

Transformational leadership and union strength as predictors of union commitment in Ashanti region senior high schools, Ghana

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ABSTRACT

This study examined transformational leadership of senior high school (SHS) heads, union strength and union commitment of teachers in the Ashanti Region of Ghana, using the quantitative descriptive-correlational design. Data were collected from a random sample of 400 public SHS teachers through the Multifactor Leadership Questionnaire, Union Strength and the Union Commitment Scales. Data analysis was conducted using the Partial Least Squares Structural Equation Modelling. Results revealed that teachers perceived their heads as moderately transformational, with an overall average score of 51% (grand mean = 2.59, SD = 1.10). Teachers also exhibited high levels of union commitment (overall average = 70%; mean = 2.25, SD = 1.03), with 72.5% expressing pride in belonging to their unions and over 80% affirming responsibility toward union goals. Transformational Leadership to Union Commitment link was also found to be statistically significant at 14% level. The study recommends that The Ghana Education Service (GES) and schools strengthen the leadership skills of heads by holding workshops that emphasise staff morale and motivation, offering teachers individualised support, and promoting innovative approaches to instruction. Again, it is recommended that working conditions of teachers need to be enhanced by working with school governing boards, parent-teacher associations, and teacher unions. Teachers need to be involved in curriculum planning and instruction. Implement supportive practices like regular feedback sessions and teacher recognition in schools.

Keywords: Labour, Senior High School, Transformational leadership, Union Commitment, Union Strength.

I. INTRODUCTION

Leadership is a cornerstone of effective management because it profoundly shapes the behaviours, decisions, and activities that drive an organisation toward its goals. Contemporary scholars and practitioners consistently emphasise that strong, adaptive leadership is essential for fostering innovation, aligning teams, and achieving both organisational success and employee fulfilment (Ytterstad & Olaisen, 2023). Effective leadership has essentially turned out to be indispensable against an increasingly changing and pressurised environment that is characterised by demands from the various sectors in society requiring institutions to be accountable for their continued survival (Cregan et al., 2009). The subject of leadership has been a matter of utmost importance since the beginning of humanity. As man strives to build fortresses, irrigation systems, armies, and mines, the consequent need for strong leadership to realise such visions become more and more apparent (Akdere & Egan, 2020).

Transformational leadership is described as where a leader rallies, inspires, and motivates followers towards the achievement of a particular vision (Litz & Blaik-Hourani, 2020; Ismail & Mydin, 2019). Transformational leadership has been accepted by many experts as very efficient, if fully applied in an organisation. It is therefore important that much research attention is given to this paradigm. However, scholars such as Braun et al. (2013) and Hallinger and Bryant (2013) have bemoaned the paucity of research on transformational leadership in the developing world. Transformational leadership is popular leadership idea that has engaged the attention of leadership thinkers in the past four decades. Having started as 'transforming leadership' by Eaton et al. (2017), he described it as where leaders and followers raise each other to the highest level of motivation and morality. According to Hennebert et al. (2021) transforming leadership is a process in which leaders and followers elevate one another to higher levels of morality and motivation, the concept was further developed and formalised by Gall and Fiorito (2012). The researchers expanded the framework by identifying four core components: idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration.

Despite its global prominence over the past four decades and extensive research in Western contexts, transformational leadership remains significantly understudied in developing and non-Western regions. Scholars have

repeatedly highlighted this research gap, noting that most empirical evidence continues to be drawn from North American and European settings, limiting our understanding of how transformational leadership operates across diverse cultural, economic, and institutional contexts (Gumusluoglu & Ilsev, 2009a; Lemoine et al., 2021). In a similar vein, Cregan et al. (2009) and Schnabel (2020) reported that more than half of the global workforce is not unionised, and unions continue to lose members, a trend that, according to Braun et al. (2013), undermines the strength and influence of unions. In the words of Eden (2017) union strength relates to the communication that needs to be practised regularly among workforce. This they believe will preserve cooperation in an organization. However, the International Labour Organization (ILO) (1997) maintains that despite shrinking membership, union influence remains significant.

In Ghana, the frequent occurrence of industrial disputes in the education sector, particularly among Senior High School teachers, reflects deeper issues concerning teacher morale and motivation. Teacher unions in Ghana organised the highest number of strikes between 2010 and 2013 (Seniwoliba, 2013), actions that disrupted learning and contributed to low retention rates among teachers. These actions underscore a breakdown in trust and collaboration between school leadership and unionised staff. As noted by Seniwoliba (2013), the resulting low motivation and high attrition adversely affect the quality of education. Against this backdrop, transformational leadership emerges as a critical factor in improving union commitment.

1.1 Statement of the Problem

In spite of the critical role of unions in promoting teachers' welfare and industrial harmony, many schools globally and in Ghana particularly continue to experience strained union-management relations, low union commitment, and weak union strength, especially during policy changes and disputes. While transformational leaders are known for their ability to inspire, motivate, and foster strong relationships with employees (Monje-Amor et al. 2020), many educational leaders still adopt top-down, non-consultative approaches to dealing with school matters that erode trust with unions. Amponsah (2025) notes that effective leadership is central to organizational effectiveness, yet in education, poor leadership often leads to confrontation rather than cooperation with unions. As Ismail et al. (2021) concluded, healthy industrial relations depend significantly on good leadership, and Genty (2014) further emphasizes that organizational harmony is strengthened when leadership works genuinely with unions to meet workers' needs. Given this gap, it is unclear how transformational leadership practices of head teachers influence union strength and union commitment among teachers in Ghanaian SHS. Addressing this problem is essential for building a climate of cooperation, rebuilding trust, and improving educational outcomes.

1.2 Research Questions

- i. What transformational leadership practices are exhibited by head teachers?
- ii. How committed are teachers to their unions in the Ghana Education Service?

1.3 Hypotheses

H₁: There is statistically significant relationship between transformational leadership of school heads and union commitment of teachers.

H₂: Union strength mediates the relationship between transformational leadership of heads and union commitment of teachers.

II. CONCEPTUAL REVIEW OF LITERATURE

2.1 Transformational leadership

Transformational leaders are known for their ability to inspire, motivate, and foster strong relationships with employees. In the context of education, transformational leaders such as head teachers and principals who exhibit empathy, vision, and participatory decision-making can help rebuild trust with unions. By fostering open communication, recognising teachers' contributions, and addressing their concerns proactively, such leaders can increase union members' sense of belonging and commitment. This is particularly important in times of dispute or policy changes, where mutual understanding between unionised staff and leadership is essential. Moreover, as Ismail et al. (2021) concluded, healthy industrial relations depend significantly on good leadership. When school leaders engage unions respectfully and transparently, they create a climate of cooperation rather than confrontation. Genty's (2014) findings reinforce this, highlighting that organisational harmony is strengthened when leadership genuinely works with unions to meet workers' needs.

The transformational leader employs visionary explanation to depict what the group can accomplish and gets the followers to be excited in achieving it (Cregan et al. 2009). Ytterstad and Olaisen (2023) however, admits that idealised influence and inspirational motivation are inseparable factorially because charisma goes with inspiration. A leader stimulates followers to be creative and innovative in their approach to organisational objectives (Jun & Lee, 2023; Northouse 2013). By promoting out-of-the-box thinking, a leader inspires followers to challenge their own beliefs and

that of their managers and learn to solve problems by themselves (Akdere & Egan, 2020; Northouse, 2013). Monje-Amor et al. (2020) explains that the leader performs the role of a mentor to the individual followers.

The leader may use delegation of authority to help followers grow (Fortin-Bergeron et al. 2018; Northouse, 2013). Fortin-Bergeron et al. (2018) concluded that school leaders have a greater impact on teacher bonding by establishing satisfactory conditions at the workplace through transformational leadership. According to Cregan et al. (2009) transformational leadership occurs when leaders and followers raise one another to high level of values. Typically, a transforming leader communicates his / her values to followers. Hennebert et al. (2021) in his study established the contingencies between leaders and followers' values. Thus, a leader's values might start separately but eventually get faded with that of the organisation and consequently influences followers. With the intention of establishing a shared vision, transformational leaders act as a response to the needs of their followers through empowerment and aligning organisation goals and objectives with those of their juniors (Afful-Broni, 2012). Consequently, high levels of employee satisfaction are achieved when transformational leadership aspects are positively associated with exemplary performance, and greater organisational commitment (Akdere & Egan, 2020).

Therefore, in a context where union relevance is increasingly questioned, transformational leadership offers a pathway to revitalising union commitment. By aligning organisational goals with staff welfare and promoting inclusive decision-making, transformational leaders can ensure both effective school management and stronger union engagement, ultimately contributing to improved educational outcomes.

2.2 Union Strength

History traces collective action of employees (unionism) to the medieval guild (Grafe & Gelderblom, 2010). The economic, social and political conditions at the time influenced the actions of the time. According to Rebores (2001) such influences are rather strong today because of the technological explosion of the media in updating on political, social and economic trends. Poole and Warner (1998) are rather of the view that the present-day trade unions came about as a result of the industrial revolution and the related wage-earning class which it created. They, however, concede that some of the modern-day trade unions trace their root to the medieval guild. They further agree that some of the associations, during the 1800s, lobbied their governments to enforce protective regulations. Where these associations were strong, they could agree not to work for unacceptable rates.

One element affecting the union's efficacy can be summed up as union strength. Bryson (2003) defines union strength as the ability of a union to provide significant contributions and to disrupt the labour market in order to safeguard the interests of its members. According to research by Eden (2017), consistent contact among them is linked to union strength. Therefore, developing measures to maintain cooperation more successfully is crucial. The results of their investigation revealed that the efficacy of trade unions is greatly influenced by the hierarchical regression used in his study. The study, indicates that most significant factor influencing a trade union's efficacy was its strength.

Ghana's major law on industrial relations was passed in 1958 (Industrial Relations Act 1958, (ACT 56). Many unions were suspicious of this and the centralising proposals. Mr. Ako Adjei, Minister of Labour and Co-operatives at the time said the pressure for the law came from the organised working people of Ghana. Tettehghah returned from Israel 1954 propagating a centralized model from Israel. This propaganda by Tettehghah largely influenced the tenets of the Act. The Executive Board adopted the proposals to replace the existing consultative federal structure. Another reason for this option was that employers were unwilling to implement the check-off system and to acquiesce in collective agreements. Under the Act certification of each union was through the TUC which also contacted the Ministry of Labour in the event of any industrial dispute among other provisions. Private employers were to meet union officials in standing negotiating committees. It was a victory for the TUC to force companies to recognise unions independent of their control. It also protected union officials from victimization and collective agreements were made legally enforceable (Arthiabah & Mbiah, 1995).

The 1959 Amendment made only registered unions the legally recognized entity to negotiate with employers and only unions affiliated to the trade union congress (TUC) could be registered. In effect, the recalcitrant ones could only end up as welfare associations, thus forcing the UAC Employees Union to join the Commercial and Allied Workers Union. Another 1960 Amendment was passed which gave the TUC disciplinary power and financial control over the unions. It persuaded the government to accommodate it and the CPP obliged because of the rowdy street demonstrations in 1960 which suggested that it was losing control of the masses (Arthiabah & Mbiah, 1995).

In the global economy, union strength is essential to protecting worker rights, reducing economic inequality, and balancing company power. Workers confront pressures from globalization, automation, and informal labour markets, collective action guarantees fair salaries, safe workplaces, and social stability.

2.3 Union Commitment

Labour unions can be described as a group of employees who have organised themselves for synergy to represent their interest for the purpose of negotiating compensation, hours of work and working conditions. Nickel, McHugh and McHugh (1996) described labour union as an organisation formed by workers to protect themselves against

the excesses of management and to have a strong voice in the operations of their jobs. According to Rebore (2001) when representatives of an organised group bargain collectively over salaries, fringe benefits and working conditions for their members with management, the group is, in essence, a labour union. The term labour union and professional association are also interchangeably used when referring to the involvement that teacher organisations have in the negotiation process. For instance, in Ghana, most of the teacher unions consider themselves as professional organizations but are still registered as labour unions. Thus, labour unions aim at improving their members' benefits through improved remuneration, employment, participation in and influence on the decision-making process in the workplace, welfare services such as help with legal matters relating to employment, education and financial assistance in times of industrial action. In Ghana, however, most unions are not financially sound enough to be able to provide financial assistance to members in times of industrial action. For instance, in 2006 the Ghana National Association of Graduate Teachers (NAGRAT) could not sustain its industrial action when the employer refused to pay the workers at the end of the month. Members started trooping back to work when the union could not support them financially. For centuries, labour unions have been quite influential in shaping policies at the state and organisational levels (Kearney, 2009). According to Kelly (1998) employees join unions mainly because they need their collective strength to engage the employer on their conditions of work.

For over half a century now union commitment has suffered a persistent decline. According to ILO (1997) over fifty per cent of the global workforce is not unionized and that unions continue to lose more members. This according to Gall and Fiorito (2012) goes to limit the potency of unions. However, the ILO still believes that the decline in membership of unions has not diminished union influence. Union commitment as described by Gordon et al. (1980) is where the individual has the desire to remain a member of a union, exert effort for it and identifies with its objectives. Union commitment entails factors such as union loyalty, belief in unions, willingness to work for unions and responsibility to unions.

Research consistently shows that employees join unions for one primary reason; they are dissatisfied with how they are treated by their employers and feel the unions can improve their situation. If the employees do not get organizational justice from their employers, they turn to the unions to assist them in getting what they believe is equitable (www.auburn.edu/wilsokc/). It is clear from the foregoing that there are a plethora of opinions on the continued existence of labour unions the world over and for that matter Ghana. However, with dynamism within the unions they can withstand the turbulence particularly by forging a healthy relationship with institutional leadership. Ismail et al. (2021) concluded in their study that for healthy industrial harmony, employers must exhibit good leadership and do their best to work with unions to meet the commitment of workers.

III. METHODOLOGY

3.1 Research Design

This study employed a correlational research design, incorporating descriptive techniques to examine the relationships between variables. The quantitative approach was adopted, utilising an empirical investigation of observable phenomena. Data analysis was conducted using computational techniques, specifically, Partial Least Squares Structural Equation Modeling (PLS-SEM).

3.2 Eligibility Criteria

The eligibility criteria included public SHS teachers who have five years of teaching experience in the Ghana Education Service and a member of pre-tertiary teacher union in Ashanti Region.

3.3 Population and Sampling Technique

The target population for the study comprised all public senior high school teachers in the Ashanti Region. These were teachers whose basic qualifications were first degrees and they taught students between the ages of twelve and sixteen. There were 105 public senior high schools in the region and a teacher population of 7016. The accessible population was however 1838 in 20 selected schools. A sample of 400 teachers was used for the study. The 400 was arrived at using Krejcie and Morgan's (1970) sample size determination table. The 400 was considered reasonable as it fell within the prescription by the rule of thumb relative to this study. Since the study was delimited geographically to senior high schools in Ashanti Region the researchers randomly selected 20% out of the 105 Senior High Schools in the region. The sampling technique used was multi-stage sampling approach. The number of teachers from each school who participated in the study was proportionately determined (Amedahe, 2002).

3.4 Research Instruments

Instruments that were used to collect data for the study were already developed and tested questionnaires which were adopted to make it relevant to the Ghanaian context. These were standardised questionnaires whose validity and

reliability had been tested over a period and quoted in many academic studies such as Bass and Avolio (2004). The instruments used for data collection in this study contained important sections outlined as follows;

1. Multifactor Leadership Questionnaire 5X by Bass and Avolio (2004).
2. Union Strength Scale by Eden (2017).
3. Union Commitment Scale by Gordon et al. (1980).

3.5 Data Analysis Procedure

The completed questionnaires were entered in SPSS version 25.0 for analysis. Descriptive statistics were conducted to describe the research variables used in the data analysis. Frequencies, percentages, means and standard deviations were calculated to describe any nominal information. Again, Skewness and kurtosis of head teachers' transformational leadership were calculated (Serin & Akkaya, 2020; Howell, 2010).

3.6 Ethical Issues

Participants' replies were protected to ensure confidentiality. This was preserved by providing the data in such a way that the participants were unrelated to the information supplied. Participants' names and other personal information were not revealed. This was accomplished by ensuring pseudonyms and passwords to safeguard the files holding participant information (Cohen, *et al.*, 2013). Again, participants were advised of their ability to withdraw from the research at any time (Gay, *et al.*, 2009).

Table 1

Reliability Co-efficient of instruments

Construction	No. of Items	Alpha Levels
Transformational Leadership	16	0.890
Union strength	08	0.788
Union commitment	14	0.878

The rule of Thumbs says that a Cronbach's alpha of between 0.7 and 0.9 for any construction is considered reliable (Hair et al., 2017; Robinson et al., 1991). As per the results in Table 1, the instruments for the study were reliable.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 What transformational leadership practices are exhibited by head teachers?

The research question sought to find out the transformational leadership practices are exhibited by head teachers. The findings are presented below: The descriptive statistics of the data collected is presented below in Table 2.

Table 2

Descriptive Statistics of Teachers' Perceived Transformational Leadership practices of their Heads.

S/ N	SCHOOL LEADERSHIP	VO	OF	ST	NO	NA	TT
		N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
1	Talks about his/her most values and beliefs.	69 (17.3)	126 (31.5)	127 (31.8)	55 (13.8)	23 (5.8)	400 (100)
2	Specifies the importance of having a strong sense of purpose	95 (23.8)	173 (43.3)	87 (21.8)	35 (8.8)	10 (2.5)	400 (100)
3	Considers the moral and ethical consequences of decisions	93 (23.3)	159 (39.8)	94 (23.5)	40 (10)	14 (3.5)	400 (100)
4	Emphasizes the importance of a collective sense of mission	111 (27.8)	147 (36.8)	81 (20.3)	49 (12.3)	12 (3)	400 (100)
5	Re-examine critical assumption to question whether they are appropriate	56 (14)	124 (31)	146 (36.5)	55 (13.8)	19 (4.8)	400 (100)
6	Seeks differing perspectives, when solving problems.	57 (14.3)	124 (31)	126 (31.5)	67 (16.8)	26 (6.5)	400 (100)
7	Gets me to look at problems from many different angles	44 (11)	118 (29.5)	112 (28)	88 (22)	38 (9.5)	400 (100)
8	Suggests new ways of looking at how to complete assignments.	59 (14.8)	122 (30.5)	124 (31)	75 (18.8)	20 (5.8)	400 (100)

S/ N	SCHOOL LEADERSHIP	VO	OF	ST	NO	NA	TT
		N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
9	Talk optimistically about the future	103 (25.8)	139 (34.8)	90 (22.5)	48 (12)	20 (5)	400 (100)
10	Talks enthusiastically about what needs to be accomplished	114 (28.5)	161 (40.3)	78 (19.5)	40 (10)	7 (1.8)	400 (100)
11	Articulates a compelling vision of the future.	69 (17.3)	144 (36)	113 (28.3)	54 (13.5)	20 (5)	400 (100)
12	Expresses confidence that goals will be achieved	109 (27.3)	150 (37.5)	94 (23.5)	37 (9.3)	10 (2.5)	400 (100)
13	Spends time teaching and coaching people	47 (11.8)	91 (22.8)	113 (28.3)	100 (25)	49 (12.3)	400 (100)
14	Treats me as an individual rather than just as a member of a group	44 (11)	113 (28.3)	109 (27.3)	84 (21)	50 (12.5)	400 (100)
15	Considers me as having different needs, abilities and aspirations from others.	43 (10.8)	110 (27.5)	104 (26)	89 (22.3)	54 (13.5)	400 (100)
16	Helps me to develop my strengths.	49 (12.3)	104 (26)	117 (29.3)	77 (19.3)	53 (13.3)	400 (100)

Very often (VO) Often (OF) Sometimes (ST) Not often (NO) Not at all (NA) Total (TT)

Table 2 presents the results on views gathered from teachers on their perception of transformational leadership practices of heads of senior high schools in the Ashanti region. In all, 16 questions were asked to elicit information on teachers' perceptions of the transformational leadership practices of their heads. From the analysis, it could be seen that teachers perceive their heads to score slightly above average in terms of their transformational leadership practices.

The sixteen indicators from the Multifactor Leadership Questionnaire that were administered to 400 senior high school teachers in Ashanti Region, the teachers scored the heads lowest on the question "The person I am rating spends time teaching and coaching people". Table 1 suffice it to note that the negative responses scored lower than the affirmative responses. The neutral responses, that is, those who were not sure, were high. It was also noteworthy that in seven of the observations, teachers scored their heads above fifty percent. The overall average percentage score for transformational leadership on the Multi-Factor Leadership Questionnaire was 51%, which was slightly above average.

Table 3

Descriptive Statistics on Transformational Leadership Data Normality

Mean	Standard Deviation	Skewness	Kurtosis	Range
2.5925	1.09976	0.337	-0.498	4
2.23	0.98972	0.695	0.108	4
2.3075	1.04435	0.632	-0.116	4
2.26	1.08413	0.619	-0.389	4
2.6425	1.03556	0.254	-0.357	4
2.7025	1.10546	0.262	-0.596	4
2.895	1.15208	0.147	-0.827	4
2.6875	1.08987	0.19	-0.676	4
2.3575	1.13486	0.589	-0.428	4
2.1625	1.00679	0.677	-0.159	4
2.53	1.08029	0.432	-0.423	4
2.2225	1.02744	0.616	-0.186	4
3.0325	1.20002	-0.045	-0.903	4
2.9575	1.19761	0.135	-0.907	4
3.0025	1.21292	0.088	-0.965	4
2.9525	1.21405	0.125	-0.889	4

From Table 3, the mean scores ranged from 2.22 to 3.03. The overall mean score was 2.59. The standard deviation ranged from 0.98 to 1.21. The overall standard deviation was 1.10. Comparing the mean and standard deviation, it could be gleaned that the figures for the standard deviation were small; thus, the data set was close to the mean. This meant the dataset was not unduly affected by outliers. The kurtosis figures measure the size of a two-tailed distribution. In the above distribution, since the values were less than 3, the dataset had a lighter tail than the normal distribution. Skewness of the data showed that only two items had a value greater than 1 (-0.045 and 0.88). The rest were

less than -1. The rule of thumb says that if the skewness is between -0.5 and 0.5, the data is fairly symmetrical, and if it is between -1 and -0.5 or between 0.5 and 1, the data is considered moderately skewed (von Hippel & Schuetze, 2025). This implied that the data were moderately skewed. Thus, the data were close to symmetry. The data was therefore considered normal. This normal data concludes that teachers perceived their heads to be moderately transformational at 51%.

4.1.2 Teachers Commitment to Their Unions in the Ghana Education Service

Research question two (2) sought to find out how teachers were to their unions in the GES. To answer research question 2, 15 questions from the Union Commitment Scale were presented to 400 teachers chosen from selected senior high schools in Ghana to answer. The descriptive statistics of the data collected is presented below in Table 4.

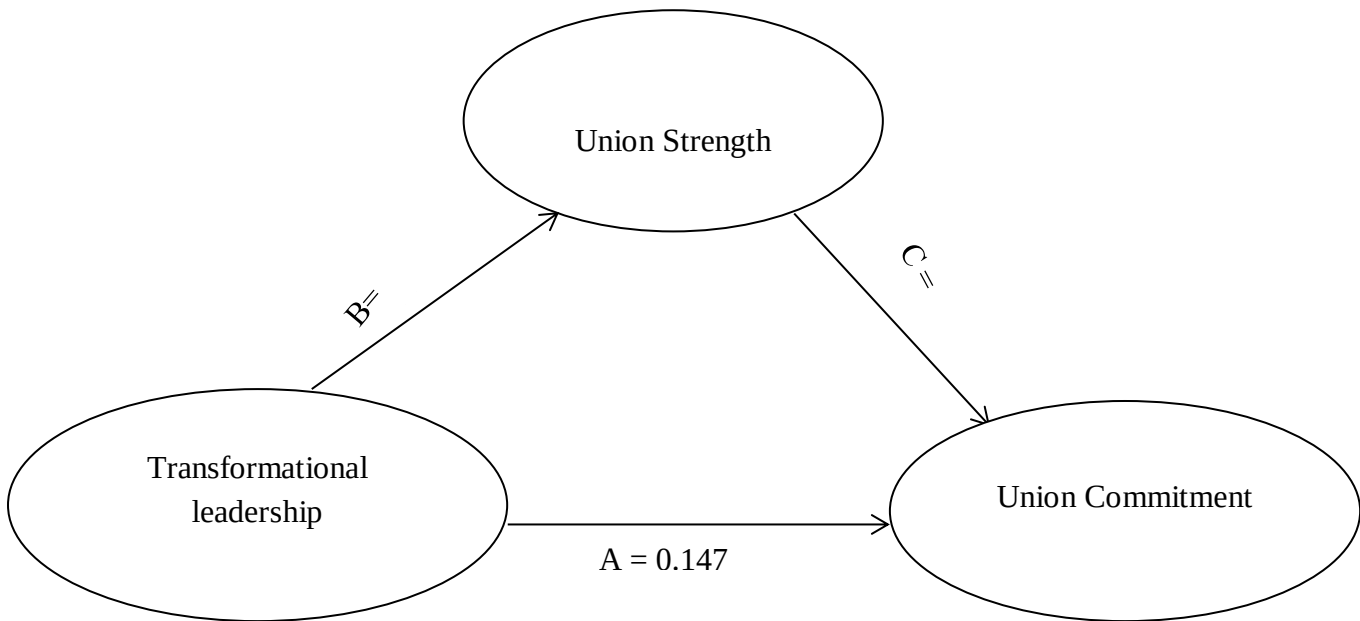
Table 4

Descriptive Statistics of Perceived Union Commitment of Teachers

S/N	UNION COMMITMENT	SA N(%)	A N(%)	DN N(%)	DA N(%)	SD N(%)	TT N(%)
1	I feel a sense of pride being part of the union.	98(24.5)	192(48)	44(11)	45(11.3)	21(5.3)	400(100)
2	The record of the union is a good example of what dedicated people can get done.	55(13.8)	199(49.8)	78(19.5)	52(13)	16(4)	400(100)
3	There is a lot to be gained by joining the union	71(17.5)	205(51.3)	44(11)	59(14.8)	21(5.3)	400(100)
4	Deciding to join the union was a smart move on my part.	78(19.5)	177(44.3)	54(13.5)	66(16.5)	25(6.3)	400(100)
5	I am willing to put in a great deal of effort beyond what is normally expected of a member to make the union successful	97(24.2)	212(53)	54(13.5)	26(6.5)	11(2.7)	400(100)
6	The union adequately represents the interests of all members.	72(18)	149(37.3)	64(16)	83(20.8)	32(8)	400(100)
7	I recommend the union to my friends as a great organization to be a member of.	84(21)	174(43.5)	52(13)	63(15.8)	27(6.8)	400(100)
8	If asked I would run for an elected office in the local association.	84(21)	138(34.5)	95(23.8)	53(13.3)	30(7.5)	400(100)
9	Every association member must be prepared to take the risk of filing a member's grievance.	93(23.3)	188(47)	71(17.8)	40(10)	8(2)	400(100)
10	It is the duty of every member to keep His/her ears open for information that might be helpful to the local association.	155(38.8)	195(48.8)	31(7.8)	12(3)	7(1.8)	400(100)
11	It is every member's duty to support or help another member use the grievance procedure.	115(28.8)	217(54.3)	48(12)	18(4.5)	2(0.5)	400(100)
12	Based on what I know now and what I believe, I can expect in the future, I plan to be a member of the union for the rest of the time.	89(22.3)	175(43.8)	78(19.5)	38(9.8)	20(5)	400(100)
13	It is every member's responsibility to see to it that the school administration lives up to the terms of the contract.	124(31)	210(52.5)	38(9.5)	19(4.8)	9(2.3)	400(100)
14	I am ready if asked to serve on a committee for the union.	101(25.3)	193(48.3)	59(14.8)	26(6.5)	21(5.3)	400(100)

Strongly Agree (SA) Agree (A) Don't Know (DN) Disagree (DA) Strongly Disagree (SD) Total (TT).

Table 4 discusses respondents' commitment to their teacher unions at the pre-tertiary level in Ghana. Out of the 400 respondents to the items, 290 (72.5%) indicated that they feel a sense of pride in being part of the union. On the other hand, 66(16.6%) disagree with feeling a sense of pride in being part of the union. There is a positive perception of teachers about their unions. The overall average percentage score was 280 (70%). Question 10, which sought to find out whether teachers perceive it as their duty to keep their ears open for information that might be helpful to the local association, attracted the highest score of 350 (88%). Questions number 11 and 13 also scored above eighty percent at 332 (83%) and 334 (84%) respectively. Even questions 6 and 8, which had the lowest scores, still hovered above fifty percent at 221 (55%) and 222 (56%). The average mean score on the union commitment scale was 2.25, and the standard deviation of 1.03. Table 4 presents the mean score and standard deviation of perceived union commitment of teachers in senior high schools in Ashanti Region.

**Figure 1***Relationships of latent variables***Hypothesis One**

H₁: There is statistically significant relationship between transformational leadership of school heads and union commitment of teachers.

Figure 1 shows the relationship among the latent variables under study (transformational leadership, union strength and union commitment). The Transformational Leadership to Union Commitment link is statistically significant at 14% level. The indirect effect (AxB of Figure 1) that mediated this link increased its positive impact to a total effect of 0.184 which was significant. The significance of this indirect effect is determined by the Variance Accounted For (VAF) statistic. This is determined by calculating the influence of indirect effect on a dependent variable or how much of the dependent variable is explained by this indirect effect through the mediator. A VAF that is above 80% is considered full mediation and a VAF between 20% and 80% is considered partial mediation. A VAF that is below 20% is considered no mediation (Hair et al., 2017).

Figure 1 shows the mediating effect of union strength on the relationship between Transformational Leadership and Union commitment.

$$A = 0.147$$

$$B = 0.530$$

$$C = 0.348$$

$$\text{Indirect Effect} = A \times B$$

$$0.147 \times 0.348 = 0.077$$

$$\text{Total effect} = A + (B \times C)$$

$$0.147 + (0.530) \times (0.348) = 0.331$$

$$\text{VAF} = \text{Indirect effect divided by total effect}$$

$$\text{VAF} = 0.077/0.331 = 0.235$$

With the VAF results of 0.235 one could conclude that there was a partial mediation between Transformational Leadership and Union commitment, by union strength (unionism) since it was between 20% and 80%. The letter A represented the direct effect between Transformational Leadership and Union commitment. B represented the direct relationship between Transformational Leadership and Union Strength and C represented indirect relationship between Union Strength and Union commitment. The **PLS** quality criteria overview of Table 5 shows composite reliability values for union strength = 0.838, Transformational Leadership = 0.911 and Union commitment = 0.897. This means all of the constructs show strong composite reliability as 0.70 to 0.90 is considered strong. This result shows a high level of internal consistency of the study.

Table 5*AVE, Composite Reliability, R Square and Cronbach's Alpha*

	AVE	Composite Reliability	R Square	Cronbachs Alpha
UNS	0.348	0.838	0.281	0.787
T LEAD	0.395	0.911		0.895
UMC	0.394	0.897	0.197	0.879

AVE is the basis for calculating convergent validity assessment. The **AVE** of Union Strength = 0.348, Transformational leadership = 0.395, and Union commitment = 394. The general rule is that the AVE should be 0.50 and above. None of these three variables could get the 0.50. This means they all have weak **AVE** but we can still accept the approximately 0.4 because Fornell and Larcker (1981) said that if **AVE** is less than 0.5 but composite reliability is higher than 0.6 the convergent validity is still consistent. The Cronbach Alpha for the construct are strong with Union Strength = 0.787 Transformational Leadership = 0.895 and Union Commitment = 0.879. All these scores are above the minimum acceptable limit of the Rule of Thumb. The R^2 of Union Strength = 0.281 and union commitment = 0.197. These are acceptable scores. Hair et al. (2017) and Falk and Miller (1992) proposed a minimum acceptable limit of 0.20 and 0.10 respectively.

Discriminant validity is the extent to which two distinct constructs are assessed to ascertain relationship or otherwise. It is used to prove how truly a construct is different from the other. Typically, cross-loadings are used to assess discriminant validity. Fornell-Larcker criterion is also used. In using the cross loadings, the indicators outer loading should be greater than any associated loading on the construct (Hair et al., 2017). The smart **PLS** report shows the results of the calculation of the outer loadings as in table 6. It indicates that one out of the indicators of Union strength crossed the 0.7 threshold. Out of the 16 indicators of the transformational leadership, one crossed the 0.7 threshold. Five out of the indicators of Union Commitment crossed the 0.7 threshold.

Table 6*Outer Loadings of Indicators*

	UNS	TLEAD	UNC	
Q1		0.408		
Q10		0.628		
Q11		0.654		
Q12		0.665		
Q13		0.677		
Q14		0.416		
Q15		0.532		
Q16		0.692		
Q2		0.634		
Q23	0.698			
Q24	0.647			
Q25	0.720			
Q26	0.496			
Q27	0.435			
Q28	0.517			
Q29	0.549			
Q3		0.643		
Q30	0.629			
Q31			0.690	
Q32			0.741	
Q33			0.749	
Q34			0.741	
Q35			0.674	
Q36			0.716	
Q37			0.782	
Q38			0.573	
Q39			0.369	
Q4		0.677		

	UNS	TLEAD	UNC	
Q40			0.460	
Q41			0.490	
Q42			0.652	
Q43			0.416	
Q44			0.531	
Q5		0.646		
Q6		0.690		
Q7		0.673		
Q8		0.703		
Q9		0.613		

Hypothesis two

Mediation Effect of Union Strength

H₂: Union Strength mediate the relationship between transformational leadership of heads and union commitment of teachers.

This hypothesis sought to ascertain the mediation relationship of union strength between transformational leadership and union commitment. The analysis of this study was performed using factor analysis and partial least squares structural equation modelling (PLS – SEM). The measurement model had 40 indicators while structural model had 3 latent variables and all of them were reflectively measured. The latent variables were transformational leadership, union strength and union commitment. The model hypothesized that union strength of teachers mediated the relationship between transformational leadership of heads and union commitment of teachers. Put simply, transformational leadership of heads indirectly affects the union commitment of teachers through teacher union strength.

In the exploratory factor analysis (EFA) of the transformation leadership indicators which had been grouped into four, a minimum rotated EFA of 0.50 was considered for inclusion. This meant that any indicator loadings below 0.5 should have been deleted. However, item 1 and 14 were the only items that had outer loadings below 0.5 but were included. Item 26, and 27 scored 0.497, and 0.435 respectively from union strength, fell below the 0.5 threshold but were still included for yet to be explained reasons. In the case of UNC items 39, 40, 41, and 43 loaded 0.369, 0.460, 0.490, and 0.416 respectively and should have been deleted but maintained for good reasons.

The reasons for maintaining the items that fell below the minimum rotated factor score were that; first, all the questions for the study were selected from already validated questions and therefore are very relevant in measuring the model. Also, attempt at deleting them was considered unnecessary. Hair et al. (2017) advocate that loadings below 0.70 should be deleted if the deletion will lead to improvement in the composite reliability. Table 6 shows the outer loadings.

Table 7

Construct Reliability and Validity

MATRIX	Cronbach Alpha	RHO	Composite Reliability	Average Variance Extracted
UNS	0.788	0.802	0.838	0.345
T LEAD	0.890	0.896	0.907	0.383
UNC	0.878	0.903	0.896	0.393

From Table 7 the model has no Fornell-Larker challenges. However, Henseler et al., (2015) have raised issues regarding the ability of cross-loadings and Fornell-Larker criterion as measures as they fail to indicate a lack of discriminant validity when two constructs are perfectly correlated and when indicator loadings of a construct under consideration differ only slightly, respectively.

Table 8

Fornell-Larcker Criterion

	UNS	T LEAD	UNC
UNS	0.590		
T LEAD	0.530	0.628	
UNC	0.426	0.331	0.627

To cure the weaknesses of Cross-loading and Fornell-Larker criterion Hensler et al. (2015) recommends heterotrait-monotrait ratio (HTMT) of the correlation. The number of observations for PLS-SEM should be a minimum

of 50 according to the recommendations of Hair et al. (2017). Thus, for a power of 80% with 50 observations, the R^2 for the respective latent variable must be 0.50. The minimum acceptable N is calculated by identifying the reflective latent variable with the largest number of indicators and multiplying the number of indicators by 10. In this study TLEAD as the latent variable with the largest number of indicators, 16 indicator variables in all were multiplied by 10 to get 160. The study had an N of 400 which exceeds the rule of Thumb minimum. With this sample size and R^2 of 0.197 it is sufficient to enable 80% power probability. Having assessed the measurement model and accepted that the construct measures are reliable and valid, structural model is the next to be assessed. This is where the predictive capability of the model is assessed (Hair et al., 2017).

The systematic approach to the assessment of structural model results include assessment for collinearity issues, significance and relevance of the structural model relationship, level of R^2 , and predictive relevance Q^2 . Collinearity assessment is necessary because the estimation of path coefficients in structural model is based on Ordinary Least Square (OLS) regression of the endogenous latent variable on its corresponding predecessor construct. Usually, the path coefficient will be biased if the estimation involves critical levels of collinearity among the predictor constructs (Hair et al., 2017). From Table 9 all values are lower than 5 and their tolerance levels are higher than 0.20. Therefore, there is no collinearity problem.

Table 9*Collinearity Statistics (Variance Inflation Factor - VIF)*

	UNS	TLEAD	UNC
UNS			1.391
TLEAD	1.000		1.391
UNC			

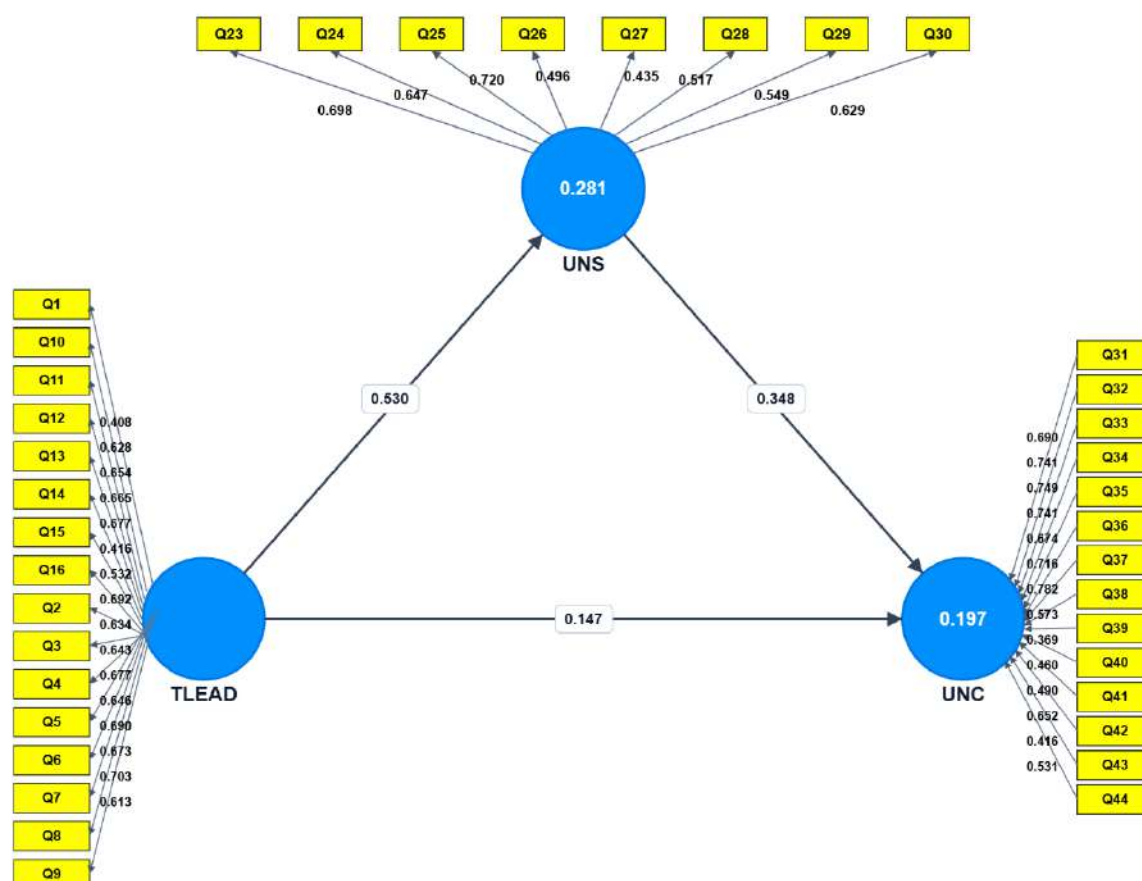
**Figure 2***PLS Algorithm results of standardized coefficients*

Table 10
Construct Coefficients

	UNS	T LEAD	UNC
UNS			0.348
T LEAD	0.530		0.147
UNC			

As depicted in Figure 3 and Table 10 transformational leadership rather scored very low in the correlation with union commitment ($\beta = 0.147$). Transformational Leadership scored the highest significance in correlation with union strength ($\beta = 0.530$). Union strength has a very strong effect on union commitment ($\beta = 0.348$).

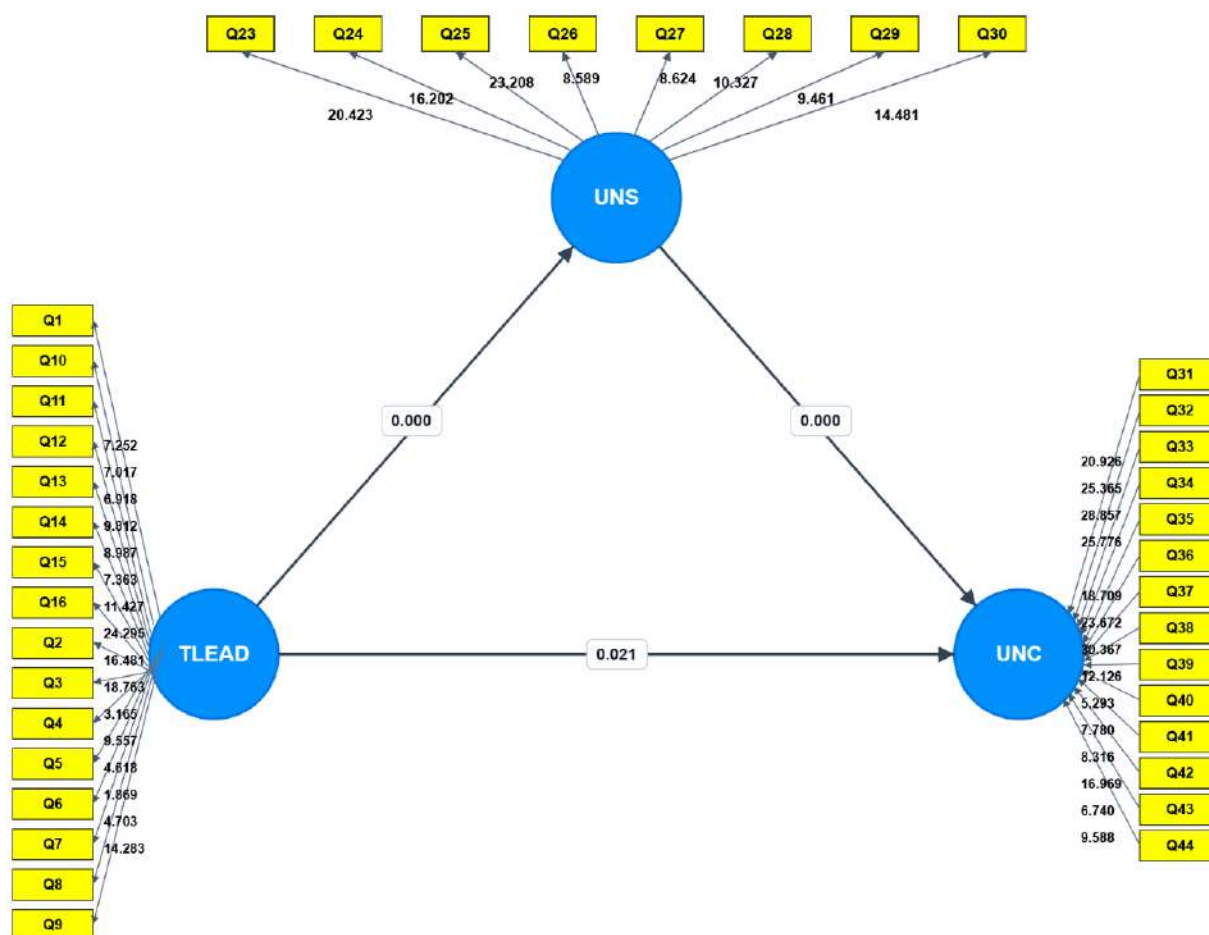


Figure 3
Bootstrapped PLS Path Model

As depicted in Figure 3 and Table 11 the model recorded significant **p values**.

Table 11
Bootstrapped Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	t Statistics ((O/STDEV))	P Values
UNS -> UNC	0.348	0.358	0.065	5.378	0.000
TLEAD -> UNS	0.530	0.540	0.040	13.386	0.000
TLEAD -> UNC	0.147	0.147	0.064	2.305	0.021

4.2 Coefficient Determination (R^2)

Structural model results perform predictive functions regarding the relationship between constructs. According to Hair et al. (2017), the coefficient of determination (R^2) is the most commonly used means to evaluate the structural model. In controlling for UNS, the UNC produced an R^2 of 0.197. Controlling for UNC, UNS produced an R^2 of 0.281. The R^2 value ranges from 0 to 1 with higher levels indicating higher level of predictive accuracy (Hair et al., 2017).

Though there is no established rule of Thumb in social science on acceptable limit for R^2 values most researchers consider 0.20 as the acceptable limit. Though the predictive power of Transformational leadership and Union Strength on Union commitment were below 0.20 they are still acceptable in social science research (Cohen, 1988; Falk & Miller, 1992). Transformational leadership, however, had a higher predictive power on union strength.

4.3 Discussion

The study revealed that 51% of teachers perceived their school heads as exhibiting transformational leadership skills, with a grand mean score of 2.59 (SD = 1.10) across items ranging from 2.22 to 3.03. This indicates a moderate level of transformational leadership, suggesting that while such practices are present, they are not fully realised across all schools. The 22% who did not perceive their heads as transformational represent a significant group whose needs may be unmet. This finding underscores the importance of not only enhancing leadership capacity but also ensuring its consistent application across diverse school contexts.

The moderate level of transformational leadership identified in this study has implications for student performance, particularly given the recent West Africa Secondary School Certificate Examination (WASSCE) results, which have averaged around 50% in core subjects. This performance level mirrors the moderate leadership scores, suggesting a potential linkage. A striking finding from this study is the high level of union commitment among teachers, with 70% expressing strong allegiance to their unions. This contrasts sharply with global trends of declining union commitment, as noted by Cushman (2023) and Little (2022). However, it aligns with Prosser (2021), who observed persistent union commitment in certain countries due to unique socio-political factors. In Ghana, Asiedu-Appiah et al. (2021) attribute this high commitment to unions' critical role in advocating for teacher welfare amid challenges like delayed salaries and poor working conditions.

The study indicates that there is a significant relationship between transformational leadership of school heads and union commitment of teachers at 14% level. Whiles a partial mediation between Transformational Leadership and Union commitment, by union strength since it was between 20% and 80% (VAF results of 0.235).

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study found that the heads were moderately transformational. It is therefore concluded that there is more room for transformational leadership behaviours to be demonstrated. It is also concluded that the status quo would adversely affect academic achievement in the SHS in the region, as it is established that there is a positive correlation between transformational leadership and school achievement. Again, the finding indicates that Ghanaian SHS teachers are committed to their unions and perceive them as supportive.

5.2 Recommendations

The Ghana Education Service (GES) and the school strengthen the leadership skills of head teachers by holding workshops that emphasise staff morale and motivation, offering teachers individualised support, and promoting innovative approaches to instruction. They can accomplish this by collaborating with leadership training institutes and non-governmental organisations (NGOs) that focus on educational leadership.

Enhance working conditions by working with school governing boards, parent-teacher associations, and teacher unions (such as the Ghana National Association of Teachers, (GNAT), and the National Association of Graduate Teachers, (NAGRAT). This can be accomplished by holding frequent meetings between union officials and school leaders, working together to address problems like resources and workload, utilising the union's 70% commitment to boost teacher morale, and forming a cooperative committee to promote changes. School heads and management should foster participatory decision-making. Teachers need to be involved in curriculum planning and instruction. Implement supportive practices like regular feedback sessions and teacher recognition.

Declaration of Interest

The author declares that he does not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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