no effect on student achievement or teacher effectiveness (Dee & Wyckoff, 2015). The effectiveness of performance-based pay efforts may be mediated by contextual factors, including organizational culture, performance measurement criteria, and pay system design (Murnane & Cohen, 1986). Several issues and obstacles exist in implementing performance-based compensation schemes in the educational sector. Unintended effects, including system gaming or curriculum limitations that focus on tested areas, are a cause for concern (Hanushek & Rivkin, 2012). Furthermore, because teaching and learning



have many facets, effectively and fairly assessing teacher effectiveness is inherently problematic (Donaldson et al., 2008). Furthermore, the implementation and success of performance-based compensation programs may be hindered by opposition from teacher unions, concerns about fairness and justice, and financial constraints (Lavy, 2015).

Performance-based compensation schemes are a contentious yet potentially effective strategy for rewarding teacher effectiveness and improving student outcomes. Although theoretical frameworks, such as expectation theory, justify these systems, empirical data suggest that their efficacy varies depending on implementation tactics and contextual circumstances.

Teachers' Performance and Reward Structures

In education, reward systems play a crucial role in influencing teacher performance and, consequently, student achievement. Performance-based pay plans directly link a teacher's salary to students' academic success or other specific performance indicators. Research indicates that financial incentives can have mixed effects on educators' performance over the long term, even if they initially boost motivation (Dee & Wyckoff, 2015). While performance-based pay has been associated with improved student outcomes in some cases, particularly in courses involving standardized testing, in other situations, it has shown no clear impact or has led to unintended consequences, such as narrowing the curriculum (Lavy, 2015).

Non-financial incentives, such as professional development opportunities, career advancement options, and recognition, have a significant impact on educators' performance. These rewards fulfill intrinsic motivators, including the need for career satisfaction and personal growth. Research indicates that non-financial rewards can significantly impact

teachers' job satisfaction, commitment, and teaching quality when they align with their professional goals and interests (Podgursky & Springer, 2007).

Contextual factors such as leadership styles, socioeconomic situations, and school culture all influence the effectiveness of reward systems. Reward systems are more likely to be successful in improving teacher performance in schools with collaborative cultures, supportive leadership, and adequate resources (Leithwood & Jantzi, 2008). Additionally, educators' perceptions of rewards and their motivational effects are shaped by the sociocultural context, highlighting the importance of culturally sensitive incentive programs (Khalil, 2019).

Despite numerous studies on reward systems, gaps remain in our understanding of how they affect teachers' performance across diverse educational settings, including communities with different cultural backgrounds or limited resources. To better understand how different reward systems influence teacher motivation, instructional strategies, and student achievement in diverse sociocultural and economic contexts, further research is needed. Bonuses, allowances, and pay increases are common financial inducements for teachers in Ghana. However, equal incentive distribution is hindered by differences in pay between public and private institutions and between urban and rural areas (Ankomah, 2019). Problems such as subjective performance ratings and delayed payments have also hindered the effectiveness of performance-based pay schemes, despite efforts to implement them (Amankwaa, 2017). Non-monetary incentives, such as recognition, opportunities for professional growth, and career advancement, are just as crucial in inspiring Ghanaian educators. Research indicates that teachers' job satisfaction and commitment are significantly influenced by factors such as access to ongoing professional



development opportunities and a supportive school administration (Amoah, 2018). Concerns still exist, though, about the accessibility and fair distribution of these incentives among various geographic areas and school types.

Ghana's educational system faces various contextual issues, including inadequate infrastructure, limited resources, and cultural norms that undermine the effectiveness of reward systems. Comprehensive incentive program implementation is often hampered by funding constraints, especially in rural and underserved areas (Asare-Kyei & Onu, 2019). Furthermore, cultural elements can affect teachers' motivation and morale, such as public views of teaching as a low-status profession (Asante, 2016). Although reward systems in Ghanaian education have been studied, there remains limited knowledge of their impact on teachers' performance and retention, particularly in isolated and underprivileged areas. Additional research is required to examine the efficacy of incentive programs and instructors' opinions and experiences with reward systems in various geographic locations and educational settings (Adu-Gyamfi & Addei, 2020).

Research on reward systems has provided evidence-based insights that may guide educational strategies to enhance teacher motivation and improve the quality of instruction in Ghana. Policy interventions should emphasize the professional development needs of teachers in resource-constrained situations, address equity concerns in incentive distribution, and improve the transparency and efficiency of performance evaluation processes (Boateng, 2020). In Ghanaian education, reward systems have a significant impact on teachers' performance; however, many contextual factors also influence their effectiveness. By addressing issues with both financial and non-financial incentives, policymakers can create an

environment that promotes teacher motivation and enhances student learning outcomes nationwide.

3. Methodology

This study employed a mixed-methods approach to investigate how reward systems influence employee performance, moderated by school type, in public and private schools in Ghana. The study population comprised staff members working in both public and private schools in Ghana. A total of 495 questionnaires were distributed to staff members, with 278 from public schools and 217 from private schools. Convenience sampling was used to select participants from both public and private schools based on accessibility and willingness to participate. The study used a structured questionnaire adapted from Chiang's (2005) reward systems framework. The questionnaire consisted of items measured on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Questionnaires were distributed to eligible participants in both public and private schools. Participants were briefed on the purpose of the study and provided informed consent before completing the questionnaire. Completed questionnaires were collected at a later date to ensure thorough responses. Quantitative data from the questionnaires were analyzed using Statistical Package for the Social Sciences (SPSS) version 23. Descriptive statistics, including frequency distributions, were used to summarize respondents' background information. Inferential statistics, specifically structural equation modeling (SEM), were employed to explore the relationship between reward systems and employee performance, moderated by school type, using SmartPLS 3 software.

4. Analysis and Findings

A total of 495 participants were targeted for the survey. Using the Statistical Package for Social Sciences (SPSS) software (version 20) and Excel,



data from 367 respondents were successfully collected, cleaned, entered, and analyzed. Consequently, the study results and analyses are based on responses from 367 individuals, yielding a response rate of 74 percent and a non-response rate of 26 percent (as shown in Table 1).

Table 1: Summary of Data Collection and Response Rate

Data Collection		
Questionnaires Distributed	Questionnaires Returned	Response Rate
495	367	74%

Table 2: Demographic Characteristics of Respondents

Demographics	Frequency	Percentage
Gender		
Male	106	28.9
Female	260	70.8
Missing	1	.3
Total	367	100.0
Age		
16-25	65	17.7
26-35	132	36.0
36-45	104	28.3
46+	65	17.7
Missing	1	.3
Number of Years in Organization		
less than a year	59	16.1
1 to less than 2 years	38	10.4
2 to less than 5 years	73	19.9
5 to less than 10 years	74	20.2
10 years or more	123	33.5
Total	367	100.0
Educational Level		
WASSCE	100	27.2
certificate 'A'	23	6.3
Diploma	86	23.4

Degree	147	40.1
postgraduate degree	9	2.5
Na	2	.5
Total	367	100.0
Marital Status		
Single	153	41.7
Separate	17	4.6
Divorced	2	.5
Widowed	9	2.5
Married	186	50.7
Total	367	100.0
Current rank		
Assistant Director I	4	1.1
Assistant Director II	26	7.1
Principal Superintendent	110	30.0
Senior Superintendent I	30	8.2
Senior Superintendent II	13	3.5
Superintendent I	5	1.4
Superintendent II	5	1.4
Na	174	47.4
Total	367	100.0
Current position		
Teacher	367	100.0
Total	367	100.0
Type of School		
Public	201	54.8
Private	166	45.2
Total	367	100.0

Table 2 presents the study's demographic characteristics, including frequency and percentage distributions. The majority of respondents were female, accounting for approximately 70% of the total, while



approximately 30% were male. As a result of this gender distribution, the majority of the data collected will reflect a feminine perspective. According to the age distribution, the majority of respondents were between 26 and 35. This was followed by respondents aged 35-45, who accounted for 28% of the total. Respondents aged 16 to 25 and 46 and up each accounted for 17% of the total.

The findings indicate that the majority of respondents (about 33%) had worked in the education sector for at least 10 years. Some individuals had worked for 5 to 10 years or less, accounting for 20% of the total. Respondents who had worked for 2 to less than 5 years accounted for 19 percent of the total, while those who had worked for 1 to less than 2 years accounted for 10%. Despite this, 16% of those polled had worked for less than a year.

Table 2 equally shows the respondents' educational backgrounds. The majority of respondents held a college diploma (40 percent). WASSCE graduates (27 percent) and

Diploma holders come in second and third, respectively (23 percent). Advanced-level certifications and postgraduate degrees account for 6% and 3% of the total, respectively. The results show a largely settled and professionally diverse group of teachers. Most respondents were married, with a sizable number also single, while only a few were separated or widowed, suggesting a fairly stable social background among the participants. All respondents were teachers from both public and private schools, providing the study with a balanced institutional perspective. They also represented a wide range of professional ranks, from junior to senior positions, indicating that the views captured in the study reflect experiences across different levels of responsibility and authority within the education system.

Measurement model evaluations

To assess the appropriateness of PLS-SEM, we examined the items and constructs for reliability and validity.

Table 3: Structure loadings and reliability statistics

Construct	Items		Loadings	Public Loadings	Private Loadings
Performance-based Rewards		CR	0.895	0.923	0.859
		CA	0.854	0.895	0.803
		AV E	0.633	0.705	0.555
	PBR1		0.878	0.915	0.815
	PBR2		0.708	0.823	0.735
	PBR3		0.747	0.774	0.782
	PBR4		0.809	0.843	0.799
	PBR6		0.823	0.838	0.831
	PBR7		0.716	0.764	0.727
Non-performance-based Rewards		CR	0.876	0.900	0.846
		CA	0.822	0.861	0.774
		AV E	0.586	0.645	0.524
	NPBR 1		0.834	0.878	0.782



	NPBR 2		0.748	0.814	0.74
	NPBR 3		0.792	0.819	0.782
	NPBR 4		0.764	0.807	0.728
	NPBR 5		0.782	0.786	0.777
Employee Performance		CR		0.908	0.876
		CA		0.877	0.831
		AVE		0.621	0.542
	EPF1		0.716	0.746	0.787
	EPF2		0.800	0.787	0.806
	EPF3		0.768	0.815	0.713
	EPF4		0.791	0.818	0.762
	EPF5		0.774	0.826	0.734
	EPF6		0.719	0.732	0.709

Table 3 presents model assessment results that provide the basis for examining the indicator and consistency reliability, as well as convergent and discriminant validity of observed and unobserved variables for the overall group and split groups. The results show that all outer loadings in the overall and split groups exceed the 0.7 threshold for examining indicator reliability. This indicates indicator reliability, which aligns with a study that posits that the outer loading of an indicator should be at least 0.7 (Hair et al., 2019). Also, the results show that the Cronbach Alpha (CA) and Composite Reliability (CR) values of all constructs exceeded the 0.7 thresholds suggested by Hair, Ringle, and Sarstedt (2012) to attain acceptable construct reliability and internal consistency. Finally, the results in Table 3 revealed that all constructs had AVEs greater than 0.5, suggesting that they exhibit sufficient convergent validity (Sarstedt et al., 2014).

Furthermore, to assess the measurement model's discriminant validity, the study employed the Heterotrait-Monotrait (HTMT)

criterion, a more recent approach (Henseler et al., 2015).

Table 4: Discriminant validity via the HTMT criterion

	PBR	NPBR	EPF
<i>HTMT (Full)</i>			
PBR	-		
NPBR	0.725	-	
EPF	0.809	0.776	-
<i>HTMT (Public)</i>			
PBR	-		
NPBR	0.770	-	
EPF	0.591	0.793	-
<i>HTMT (Private)</i>			
PBR	-		
NPBR	0.792	-	
EPF	0.778	0.801	-

Table 4 presents the results of the HTMT criterion for assessing the discriminant validity of the measurement model's latent factors. As Henseler et al. (2015) note, this criterion provides a ratio based on the correlation between two latent factors to assess

discriminant validity. Various studies have proposed that an HTMT ratio below 0.85 is ideal for confirming discriminant validity (Kline, 2011; Henseler et al., 2015). In line with these recommendations, the study provides evidence of discriminant validity, as all ratios in both the whole and split groups are below the recommended threshold of 0.85.



Figure 2: Results of path coefficients of the structural model

It could be observed in Figure 2 that two exogenous constructs, namely performance-based rewards (PBR) and non-performance-based rewards (NPBR), jointly explained about 56.7% of the variation in employee performance (EPF).

Multigroup Analysis

To perform a multi-group analysis by comparing the results between public schools and private schools, we employed the MICOM test, which is a 3-step assessment process, namely:

- configured invariance.
- compositional invariance.
- equal mean and variance assessment, proposed by Henseler et al. (2016).

The motive behind MICOM is to ensure no dissimilar group-specific model estimations resulting from the distinctive content and the meaning of the latent variables access group (Henseler et al., 2016; Sarstedt & Ringle, 2010). Accordingly, if the above three conditions are met, then a comparison and interpretation of the results can be done in a multi-group analysis. Hence, we next present the results of the MICOM test in Tables 5 and 6.

Table 5: MICOM results

Step II	Original Correlation	CP M	5%	p-values
PBR	0.997	0.996	0.992	0.214
NPBR	0.996	0.996	0.989	0.329
EPF	0.998	0.997	0.992	0.697
CPM=Correlation permutation means				

Table 5 presents the results of compositional invariance, thus Step II of the MICOM. According to Henseler et al. (2016), Step II employs the permutation technique to assess the original correlation, which is expected to be greater than or equal to 0.05. In this study, all the original correlation values are greater than 0.05 quantile values, suggesting the achievement of compositional invariance.

Table 6: MICOM results (Equal mean and variance)

Step IIIa	Mean - OD (Pubic - Private)	Mean - PMD	95% CI	p-values
PBR	-0.007	0.007	[-0.365, 0.377]	0.976
NPBR	0.100	0.005	[-0.397, 0.407]	0.614
EPF	0.162	0.011	[-0.356, 0.393]	0.405
Step IIIb	Variance - OD (Pubic - Private)	Variance - PVD	95% CI	p-values
PBR	0.187	-0.005	[-0.372, 0.362]	0.333



NPBR	0.175	0.003	[-0.433, 0.450]	0.465
EPF	0.059	0.000	[-0.441, 0.489]	0.798
CPM=Correlation Permutation Mean; OD=Original Difference; PMD=Permutation Mean Difference; PVD=Permutation Variance Difference				

Results in Table 6 present the Step III(a) and III(b) results that aid the assessment of equal means and variances. As indicated by Henseler et al. (2016), there is full measurement invariance when the mean and variance original difference falls within a 95% confidence interval. Consequently, it could be observed that the results established full invariance since the conditions in Step III(a) and III(b) have been met, and also all the p -values are greater than 0.05.

Hypothesis testing

The significance of the various hypothesized paths was examined, and the results are presented in Table 7.

Table 7: Hypothesis results

	Path Coefficient	Standard Deviation	t -statistics	p -values
<i>Full</i>				
PBR → EPF	0.477	0.102	4.654	0.000
NPBR → EPF	0.329	0.109	3.019	0.003
<i>Public</i>				
PBR → EPF	0.134	0.170	1.034	0.279
NPBR → EPF	0.182	0.163	1.118	0.264
<i>Private</i>				
PBR → EPF	0.630	0.142	4.420	0.000
NPBR → EPF	0.389	0.137	2.839	0.005

The results in Table 7 revealed that all hypotheses under the complete model are

statistically significant, thus suggesting that all two direct hypotheses were supported. In particular, the results established that performance-based rewards (PBR) have a positive effect on employee performance (EPF) ($\beta = 0.477; p < 0.05$), thus giving credence to accept the hypothesis H_1 . Also, the analysis shows that non-performance-based rewards (NPBR) have a positive influence on employee performance (EPF) ($\beta = 0.329; p < 0.05$). Therefore, indicating that hypothesis H_2 is supported.

With regards to the group effects, the analysis established that performance-based rewards (PBR) within the public school group do not influence employee performance (EPF) ($\beta = 0.134; p > 0.05$); And also, the results demonstrated that non-performance-based rewards (NPBR) within the public school group have no relationship with employee performance (EPF) ($\beta = 0.182; p > 0.05$). However, results established that performance-based rewards (PBR) within the private school group exert a strong positive influence on employee performance (EPF) ($\beta = 0.630; p < 0.05$), and also non-performance-based rewards (NPBR) within the private school group have a positive effect on employee performance (EPF) ($\beta = 0.389; p < 0.05$).

5. Conclusions and Implications

Conclusions

This study has demonstrated that the reward systems have a significant impact on the performance and motivation of primary school teachers in Ghana. Applying a convergent parallel mixed-methods approach, which combines quantitative empirical data from a structural equation model with qualitative



findings, the study highlights both the positive and negative effects of incentive structures in private and public schools. The evidence indicates that pay-for-performance systems, specifically merit pay and bonuses, are effective in enhancing short-term productivity by establishing a transparent connection between employees' activities and measurable efforts," they observe. However, as the expectation of monetary rewards diminishes, so too does the motivating effect of these bonuses. Moreover, non-material factors such as gratitude, opportunities for career advancement, and clearly defined career pathways play a significant motivational role. These elements not only boost teachers' job satisfaction but also support ongoing differentiation and commitment to teaching excellence.

A comparative analysis of reward structures, considering specific conditions, shows that differences between school sectors are subtle. While private schools generally have greater flexibility and innovation in their reward mechanisms, public schools face resource constraints and bureaucratic restrictions that limit the effectiveness of incentive programs.

Implications for policy and practice

Our study findings have several policy and practice implications. Administrative policymakers and educators need to establish effective incentive systems that combine monetary rewards with substantial professional development opportunities. In public school systems, there is no sense of urgency about addressing administrative waste and, in at least some cases, the lack of innovative tendencies in private schools. However, constant monitoring of reward mechanisms is necessary to guarantee fairness, openness, and effectiveness in the long run. The theoretical and practical implications of this study are far-reaching. It underscores the importance of motivational theory in educational management and offers concrete

suggestions for improving teacher performance. Carefully designed incentive systems, as part of educational reforms, could help Ghana - and indeed, other African settings - strengthen teacher motivation, reduce attrition, and, in the end, reach the goal of improving student achievement.

Reward systems make a difference. Recognition and support play a crucial role in enhancing work motivation. While material inducements, such as cash rewards or grants, are essential, so too are recognition, professional growth, and targeted career pathways that reduce the risk of a dehumanizing work life. Private schools can afford to experiment with broad incentive systems; public schools, if not freed from them through deregulation, can at least improve teacher motivation by strategically importing the successful, deregulated practices of the private sector. In this way, schools can more effectively develop each teacher's capabilities and minimize teacher turnover, thereby enhancing student learning.

Acknowledgement and Funding.

This study was wholly organized and funded by the authors.

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