


Research Article

Impact of Headteachers' Leadership Styles on Teachers' Job Performance in Sagnarigu Municipality in Northern Region of Ghana

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Abstract: Teachers' productivity and job performance in educational settings are significantly dictated by several factors, including the leadership styles employed by headteachers in the governance of schools. However, there is an ongoing debate among scholars in educational management as to which school governance style is the most effective and can facilitate high productivity among teachers. This research was therefore carried out to explore the effects of headteachers' leadership styles on the job performance of junior high school teachers in Sagnarigu Municipality in Ghana's Northern Region. The research adopted cross-sectional design informed by three research questions. Out of 82 schools, Yamane (1967) formula for sample size determination was used to randomly sample (N = 68 school heads) to complete a Questionnaire for Headteachers' Leadership Style (QHLS). Using Cronbach alpha formula, the reliability of the items on the questionnaire was validated. The Standardized Lesson Observation Scale (SLOS) was used to observe the instructional quality of 40 teachers. The study found excellent performance of teachers in quality lesson delivery with female teachers out-performing the males. Also, the sampled schools had more male teachers than females. The democratic leadership style was the most frequently used by headteachers with autocratic leadership approach being the least utilized. There was no statistically significant relationship between headteachers' leadership styles and job performance of teachers. The demographic characteristics of headteachers have no statistically significant influence on their leadership styles. The study recommends recruitment of more females as headteachers, capacity building for heads of schools, and periodic organization of Continuous Professional Development (CPD) programs.

Keywords: demographic variables, gender, leadership styles, democratic style, teacher job performance, continuous professional development

1. Introduction

Education management can be viewed from two main dimensions: system management and teacher management (Education Strategic Plan, 2018-2030). With regards to teacher management in Ghana, attrition, absenteeism, and time-on-task has been generally recognized as challenges. General teacher absenteeism reached 14% in 2014-2015, and varied considerably by region. In addition, the attrition rate for teachers rose from 2% in 2009 to 4% in 2016

(Education Strategic Plan, 2018-2030). With wide regional differences in student-teacher ratios and a weak correlation between the number of students and teachers within a district, particularly within the KG, primary, junior high school, and senior high school sub-sectors, the deployment of teachers is also marked by significant difficulties (Ministry of Education, 2018). Four independent organizations, namely; the National Teaching Council (NTC), the Ghana Tertiary Education Commission (GTEC), the National Council for Curriculum and Assessment (NaCCA), and the National Schools Inspectorate Authority (NASIA) are in charge of overseeing system accountability. These regulatory agencies are responsible for planning, developing, and enforcing accountability systems, and the execution of these structures has an impact on the entire educational system. For instance, within the Ghana Education Service (GES), the network of regional and district education offices down to the school level should perform their roles in a fully operational and accountable educational system. The lack of defined accountability frameworks across the entire education sector, poor staffing, inadequate financing, and a lack of enforcement capabilities have prevented these regulatory authorities from successfully discharging their roles (Ministry of Education, 2018).

Quality and effective leadership that consistently align schools' vision and mission is a cornerstone to building productive and highly performing schools (Werang & Lena, 2014). The main sources of effective leadership in educational institutions that raise students' performance are teachers and school principals (Day & Sammons, 2016; Fackler & Malmberg, 2016). According to Ghasemi and Keshavarzi (2014), performance is a collection of attitudes that a person exhibits when performing a task. To Suliman and Al Kathairi (2012), the term "job performance" generally refers to whether a person completes his/her work properly in line with the following five elements: the ability to perform the job, the willingness to experiment, the quantity of the work completed, the quality of the work completed, and knowledge of the duties associated with the position. Accountability is the most fundamental requirement in the educational system, and programs are currently undergoing evaluation to demonstrate that the type of training being churn out is beneficial and productive. Assessment is typically one of the strategies utilized in educational settings, with a focus on students and teachers and can reveal how well teachers are facilitating learning in the classroom, which translates to students' growth and learning success toward the targeted information, skills, and capacities (Azeem & Omar, 2018).

Leadership determines whether a staff is able to perform creditably or abysmally in an organization. Within the education context, the literature on the impact of leadership styles on teachers' performance has produced mixed findings over the years. For instance, Okoji's (2016) correlation study looked at the association between secondary school principal leadership styles and teachers' performance in some selected rural community schools in Nigeria's Ondo State. The study sampled 50 headteachers and 250 teachers using a simple random sampling approach. The Principals' Leadership Assessment Inventory (PLAI) and Teachers' Job Performance Assessment Scale (TJPAS) were used to collect the data from teachers and headteachers. The results show a statistically significant correlation between democratic and autocratic leadership philosophies and teacher job effectiveness. The findings also show that secondary school teachers in Nigeria perform far more productively and effectively when their headteachers combine democratic and autocratic leadership styles.

Similarly, Saleem et al. (2020) conducted a survey to determine the effect of four principal leadership styles (supportive, directive, participative, and achievement-oriented) on teachers' performance in private secondary schools in the Middle East. The path-goal theory was applied in the development of these leadership models. A sample of 253 middle management workers from Lahore, Pakistan, comprising vice principals, department heads, and coordinators, was obtained for an analysis of empirical correlation data using Structural Equation Modeling (SEM). The findings revealed that the supportive leadership style lagged behind the directive leadership style used by headteachers in relation to the five key indicators of teacher job performance (lesson planning, classroom organization, monitoring and evaluation, classroom atmosphere and discipline, and teacher leadership). They added that instructors favored supportive leadership philosophies that shared and communicated the school's ideals to key constituencies. Aunga and Masare's (2017) study on the impact of leadership philosophies on teachers' performance in Tanzania's Arusha District found that as democratic leadership style grows in schools, so does teachers' output and students' learning outcomes.

In Ghana, Owuoh (2016) conducted a survey on the impact of senior high school headteachers' leadership styles on teacher job performance in Kumasi Metropolis. The study discovered that most of the school heads practiced autocratic leadership style. Similarly, Kabatey (2016) researched on the perceived effect of headteachers' leadership style on the performance of basic schools in Sene West District of the Brong Ahafo Region. The results show leadership

style of headteachers enabled them to offer regular feedback to instructors concerning classroom performance and also efficiently foster teacher-headteacher relationship to improve school performance. Sowah (2017) study on the effect of leadership styles on basic school teachers' commitment at Adentan Municipality in Accra Metropolis found a positive correlation between headteachers' leadership style and commitment of teachers. However, in the Sagnarigu Municipality in the Northern Region of Ghana, there is paucity of data on this issue although several attempts have been made in the Municipality to attribute poor performance of students in the Basic Education Certificate Examination (BECE) to teachers and heads of schools. It was against this backdrop that this research was carried out to explore the effects of headteachers' leadership styles on the job performance of teachers in the Sagnarigu Municipality.

1.1 Research questions

1. What type of leadership styles are commonly employed by headteachers in the management and administration of the junior high schools in Sagnarigu Municipality?
2. What is the current level of junior high school teachers' job performance in lesson delivery?
3. Is there any significant difference between male and female teachers' performance in lesson delivery?

2. Literature review

2.1 An overview of the concept "Leadership"

Leadership is an important factor that influences the performance and outcomes of any organization, including educational institutions. In recent years, there has been a growing interest in the impact of schools' governance styles on instructors' job performance in schools. Several empirical studies have examined the relationship between leadership ideologies and job performance, and their findings have been mixed (Liu, 2015; Cheng & Yang, 2019). The most frequently examined leadership philosophies in the setting of schools, according to Aboagye et al. (2019), are democratic, transformational, transactional, and laissez-faire. Other studies have also found these to be the most prevalent leadership styles in educational settings (Liu, 2015). However, an autocratic leadership style is not considered one of the most common leadership styles in education because it is often discouraged due to its potential to lead to low teacher morale and limited creativity and innovation.

2.2 Leadership styles

2.2.1 Democratic leadership style

According to Megerian and Sosik (1996), democratic leadership style is a leadership strategy in which the leader incorporates the team or followers in the decision-making process. It is a participatory leadership style that encourages group members to share their opinions and ideas, and the leader takes them into account when making decisions (Bass, 2008). This style is characterized by open communication, collaboration, and shared decision-making (Goleman et al., 2013). In a democratic leadership style, the leader delegates authority and responsibility to the team members and encourages them to take ownership of their work (Northouse, 2019). This approach fosters a positive work environment, promotes creativity and innovation, and can lead to higher job satisfaction and motivation among team members (Gardner et al., 2010). Thus, the democratic leadership style utilized by the head teachers has an effect on the performance of the students (Iqbal et al., 2020). The democratic leadership style encourages improved communication and idea sharing between leaders and followers, allowing them to choose the most appropriate and efficient organizational strategy together. Goleman (2000) postulated that this idea fosters an environment where workers feel valued, committed, and motivated to meet organizational mission and vision.

2.2.2 Transformational leadership style

According to Burnes et al. (2018), transformational leadership takes place when leaders and followers collaborate to accomplish shared objectives or when "one or more persons engage with others in such a way that leaders and followers raise one another to a higher degree of motivation and morality." This suggests that a leader-follower

relationship is one in which the goals of the two merge, resulting in unification and a shared purpose (Barker, 1997). According to Murray and Feitler (1989), the leader inspires followers to “work for transcendental goals instead of immediate self-interest, for achievement and self-actualization instead of safety and security,” and develops in them a capacity to develop a higher level commitment to organizational goals (Leithwood & Jantzi, 2000). In the school context, the appropriate thing to do in a school environment is to support educational restructuring and innovation, concentrate on developing a vision, promote collaborative engagement, and elevate followers to the position of leaders (Silins, 1994).

2.2.3 Autocratic leadership style

Autocratic leadership style is a type of leadership in which the leader has complete control over their followers and makes decisions on their own without involving the followers in the decision-making process. This style is often characterized by rigid rules and procedures, centralized power, and a hierarchical structure. Autocratic leadership style is an ideology that values personal dominance and operates with a powerful central authority, staff control, and unshakable loyalty (Rosing et al., 2022). Studies have shown that the autocratic leadership style can negatively affect employees’ job satisfaction and their level of engagement in various work settings. Stress in most workplaces can result from authoritarian leadership, leading people to experience a range of stress reactions that negatively affect their level of job satisfaction (Qi et al., 2020).

On the mediating effect of job satisfaction and the connection between job satisfaction and teachers’ organizational behavior, Alanoglu and Karabatak conducted a study in Turkey in 2020. The results of the SEM employed to investigate the causal links revealed that the autocratic leadership style had a negative and mediating impact on organizational viewpoint but had no significant effect on job satisfaction (Alanoglu & Karabatak, 2020). Similarly, Basaran and Guclu (2018) found no correlation between autocratic leadership and job satisfaction of teachers. However, some studies have found a positive correlation between autocratic leadership and employee performance. Mwasiri and Muchiri (2022) carried out a study with the goal of determining how the autocratic leadership style affected the productivity of Kenyan employees of Price Waterhouse Coopers (PWC). The research used a descriptive research approach, with a target population of 570 PWC workers and a data collection sample of 235. The study found that the autocratic leadership style had a positive correlation with staff performance (Mwasiri & Muchiri, 2022). This suggests that the performance of employees at PWC in Kenya was enhanced under autocratic leadership. However, while it may be effective in certain contexts and situations, it can negatively affect employees job satisfaction and motivation. It is imperative to note that autocratic leadership is generally discouraged in the modern workplace due to its potential negative impact on employee well-being and job satisfaction. Therefore, leaders should consider alternative leadership styles that promote collaboration, communication, and shared decision-making.

2.2.4 Transactional leadership style

Transactional leadership style is a leadership approach that emphasizes the use of rewards and punishments to motivate employees to achieve specific goals (Bass & Riggio, 2006). This style is based on the exchange of rewards for employee compliance and is characterized by a clear chain of command, well-defined roles and responsibilities, and a focus on achieving specific goals and objectives (Yukl, 2013). In the context of headteachers leadership style, transactional leadership involves setting clear expectations for employees, providing them with feedback on their performance, and rewarding or disciplining them accordingly (Ersozlu & Saklan, 2016).

Studies have shown that transactional approach can have a favorable effect on staff performance and job satisfaction in certain situations. According to Bass and Riggio (2006), transactional leadership can be effective in organizations that require strict adherence to rules and procedures, such as military or manufacturing settings. In such contexts, transactional leaders are effective in ensuring that employees follow established procedures and meet performance standards. The implementation of a transactional leadership style by headteachers can improve the job satisfaction, commitment level, and motivation of teachers in schools (Kaur, 2020). A study by Tian et al. (2020) found that headteachers; use of transactional leadership style was positively correlated with teacher job satisfaction, while Simsek et al. (2018) found that headteachers use of transactional leadership style was positively correlated with teacher commitment. Riaz and Haider (2010) found that transactional leadership has a positive effect on employee job

satisfaction and performance in the Pakistani banking sector. The study showed that transactional leaders were able to motivate employees to achieve organizational goals through rewards and punishments. The authors concluded that transactional leadership is an effective leadership style in contexts where employees are motivated by extrinsic rewards such as pay, bonuses, and promotions.

However, the overuse of a transactional leadership style by headteachers' can lead to negative outcomes, such as reduced creativity and innovation among teachers (Tian et al., 2020). In addition, some studies have found that headteachers' use of a transactional leadership style can be associated with teacher stress and burnout (Wang et al., 2023). To achieve the best outcomes, headteachers need to balance their use of transactional leadership with other leadership styles, such as transformational leadership. A study by Wang et al. (2023) found that headteachers who used a combination of transactional and transformational leadership styles had higher levels of teacher job satisfaction, organizational commitment, and teacher effectiveness compared to headteachers who used only one leadership style.

2.2.5 Laissez-faire leadership style

The laissez-faire leadership approach is also called the absence of leadership, the hands-off style among others. This category of leadership style is defined by a lack of accountability on the part of management for decisions like omissions, incentives, or penalties. This leadership style may result from negligence or ignorance, or a leader's regard for their followers. Teachers can favorably view a leader's laissez-faire leadership style as a deliberate decision that can demotivate them. Hence, "to prevent a traditional point of view and subsequent linkages with poor outcomes, a more balanced approach to this style is essential" (Breevaart & Zacher, 2019). Budiasih et al.'s (2020) study looked at how organizational politics may affect the relationship between leadership philosophies and work satisfaction. It was conducted at businesses in the private sector in the capital city of Indonesia. Respondents were managers and staff members that assist them from private sector businesses in the capital city. Questionnaires were used in the survey to collect the data from 560 respondents. According to the findings, work happiness and a laissez-faire leadership style were positively correlated. Sehar and Khurram (2019) carried out a similar study that explored the effect of the headteachers' leadership style on teachers' job satisfaction and motivation at work. Employing a descriptive survey design, structured questionnaires were used to collect the data from 122 teachers and 13 heads of schools. The results showed that the headteachers thought that strict supervision was necessary for teachers to work to their maximum ability. According to this study, a laissez-faire leadership style was inappropriate in schools because that is where the next generation is raised and teachers need to be inspired to educate them rather than coerced them into working under tight command.

2.3 Impact of demographic variables on leadership style of headteachers

Research on the impact of headteachers' demographic variables (age, gender, qualification, and experiences) on their leadership styles have yielded mixed findings. For instance, Duorinaah (2020) found that the proportion of female heads who use all four transformational styles was higher than that of male heads. These results contradict the findings of Munir and Aboidullah (2018), who found no significant gender difference in the transformative styles of school leaders in a study conducted in Pakistan. Coaching and mentoring are the transformational behaviors that female heads tend to apply more frequently than male heads, with 87% of all female heads exhibiting this. Two out of every three female heads frequently coach and mentor their teachers and pupils (Duorinaah, 2020). Iqbal et al. (2020) conducted a survey to examine how the demographic traits of school leaders affected their leadership philosophies. The effect of head teachers ages on the application of various leadership philosophies was compared using an ANOVA test. Years were used to categorize ages. All leadership styles, with the exception of the autocratic style, were found to have a substantial age effect. Age had a significant impact on the leadership styles of headteachers.

3. Methodology

3.1 Profile of study area

The Municipality is endowed with an appreciable number of institutions across all levels of education including

primary, junior high, senior high schools as well as tertiary institutions. Data from the Municipal Education Directorate indicated that as at 2022, Sagnarigu Municipal had 82 junior high schools across the 11 circuits with 1,186 teachers of which 787 were males and 368 were females. Non-professional teachers were 26 who were all males. The municipality scored below 50% at the annual BECE for five consecutive years. A report by Center for Active Learning and Integrated Development (CALID) (2017) revealed that 48.5% of basic school pupils in Sagnarigu Municipality could neither read simple letter words nor work out simple numeracy from grade 2 symbols. Some stakeholders in the municipality blame the unacceptable students' performance on weak school leadership and management, poor quality of teaching, low involvement of Parent Teachers Associations (PTAs) and School Management Committees (SMCs) in the operation of the schools.

3.2 Research design

This study adopted a cross-sectional study design to examine how headteacher leadership styles affected junior high school teachers' work performance. A cross-sectional survey design, according to Kothari (2014), is used to collect social and individual facts, attitudes, and beliefs; it entails measurement grouping, examination, appraisal, and elucidation of data, which results in the establishment of critical philosophies of knowledge and the resolution of significant issues. Cross-sectional studies are most appropriate to studies aimed at establishing the prevalence of a given phenomenon, problem, situation, attitude, or an issue by engaging a cross section of the population. Headteachers and teachers in the 82 junior high schools in the 11 circuits of the Sagnarigu Municipality constituted the target population for this study. A school was selected to take part in the research if the headteacher had been appointed by the GES and duly served up to a year or more in that capacity as head of school with at least more than four teachers under his/her supervision. Headteachers and teachers in the schools chosen at random to participate in the study provided the data. Data from the headteachers and teachers were gathered using standardized lesson observation checklists and structured questionnaires. The questionnaires yielded 95.24% return rate which was strong enough to draw conclusion for the study. The internal consistency of the questionnaire's items, also known as the reliability coefficient, was evaluated using Cronbach's alpha formula. The study's adaptation of the five-item Teachers' Job Satisfaction Scale produced an alpha of $\alpha = 0.670$, whereas Victor's leadership styles' five-item scale produced an alpha of $\alpha = 0.741$.

Standardized Lesson Observation Scale (SLOS) designed by Professional Education Practice Unit (PEPU) of the University for Development Studies was used to observe lessons of 40 teachers who took part in the study to determine their level of performance and as to whether differences exist between male and female teachers' performance in instructional delivery. Teachers' competence in teaching was examined in terms of critical elements in lesson plan; management and organization of learning environment; and instructional pedagogy and scored from 0-100 marks. The 40 schools (48.78% of schools) were randomly sampled from 82 schools for lesson observation. This sample was more than the minimum of 10% recommended by (Amedahe, 2002) for surveys involving small populations, making it adequate for the research.

3.3 Sampling and sample size selection

A sample, according to Babbie (2014), is a subset of the population. Similarly, Sekaran (2003) maintains that sampling is the process of choosing a large number of elements from the population. It is feasible to generalize qualities or characteristics to the complete population after studying the sample and knowing its characteristics. From 82 junior high schools clustered in 11 circuits in the study area, 68 of them were randomly sampled to participate in the study. Yamane (1967) formula for sample size calculation was employed. Therefore, the sample size = 68 schools. Also, 68 headteachers were purposively sampled to complete a questionnaire on the leadership styles often employed in the management and administration of the schools and whether those styles affect the performance of teachers.

3.4 Data analysis

In this research, questionnaires and observation were the main instruments employed to mine the data. Descriptive statistics such as frequencies and percentages were used to analyze the data on the demographic characteristics of the study participants. Mean and standard deviation was employed to compute statistical data on the kind of leadership

styles often used by the headteachers as well as teachers' performance scores in lesson presentation. Inferential statistics such as ANOVA and Chi-square were adopted to test the hypothesis to determine if there was statistically significant relationship between leadership styles of head of junior high schools and teachers' performance. Tables and graphs were used to present the findings of the study.

3.5 Research participants

The participants, as shown in Table 1 show that the majority of headteachers were between the ages of 31 and above. Seven headteachers, or 10.4% of all respondents, were between the age bracket of 21 and 25, and 33 headteachers representing 48.5% of the respondents were 31 years and above.

Table 1. Demographic variables of headteachers (N = 68)

Variable	Frequency	Percent (%)
Age		
Below 20 years	2	2.9
21-25	7	10.4
26-30	26	38.2
31 and above	33	48.5
Total	68 p < 0.001	100
School Location		
Urban	57	83.8
Rural	11	16.2
Total	68 p < 0.001	100
Gender		
Male	44	64.7
Female	24	35.3
Total	68 p < 0.001	100
Highest Qualification		
Masters	10	14.7
Bachelor's Degree	45	66.2
Diploma	13	19.1
Total	68 p < 0.001	100

Source: Field data (2022)

Results from Table 1 indicated that the percentage of male headteachers who participated in the study was higher than that of female. In all, 44 headteachers, representing 64% were men, compared to 24, or 35.3%, of women. The Gender Parity Index (GPI) was therefore 0.5 which favour the male. This finding confirm that gender gap exists in Sagnarigu Municipality and turn to favour male teachers. Duorinaah (2020) conducted similar research on the effects of headteachers leadership styles on junior high school students' performance in Northern Region of Ghana and found that the proportion of male teachers who took part in the study was higher (62%) than females (38%). With regards to qualification, the majority of heads of schools has Bachelors' Degrees. In all, 45 headteachers representing 66.2% have Bachelor's Degrees, 10 teachers, or 14.7% of the respondents had Master's Degree, and 13 respondents representing 19.1% had Diploma in Education.

3.6 Leadership styles of junior high school headteachers

The following collection of statements regarding the frequency with which the following leadership styles were applied in the administration and management of schools were presented to heads of schools, and they were asked to identify their level of agreement or disagreement with each. They were to rate their level of agreement or disagreement on a scale 1-5. Where 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, and 5 = Strongly Agree. Table 2 presents the detail illustrations of the results.

Table 2. School governance styles of junior high school headteachers in sagnarigu municipality (N = 68)

Leadership Styles	Mean (M)	Standard Deviation (SD)	Interpretation
Democratic leadership style	4.4118	0.93418	Very High
Authoritarian leadership style	1.8676	1.25668	Very Low
Laissez-faire leadership style	3.2206	1.35873	High
Transformational leadership style	3.8971	0.84887	Very High
Transactional leadership style	3.3676	1.07765	High

Source: Field survey (2022)

The results in Table 2 show that the democratic leadership style was the most frequently used by the school heads with a score of (M = 4.4118, and SD = 0.93418), this was followed by the transformational leadership style (M = 3.8971, SD = 0.84887). This finding contrasts with a study conducted by Javed et al. (2014) that revealed most leaders of institutions preferred transactional leadership over transformational leadership. On the other hand, the results are in line with those of Wahab et al. (2014), who found that Malaysian school administrators regularly adopted the transformational leadership strategy in the Temerloh Region. In Ghana, Dzakpasu et al. (2022) who researched impact of leadership philosophies on teachers' job happiness in Ashanti Region of Ghana found that school heads predominantly used the transformational leadership style which correlated significantly with the level of job satisfaction of teachers. Authoritarian leadership approach which was recorded (M = 1.8676, SD = 1.25668) was the least employed by headteachers in the study area.

3.7 Teachers' job performance scores in instructional delivery

According to Werang and Lena (2014), a teacher's work effectiveness is determined by their ability to bring all the necessary components for improving learning outcomes of the students. Several tools are used to measure teachers' performance. Ali and Haider (2017) summarized them as personal qualities, professional qualities and instructional

qualities. In Ghana, there is no uniform scale for measuring teachers' job performance. Each teacher training institution with its instrument used to evaluate the performance of teachers. Rogers (2015) categorized instruments to measure teacher skill and performance to include: a) tools for measuring attendance and activity; b) tools for measuring quality of instruction delivery; c) tools for measuring teachers' knowledge and skills; d) tools for observing performance; and e) tools for measuring teachers impacts on students' learning. In this research, the team employed Standardized Teacher Lesson Observation Scale (STLOS) developed by Professional Education Practice Unit (PEPU) of the University for Development Studies to observe and score the instructional quality of the teachers. The results from teachers' lesson observations are presented in Figure 1 below.

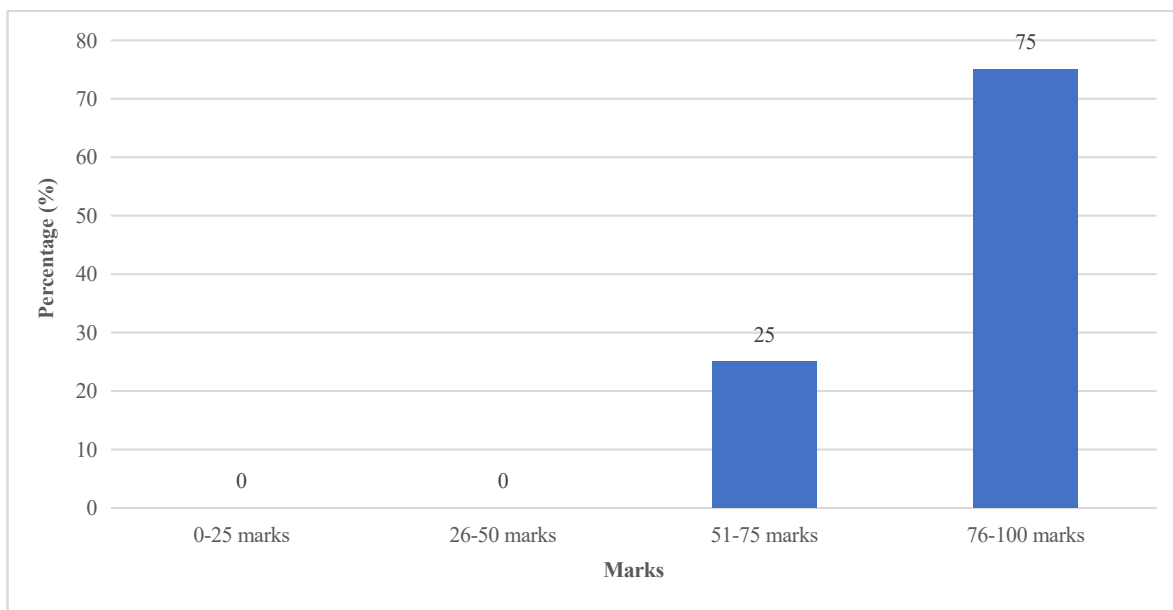


Figure 1. Summary of teachers' job performance in instructional delivery (N = 40)

Source: Field survey (2022)

The results from Figure 1 show that majority of the teachers whose lessons were observed scored between 76-100 marks. In summary, 30 teachers representing 75% of the respondents obtained 76-100 marks whereas 10 teachers, or 25% of the respondents scored between 51-75 marks. This implies that teachers present quality teaching and learning to junior high school students in Sagnarigu Municipality. However, this does not translate into high performance of students in their BECE. Table 3 presents data on the specific marks obtained by each of the teachers whose instructions were observed by the research team.

The results from Table 3 indicates that majority of the teachers scored higher marks when their instruction was observed by the research team. A sample of 40 teachers' lessons were observed and scored, comprising 22 male and 18 female. Table 4 present the results.

The results in Table 4 show that the total mean scores of female teachers' performance in lesson presentation stood at (M = 84.7778, and SD = 3.57569) and that of males stood at (M = 77.1818, and SD = 8.04533). This implies that female teachers outperform their male counterparts in terms of quality of lesson delivery. This finding is in line with Ahiatrogah (2017) longitudinal study involving 376 distance education students selected from 5 regional study centers of College of Distance Education (CoDE), University of Cape Coast (UCC) which found that in terms of proportions, more female student teachers were judged to be good performers in the area of autonomous practice. Similar to this, more female student teachers than male student teachers performed creditably in the collaborative learning abilities category. The null hypothesis that gender has no bearing on how well distance education students pick up teaching techniques during On-Campus Teaching Practice was rejected. In a similar vein, El-Emadi et al. (2019) investigation of

the motivational factors, attitudes toward, and interest in science among Qatari students discovered that female teachers delivered better lessons in theory science classes than male instructors who equally excel in laboratory-based sessions.

Table 3. Teachers’ performance scores in lesson presentation (N = 40)

Lesson observation scores	Frequency (f)	Percentage (%)
0-25 marks	0	0.00
26-50 marks	0	0.00
51-75 marks	10	25
76-100 marks	30	75
Total	40	100

Source: Field survey (2022)

Table 4. Differences in mean scores of teachers performance in lesson presentation

Gender	N	Mean (M)	Standard Deviation (Std)
Male	22	77.1818	8.04533
Female	18	84.7778	3.57569

Source: Field survey (2022)

3.8 Testing of hypotheses

Ho1 There is no statistically significant relationship between leadership styles of head of junior high schools and teachers’ performance in Sagnarigu Municipality.

An ANOVA test was run to find out if various leadership styles significantly affect teachers’ performance in instructional delivery. The results in Table 5 show that democratic leadership style had a score of $p = 0.930$, autocratic leadership style recorded $p = 0.741$, laissez fare leadership style had $p = 0.761$, transformational leadership style had $p = 0.629$, and that of transactional leadership style recorded $p = 0.690$. These results implies that headteachers’ leadership styles have no significant impact on the performance of teachers. The null hypothesis of no statistically significant association between teachers’ performance and the leadership styles of heads of junior high schools in Sagnarigu Municipality was accepted. These findings contrast with those of Okoji (2016), who found a st correlation between democratic leadership style ($r = 0.118$) and autocratic leadership style ($r = 0.314$) and teachers’ job performance at ($p = 0.05$) in Nigeria. Similar research was carried out by Saleem et al. (2020), which established the impacts of four headteacher leadership philosophies on the performance of teachers in the Middle East which found that the autocratic leadership style of headteachers had a statistically significant effect on five key indicators of teacher job performance (instructional designing, classroom management, assessment, teachers’ leadership, and classroom atmosphere and discipline) ($p = 0.05$). However, democratic leadership style did not have a significant effect on teachers’ performance. A cross-sectional survey was conducted in Ghana by Minadzi and Nyame (2016) on how leadership styles affected the performance of elementary school teachers in the South Tongu District of the Volta Region. The study discovered that most teachers concurred that the leadership style of their headteachers has a significant impact on their performance in the classroom. Azasu (2015) discovered a substantial and positive association between teachers’ performance and both

democratic and autocratic leadership styles of headmasters in her study on head teachers' leadership styles and their impact on staff performance in senior high schools in the Mfantseman Municipality. The delegating leadership style had a weak but significant positive link with the overall teacher performance, according to the results of the correlation between the two variables ($r = 0.34$, $p < 0.001$ 2-tailed, 2-tailed).

Table 5. An ANOVA test on impact of leaderships styles on teachers' job performance

Variables		Mean Square	F	Sig.
Democratic leadership style	Between Groups	0.008	0.008	0.930
	Within Groups	0.997		
	Total			
Authoritarian leadership style	Between Groups	0.198	0.112	0.741
	Within Groups	1.769		
	Total			
Laissez fare leadership style	Between Groups	0.198	0.095	0.761
	Within Groups	2.085		
	Total			
Transformational leadership style	Between Groups	0.198	0.241	0.629
	Within Groups	0.822		
	Total			
Transactional leadership role	Between Groups	0.198	0.164	0.690
	Within Groups	1.208		
	Total			

Source: Field work (2022)

Ho1 Junior high school headteachers' demographic variables do not significantly influence their leadership styles.

To test this hypothesis, the assumption of multicollinearity was tested after which Chi-square was employed to test whether demographic characteristics of teachers significantly influence their leadership styles. The results are presented in Table 6.

The Chi-square results captured in Table 6 show that heads of schools' demographic characteristics (Gender with a score of $p = 0.987$, age with a score of $p = 0.375$, qualification with a score of $p = 0.207$, and location of school with a score of $p = 0.226$) has no significant influence on their choice of leadership styles in managing their schools. Therefore, the evidence above supports the null hypothesis that Junior high school headteachers' demographic variables do not significantly influence their school leadership styles and hence the null hypothesis is accepted. This finding concurs with Mensah and Amponsah (2016) whose study in Central Region of Ghana discovered that headteachers' demographic characteristics contributed only 2% variance in the dependent variables (leadership styles). The ANOVA results show no

statistically significant ($F = 0.12, p = 0.987$). In a similar study, Iqbal et al. (2020) discovered that for the autocratic style of leadership, there was no statistically significant difference between male and female headteachers. For democratic style of leadership, there was no significant distinction between male and female headteachers. Under the Islamic Model of leadership, there was no significant difference between male and female heads of schools. However, they discovered that age had a substantial impact on the employment of all leadership styles, with the exception of the totalitarian style, which was not significant since $F(2, 63) = 0.560, p > 0.05$. Qualification has a significant effect on all leadership styles, with the exception of the Islamic leadership model, which had a non-significant effect $F(4, 61) = 2.444, p > 0.05$.

Table 6. Chi-square test of demographic variables and leaderships style of headteachers (N = 68)

Variables	Model Fitting Criteria		Likelihood Ratio Tests	
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Gender	8.553	0.134	3	0.987
Age	14.869	6.450	6	0.375
Qualification	16.867	8.448	6	0.207
Location	12.773	4.354	3	0.226

Source: Filed survey (2022)

3.9 Discussion of results

The study looked at how the leadership styles of headteachers affected teachers' performance on the job in Sagnarigu Municipality in Ghana's Northern Region. The results from this research shows that participative leadership approach was the most frequently used by junior high school headteachers in Sagnarigu Municipality with dictatorial leadership style being the least used. This outcome has some implications for headteachers. There is no perfect leadership style. Each leadership ideology can be useful depending on the context within which it has been employed. Leadership training could be useful by equipping the heads of schools with relevant knowledge and skills on how to blend the various leadership styles to manage their educational institutions effectively and efficiently. The research also found that headteachers leadership styles have no significant impact on the job performance of teachers. Therefore, the null hypothesis that there is no statistically significant relationship between leadership styles of heads of junior high schools and teachers' job performance in Sagnarigu Municipality was accepted.

The results further show a high performance of teachers in lesson presentation. Majority of teachers whose lessons were observed scored between 76-100 marks. However, this high-quality teaching demonstrated by the teachers does not translate into high performance of their students in their BECE in Sagnarigu Municipality. The low achievement of junior high school students in the district could attributed to students related factors, school infrastructure related factors, or school leadership but certainly not teacher related. This requires further research to probe into factors responsible for low learning outcomes of junior high school students in the municipality. Also, total mean score of female teachers stood at $M = 84.7778$ and that of male stood at $M = 77.1818$. This implies that in terms of the quality teaching, female teachers performed better than their male colleagues. Maybe Continuous Professional Development (CPD) can be used to bridge the gap. The goal of implementing CPD activities is to guide instructors in maintaining their competency levels so that they can uphold the integrity of the teaching profession and advance their professional standing. It is envisioned that participating in the certified CPD activities will aid in preserving and enhancing the information, abilities, attitudes, and experiences teachers acquire during their original training. For teachers to maintain their professional integrity, they must continually improve their knowledge and abilities in order to stay current with current concerns and educational strategies (National Teaching Council, 2020).

The study also probed to determine if demographic characteristics of headteachers significantly influence their choice of leadership styles. The Chi-square results in Table 4 show that heads of schools' demographic characteristics (Gender with a score of $p = 0.987$, age with a score of $p = 0.375$, qualification with a score of $p = 0.207$, and location of school with a score of $p = 0.226$) have no significant influence on their choice of leadership styles in managing their schools. The above evidence therefore supports the null hypothesis that junior high school headteachers' demographic variables did not significantly influence their school leadership styles and hence the null hypothesis was accepted.

3.10 Limitations and suggestions for future research

There are several restrictions on this study. First, the generalizability of the findings can be called into question given that this study was limited to junior high schools in the Sagnarigu Municipality. Future researchers could broaden this study to include principals of elementary and secondary schools in the Northern Region to increase generalizability. Second, there was a chance of some personal biases because our data were gathered from comparable people and includes perceptual data (headteachers rating themselves on the leadership styles they frequently utilized). However, given that numerous pieces of information were gathered from the other respondents, it is unlikely that common technique bias could be used to explain our findings. In addition, our research consisted of a cross-sectional survey that only gathered numerical information. Future researchers should collect more behavioral data on the topic through Focus Group Discussions (FGD) and interviews. Finally, in order to provide strong evidence of the causal relationship between the independent variable (leadership styles) and the dependent variable (performance of teachers), future researchers should conduct longitudinal experimental study studies, where both quantitative and qualitative data will be collected over time after repeated observations.

4. Recommendations

The following recommendations have been made in light of the findings:

1. The Ministry of Education through the GES should organize periodic leadership training for headteachers to equip them with relevant knowledge and skills on how to blend the various leadership styles to manage their educational institutions effectively and efficiently.
2. The Ministry of Education through the GES should recruit more females as headteachers for basic schools to bridge the gender gap in educational leadership within basic schools.
3. Male teachers in the study area should get regular CPD programmes from the GES in order to provide them with the cutting-edge pedagogical strategies they require to deliver courses more effectively.
4. In order to foster collaborative working environments with higher levels of commitment, motivation, and healthier school cultures and to improve the performance of good teachers in the schools, headteachers should be more adaptable in their adoption of appropriate leadership styles.

Ethical approval

The researchers in this study requested ethical approval from the Head of the Department of Educational Management and Policy Studies at the University for Development Studies during the data-gathering phase, and their request was approved. The team then requested permission to conduct the survey in the Municipality's elementary schools in a letter to the Director of Education for Sagnarigu Municipality, which was granted. The heads of the sample schools were then asked for their agreement before data collection began using that authorization letter.

Informed consent

Teachers from elementary schools who took part in the study did so willingly. They were not forced or offered money to participate in the study. Their safety and well-being were not in any danger as a result of participating in the

study. All supplied information was kept private and used solely for this study. The authors of this publication withheld the names of the teachers who took part in the study. Their private information has been protected.

Conflict of interest

The authors declare no competing financial interest.

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