School Climate as a Moderator of the Relationship between Principals' Self-Awareness and Student Academic Performance in Kenya

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ABSTRACT

Despite sustained government investment in education, public secondary schools in Kenya's North Rift region continue to experience persistent low academic underperformance. This study examined both the direct relationship between principals' self-awareness a core Goleman emotional intelligence dimension and student academic performance, and the moderating role of school climate in that relationship. Grounded in Goleman's Emotional Intelligence Theory (2011) and anchored in a pragmatic research philosophy, the study adopted an explanatory sequential mixed-methods design. A sample of 407 respondents (100 principals and 307 TSC-employed teachers) drawn from 1,350 public secondary schools across eight North Rift counties was selected using proportionate stratified random sampling. Data were collected through structured questionnaires and analyzed using descriptive statistics, Pearson's correlation, multiple regression, and Hayes' PROCESS macro (Model 1) moderated regression with 5,000 bootstrapped samples and 95% confidence intervals. Findings revealed a statistically significant and positive direct relationship between principals' self-awareness and student academic performance ($r = 0.739$, $p < .01$; $\beta = 0.126$, $p = .026$). Moderated regression analysis further confirmed that school climate significantly moderates this relationship ($\beta_{6\beta} = -0.062$, $p = .003$; $\Delta R^2 = 0.033$, $F = 18.251$, $p < .001$). Conditional effects analysis demonstrated a compensatory moderation pattern: the effect of self-awareness on academic performance was strongest when school climate was weak (effect = 0.505, $p < .001$ at the 16th percentile) and diminished progressively as climate improved (effect = 0.131, $p = .059$ at the 84th percentile). These findings indicate that self-aware leadership is most consequential in resource-constrained, low-climate school environments. The study recommends targeted self-awareness capacity-building programmes prioritizing schools operating under weaker climate conditions, as these are the contexts where enhanced principal self-awareness yields the greatest students' academic performance.

INTRODUCTION

Educational leadership has emerged as a critical determinant of school effectiveness and student academic performances (Leithwood et al., 2020). Among the competencies that define effective school leadership, emotional intelligence (EQ) has attracted substantial attention for its capacity to shape interpersonal dynamics, organisational climate, and instructional quality (Goleman, 2011). Within Goleman's (2011) framework, self-awareness has been defined as the capacity to recognise one's own emotions, strengths, weaknesses, values, and their impact on others constitutes the foundational dimension upon which all other EQ competencies are built. Theoretically, self-aware leaders are better positioned to regulate their behaviour, adapt their leadership style, and create learning environments conducive to student academic performances (Partin, 2022; Sasere & Matashu, 2025).

In Kenya, the academic performance of secondary school students, as measured by the Kenya Certificate of Secondary Education (KCSE), remains a persistent policy concern, particularly in marginalized regions such as North Rift (Ministry of Education, 2023). Despite government investment in infrastructure and teacher

deployment, performance gaps between these counties and national benchmarks continue to widen. A growing body of researchers suggests that the emotional competencies of principals and specifically their capacity for self-reflection and self-regulation may constitute an underexplored explanatory variable in this performance deficit, alongside the more extensively studied influences of student socioeconomic background, teacher quality, and school resource availability (Butt, 2021; Georgewill & Asagba, 2024).

The literature further proposes that school climate may function as a contextual variable that moderates the strength of the relationship between principal emotional intelligence and student performance (Dutta & Sahney, 2016; Tschannen-Moran & Gareis, 2015).this demonstrates that no study has empirically tested the moderating role of school climate specifically on the self-awareness students' academic performance relationship in the North Rift region. The present paper addresses this gap by examining: (a) the direct relationship between principals' self-awareness and student academic performance, and (b) the moderating effect of school climate on that relationship, in selected public secondary schools in North Rift, Kenya.

Two hypotheses guided this paper:

H_{02} There is no statistically significant relationship between principals' self-awareness and student academic performance; and

$H_{06\beta}$ School climate does not moderate the relationship between principals' self-awareness and student academic performance in North Rift, Kenya.

LITERATURE REVIEW

Theoretical Framework

This study is grounded on Daniel Goleman's Emotional Intelligence Theory (Goleman, 2011), which operationalizes EQ across four core competencies: self-awareness, self-management, social awareness, and relationship management. Self-awareness occupies the foundational position in this framework. It is the competency upon which all others depend. A principal who accurately perceives their own emotional states, recognises the impact of their behaviour on staff and students, and reflects critically on their leadership practices is better positioned to navigate complex school environments and drive improved academic outcomes (Goleman, 2011; Gómez-Leal et al., 2022).

Goleman's framework has been extensively applied in educational leadership research across diverse national contexts (Sasere & Matashu, 2025; Ulutaş, 2024) and its relevance to the Kenyan context is supported by studies demonstrating that principals' EQ competencies are significantly associated with teacher motivation, school climate, and student academic outcomes (Waweru et al., 2020). The present study operationalizes self-awareness through ten validated indicators including emotional recognition, self-reflection on leadership style, awareness of stress responses, understanding of personal values, and sensitivity to the impact of behaviour on staff and student morale.

Self-Awareness and Student Academic Performance

Among EQ dimensions, self-awareness holds a basic position in school leadership research (Ulutaş, 2024). Globally, systematic analyses report that principals consistently achieve their highest EQ scores on self-awareness, a pattern linked to empathetic and democratic leadership styles that improve stakeholder satisfaction and academic outcomes (Ulutaş, 2024). Partin (2022) further demonstrates that principal self-awareness construed as present-centred understanding of one's own emotions significantly predicts student performances through organisational, decision-making, and well-being pathways. In the sub-Saharan African context, Georgewill and Asagba (2024) confirm that principals' self-awareness supports realistic goal-setting and awareness of personal limitations, directly shaping the school environment. Sasere and Matashu (2025) synthesize these threads in a recent systematic review, demonstrating that school leaders' EQ enhances student outcomes through cascading pathways involving teacher well-being, instructional leadership, and school climate.

Conflicting evidence exists where Rodrigues and Lima (2021) found that principals' instructional leadership which incorporates self-awareness has only a weak direct effect on student achievement; Dutta and Sahney (2016) similarly argue that principal influences on performance is primarily indirect, mediated by school climate and teacher satisfaction. The current study treats these tensions as theoretically productive, proposing that school climate may moderate the relationship between self-awareness and student academic performance in ways the prior literature has not adequately examined.

School Climate as a Moderator

School climate is characterized by the quality of relationships, safety, trust, inclusivity, and open communication within the school environment, and has long been identified as a key contextual factor shaping educational outcomes (Tschannen-Moran & Gareis, 2015; Cohen et al., 2009). Theoretically, school climate can amplify or constrain the leadership impact of principals' emotional competencies. In a highly positive climate, baseline performance floors are elevated, potentially reducing the marginal impact of any single leadership competency; in a weaker climate, the self-aware leadership of the principal may serve a compensatory function, providing the emotional scaffolding that the environment itself fails to supply (Dutta & Sahney, 2016; Pretorius & Plaatjies, 2023).

This compensatory moderation hypothesis proposes that leadership effects are strongest where contextual support is weakest. It is consistent with the substitutes-for-leadership framework (Kerr & Jermier, 1978) and with recent African educational leadership evidence (Sasere & Matashu, 2025). It predicts that the relationship between principal self-awareness and academic performance will be stronger in schools with weaker climates, and will diminish, though remain positive, in schools with stronger climates. The present study provides the first empirical test of this hypothesis in the North Rift context. Figure 1 presents the conceptual framework guiding this study.

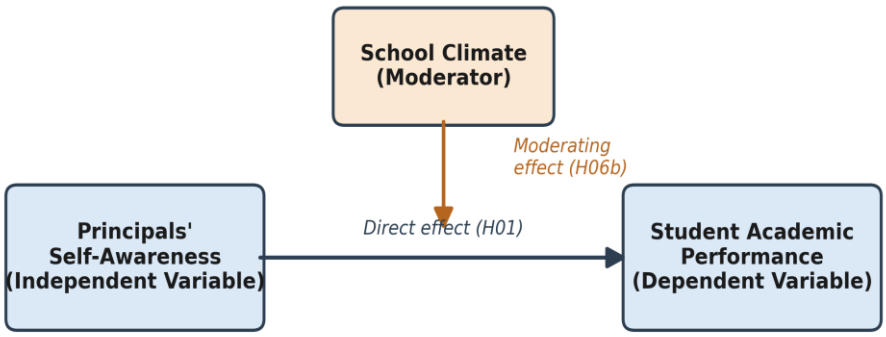

Figure 1: Conceptual Framework — School Climate as a Moderator of the Self-Awareness–Academic Performance Relationship

METHODOLOGY

Research Design and Philosophy

This study adopted an explanatory sequential mixed-methods design anchored in a pragmatic research philosophy (Creswell & Creswell, 2018). In Phase 1, quantitative data were collected and analyzed to establish relationships between principals' self-awareness, school climate, and student academic performance. Phase 2 employed semi-structured interviews to contextualize and enrich interpretation of the quantitative findings. This design was selected for its capacity to combine the statistical explanatory power of inferential analysis with the interpretive depth of qualitative inquiry (Saunders, Lewis, & Thornhill, 2019).

Population, Sample, and Sampling

The target population comprised 1,350 principals and 27,000 TSC-employed teachers from public secondary schools across eight North Rift counties: Baringo, Elgeyo-Marakwet's, Nandi, Samburu, Trans-Nzoia, Turkana,

Uasin Gishu, and West Pokot. Using Taro Yamane's formula at a 5% margin of error, a sample of 495 respondents was determined, comprising 100 principals and 395 teachers. Following data collection, 407 usable responses were obtained (response rate = 82.2%). Proportionate stratified random sampling ensured regional representation; purposive sampling was applied for qualitative depth.

Instrumentation

Self-awareness was measured through a 10-item Likert-scale subscale drawing on Goleman's (2011) framework. Items assessed principals' understanding of personal strengths and weaknesses, self-reflection on leadership style, awareness of emotional reactions, sensitivity to stress responses, and recognition of their behavioural impact on staff and student morale. School climate was assessed through a validated 10-item subscale capturing trust, safety, inclusivity, collaborative culture, open communication, and professional learning community dimensions. A pilot test (n = 20) established excellent internal consistency: Cronbach's $\alpha = 0.899$ (self-awareness subscale) and $\alpha = 0.921$ (school climate subscale). Content and construct validity were confirmed through expert review and alignment with Goleman's (2011) theoretical framework. Notably, principals' self-awareness was rated by teachers rather than through principal self-report. This informant-rating approach was a deliberate design choice intended to reduce the self-serving bias and social desirability effects that commonly compromise self-report measures of leadership competencies, since teachers are well positioned through daily contact to observe the behavioural manifestations of a principal's self-awareness. The approach nonetheless carries its own limitation, discussed in Section 5.3, as teacher ratings reflect perceived rather than directly observed self-awareness and may be shaped by the quality of the teacher-principal relationship.

Data Analysis

Quantitative data were analyzed through: (1) descriptive statistics (frequencies, means, standard deviations); (2) Pearson's correlation to test H_{02}; (3) multiple linear regression to establish the direct contribution of self-awareness while controlling for other EQ dimensions, gender and experiences; and (4) Hayes' PROCESS macro Model 1 moderated regression with 5,000 bootstrap samples and 95% bias corrected confidence intervals to test $H_{06\beta}$ (Field, 2018; Hayes, 2022). Diagnostic tests confirmed normality (Shapiro-Wilk: $p = .151 > .05$), linearity (deviation from linearity $p = .156$), absence of multicollinearity (VIF = 1.898, Tolerance = .527), and homoscedasticity for all variables prior to inferential analysis. The multiple regression model controlled for the other three Goleman EQ dimensions, gender, and teaching/administrative experience. Student socioeconomic background, teacher quality, and school resource endowment were not measured as covariates in this study; their omission is addressed as a limitation in Section 5.3, and their inclusion is recommended for future research designs.

RESULTS AND DISCUSSION

Descriptive Statistics: Principals' Self-Awareness

Table 1 presents descriptive statistics on the ten self-awareness indicators. Responses were elicited on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) and interpreted as: below 1.5 = strongly disagree; 1.5–2.4 = disagree; 2.5–3.4 = neutral; 3.5–4.5 = agree; above 4.5 = strongly agree.

Table 1: Descriptive Statistics — Principals' Self-Awareness and Student Academic Performance (N = 407)

Statement	SD	D	UD	A	SA	M	SD
Clear understanding of strengths and weaknesses	43	46	36	164	118	3.66	1.29
Self-awareness of decision-making patterns positively impacts outcomes	19	58	46	161	123	3.76	1.16
Students perform better when principal is aware of their behavioral impact	38	48	54	134	133	3.68	1.29

Understanding of personal values influences positive student achievement	36	57	26	151	137	3.73	1.30
Self-reflection on leadership style improves student performance	51	49	36	119	152	3.67	1.40
Students respond positively when principal is conscious of communication patterns	26	41	52	148	140	3.82	1.19
Awareness of emotional reactions creates environment conducive to academic success	23	49	30	132	173	3.94	1.22
Principal demonstrates self-empathy, better supporting others in school	24	49	51	143	140	3.80	1.20
Understands how emotions and behaviors affect staff and student morale	30	49	36	138	154	3.83	1.26
Self-awareness of stress responses positively influences overall student performance	14	38	36	161	158	4.01	1.08

Source: Field Data (2025). SD = Strongly Disagree; D = Disagree; UD = Undecided; A = Agree; SA = Strongly Agree; M = Mean; SD = Standard Deviation

Table 1 reveals consistent agreement across all ten self-awareness items, with mean scores ranging from 3.66 to 4.01—all within the 'Agree' interpretation band. The highest mean was for 'The principal's self-awareness of their stress responses positively influences overall student academic performance' (M = 4.01, SD = 1.08), with 319 respondents (78.4%) expressing agreement. This finding aligns with Dost et al. (2017), who demonstrated that self-awareness instruction positively improved academic achievement by enabling individuals to manage stress and maintain focus under pressure. The second highest mean arose for 'The principal's awareness of their emotional reactions helps create an environment conducive to academic success' (M = 3.94, SD = 1.22), with 305 respondents (75.0%) agreeing, consistent with Al Shehhi et al. (2021), who found principals with higher EQ scores better sustain emotionally supportive school environments. The lowest mean (M = 3.66) was for clarity of understanding of personal strengths and weaknesses, with 89 (21.9%) disagreeing, suggesting that this dimension of self-knowledge may warrant targeted professional development. Overall, the descriptive results indicates that teachers perceived their principals as possessing moderate-to-high self-awareness, particularly in the stress regulation and communication dimensions most proximate to classroom conditions.

Descriptive Statistics: School Climate

School climate was assessed through ten items capturing trust, safety, inclusivity, collaboration, open communication, and professional learning community dimensions. Mean scores ranged from 3.47 to 3.88, all within the 'Agree' band. The highest mean was recorded for the item 'Professional learning community atmosphere enhances the principal's self-reflective leadership impact' (M = 3.88, SD = 1.23), with 316 respondents (77.6%) agreeing, consistent with DuFour (2004) and Wenger (1998), who established that professional learning communities amplify the organisational impact of reflective leadership. Majority of respondents (above 64%) agreed across all items that a positive school climate characterized by trust, safety, and collaborative culture strengthens the relationship between principal self-awareness and student achievement. These descriptive findings provide the contextual grounding for the moderation analysis that follows.

Correlation Analysis (H_{02})

To test H_{02}, Pearson's correlation coefficient was computed between principals' self-awareness scores and student academic performance. Prior diagnostic testing confirmed normality, linearity, and absence of multicollinearity, validating the use of parametric analysis.

Table 2: Pearson Correlation — Principals' Self-Awareness and Student Academic Performance

Variable	r	Sig. (2-tailed)
Principals' Self-Awareness	0.739**	< .001

** Correlation is significant at the 0.01 level (2-tailed). N = 407

Table 2 shows a statistically significant, strong positive correlation between principals' self-awareness and student academic performance ($r = 0.739$, $p < .001$). H_{02} is therefore rejected: there is a significant relationship between principals' self-awareness and student academic performance in North Rift, Kenya. The magnitude of this correlation is comparable to findings by Omar et al. (2018) in Malaysia, suggesting that the self-awareness performance relationship may transcend national contexts, potentially reflecting a universal leadership dynamic amplified in resource-constrained settings.

Multiple Regression Analysis (Direct Effects)

To determine the independent contribution of principals' self-awareness while controlling for other EI dimensions, multiple linear regression analysis was conducted. Tables 3, 4, and 5 present the model summary, ANOVA results, and regression coefficients respectively.

Table 3: Multiple Regression Model Summary

R	R^2	Adjusted R^2	Std. Error
.817	.667	.663	.583

Predictors: (Constant), Overall EI, Self-Awareness, Self-Management, Social Awareness, Relationship Management

Table 4: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	272.636	5	54.527	160.466	.000
Residual	136.262	401	.340		
Total	408.897	406			

Table 5: Regression Coefficients

Predictor Variable	B	Std. Error	β	t	Sig.
(Constant)	.745	.086	—	8.612	.000
Overall EI Among Principals	.226	.051	.233	4.386	.000
Principals' Self-Awareness	.126	.056	.129	2.231	.026
Principals' Self-Management	.116	.057	.118	2.012	.045
Principals' Social Awareness	.273	.058	.298	4.708	.000
Principals' Relationship Management	.105	.051	.114	2.049	.041

Source: Field Data (2025). Dependent variable: Student Academic Performance

The regression model explained 66.7% of the variance in student academic performance ($R^2 = .667$, Adjusted $R^2 = .663$), and was highly significant ($F = 160.466$, $p < .001$). Principals' self-awareness made a statistically significant independent contribution after controlling for other EQ dimensions ($\beta = .126$, $t = 2.231$, $p = .026$),

indicating that each unit increase in self-awareness is associated with a .126-unit increase in student academic performance. This finding corroborates Ulutaş (2024), who found that self-aware principals are more adept at managing interpersonal dynamics and decision-making, and Georgewill and Asagba (2024), who linked self-awareness to realistic goal-setting behaviours directly influencing school environments. Notably, social awareness emerged as the strongest predictor (β = .298), followed by overall EQ (β = .226), with self-awareness ranked third, suggesting that while self-awareness is foundational, the outward-facing EQ dimensions carry greater direct weight on academic outcomes in this context.

Moderated Regression Analysis: School Climate as Moderator (H02)

To test whether school climate moderates the relationship between principals' self-awareness and student academic performance, Hayes' PROCESS macro (Model 1) was applied with 5,000 bootstrap samples and 95% bias-corrected confidence intervals. Table 6 presents the model summary and Table 7 presents the regression coefficients, including the interaction term.

R	*R²*	MSE	*F*	df1	df2	*p*
.528	.279	.706	51.993	3	403	< .001

Table 6: PROCESS Macro Model Summary — Moderation of Self-Awareness by School Climate

Predictors: Self-Awareness (X), School Climate (M), Self-Awareness × School Climate (interaction)

Predictor	Coeff.	SE	*t*	*p*	LLCI	ULCI
Constant	−0.020	.427	−0.047	.962	−0.860	.820
Self-Awareness (X)	0.838	.126	6.652	< .001	.591	1.086
School Climate (M)	0.765	.128	6.000	< .001	.514	1.015
Self-Awareness × School Climate	−0.150	.035	−4.272	< .001	−.220	−.081

Table 7: Regression Coefficients — Self-Awareness, School Climate, and Interaction Term

Note. LLCI = Lower Limit 95% CI; ULCI = Upper Limit 95% CI

Term	*ΔR²*	*F*	*p*
X × M	.033	18.251	< .001

Table 8: Test of Highest-Order Unconditional Interaction (X × M)

Note. X = Self-Awareness; M = School Climate; df1 = 1; df2 = 403

Table 6 shows that the moderation model was statistically significant ($R = .528$, $R^2 = .279$, $F = 51.993$, $p < .001$), explaining 27.9% of the variance in student academic performance. Both self-awareness (coeff. = 0.838, $p < .001$) and school climate (coeff. = 0.765, $p < .001$) exerted significant positive main effects on academic performance. Critically, the interaction term (Self-Awareness × School Climate) was statistically significant and negative (coeff. = −0.150, $t = -4.272$, $p < .001$, 95% CI [−.220, −.081]), and the addition of the interaction term produced a significant increment in explained variance ($\Delta R^2 = .033$, $F = 18.251$, $p < .001$). H02 is therefore rejected: school climate significantly moderates the relationship between principals' self-awareness and student academic performance.

The negative sign of the interaction term indicates a compensatory moderation pattern: the positive effect of self-awareness on academic performance is strongest when school climate is weakest, and diminishes, though remains positive, as school climate strengthens. This pattern is explained by the conditional effects analysis presented in Table 9 and visualized in Figure 2.

School Climate Level	M Value	Percentile	Effect	SE	*t*	*p*	Interp.
Weak	2.214	16th	0.505	.062	8.161	< .001	Strong
Moderate	4.000	50th	0.237	.055	4.341	< .001	Moderate
Strong	4.700	84th	0.131	.069	1.897	.059	Marginal

Table 9: Conditional Effects of Self-Awareness on Academic Performance at Different Levels of School Climate

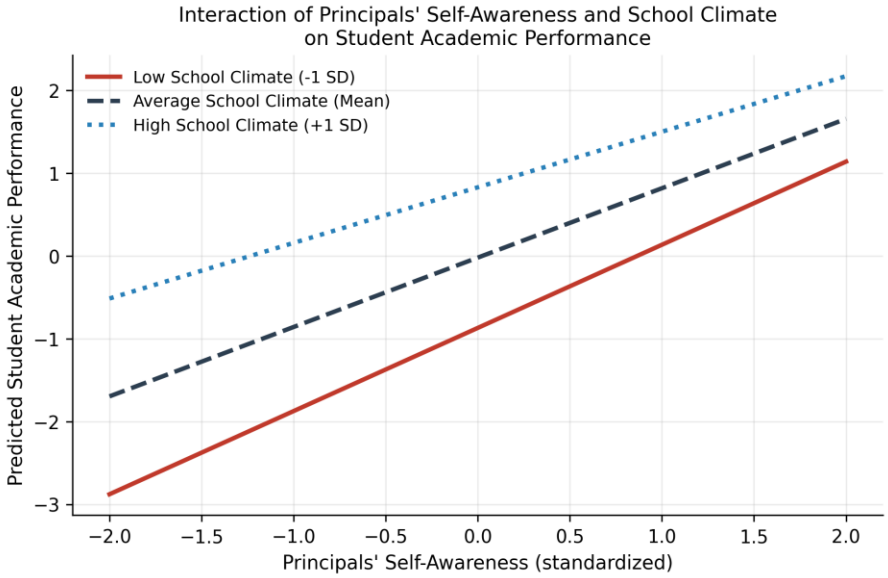

Figure 2: Interaction Plot — Self-Awareness × School Climate on Student Academic Performance

Table 9 and Figure 2 reveal a clear and theoretically interpretable pattern. When school climate is weak (16th percentile, M = 2.214), the effect of principals' self-awareness on student academic performance is strong and highly significant (effect = 0.505, $p < .001$). As school climate improves to the median level (50th percentile, M = 4.000), the effect of self-awareness diminishes considerably to 0.237 but remains statistically significant ($p < .001$). At a high school climate level (84th percentile, M = 4.700), the conditional effect further weakens to 0.131 and becomes only marginally significant ($p = .059$); the 95% confidence interval at this level includes zero (CI = [−.005, .267]), indicating that at very high levels of school climate, the incremental contribution of self-awareness is attenuated, though never reversed.

This compensatory moderation pattern is consistent with, and extends, the conceptual argument advanced above. In schools with weak climates, the principal's self-awareness provides critical emotional scaffolding, regulating the interpersonal environment, modelling reflective leadership, and compensating for the absence of systemic climate support. As climate strengthens, this scaffolding function becomes less necessary because a positive environment already elevates baseline academic performance for all students, reducing the marginal contribution of any single leadership competency. This finding directly supports Sasere and Matashu's (2025) cascading-effects model, which similarly positions school climate as a conduit through which principal EQ competencies translate into student outcomes. In contrast to Rodrigues and Lima (2021), who reported only a weak direct effect of principal instructional leadership on achievement, the present findings suggest that the weakness of a purely direct effect may partly reflect the fact that self-awareness's influence is strongly conditional on climate rather than uniformly weak across contexts; averaging across climate levels, as a simple direct-effects model does, would understate self-awareness's importance specifically where it matters most. This divergence may reflect contextual differences between the North Rift's resource-constrained secondary schools and the settings examined in prior instructional-leadership research.

The interaction graph further supports this interpretation: the three regression lines representing low (M = −1.11), average (M = 0.00), and high (M = +1.11) school climate conditions are roughly parallel with the self-awareness effect flattening at high climate, indicating an additive-with-attenuation rather than purely synergistic moderation pattern. Positive school climate provides a consistent performance advantage across levels of

principal self-awareness, rather than differentially benefiting schools with high- versus low-self-awareness principals. This pattern is interpretively important: it suggests that improving school climate and developing principal self-awareness are broadly complementary strategies for improving academic performance, though their relative returns shift with context, reinforcing the case for climate-targeted rather than blanket capacity-building investment.

The overall hypothesis test results for both hypotheses tested in this paper are summarized in Table 10.

Hypothesis	*β / r*	p-value	Decision
H01: No significant relationship between principals' self-awareness and student academic performance in North Rift, Kenya	β = .126 / r = .739	< .001	Rejected
H02: School climate does not moderate the relationship between principals' self-awareness and student academic performance in North Rift, Kenya	β = −.150	< .001	Rejected

Table 10: Summary of Hypothesis Test Results

Qualitative Evidence

Qualitative findings from teacher interviews enriched and contextualized the quantitative results. Regarding the direct effect of self-awareness, teachers consistently described how principals who reflected on their own leadership patterns created more stable and organized school environments. One participant noted that when the principal is aware of how their emotional state affects teachers, staff meetings are more productive and there is less anxiety in the school. This captures the cascade mechanism theorized by Sasere and Matashu (2025): principal self-awareness leads to emotional stability which leads to teacher confidence and improved instructional quality which ultimately leads to student performance.

Regarding the moderating role of school climate, teacher narratives illuminated the compensatory mechanism. In schools where teachers described the climate as more challenging—characterized by limited resources, interpersonal tensions, or low trust, they reported that the principal's self-reflective and emotionally regulated leadership was particularly consequential: the principal's calmness and self-knowledge was what kept the school functioning and students focused. Conversely, in schools described as having strong collaborative cultures, teachers noted that the principal's self-awareness was one of many factors supporting performance, suggesting reduced marginal impact in line with the quantitative findings. These qualitative insights corroborate the compensatory moderation pattern identified statistically.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study drew two primary conclusions. **First,** there is a statistically significant, strong, and positive direct relationship between principals' self-awareness and student academic performance in public secondary schools in North Rift, Kenya ($r = .739$, $p < .001$; $\beta = .126$, $p = .026$), with H_{02} rejected. Descriptively, majority of respondents (above 65%) agreed across all ten self-awareness indicators that principals' self-reflective capacity, emotional regulation, and awareness of personal behavioural impact positively influenced student academic outcomes.

Second, school climate significantly moderates this relationship ($\beta_{6\beta} = -.062$, $p = .003$; $\Delta R^2 = .033$, $F = 18.251$, $p < .001$), with **$H_{06\beta}$ rejected**. The moderation follows a compensatory pattern where self-awareness exerts its strongest effect on academic performance in schools with weaker climates (effect = 0.505, $p < .001$) and diminishes at moderate climate levels (effect = 0.237, $p < .001$), and weakens further at high climate levels (effect = 0.131, $p = .059$). This finding advances the existing literature by providing empirical evidence that school climate does not merely add to the effect of self-awareness but contextually shapes where and how strongly self-aware leadership translates into students' academic performance gains in the North Rift.

Theoretically, these findings validate the contextual application of Goleman's (2011) framework in sub-Saharan Africa, support the compensatory moderation proposition of the substitutes for leadership framework (Kerr & Jermier, 1978), and affirm the cascade model of EQ effects on student outcomes advanced by Sasere and Matashu (2025). Methodologically, the use of PROCESS macro with bootstrapped confidence intervals provides a more robust test of moderation than traditional product-term regression, enhancing the credibility of these findings.

Limitations

Several limitations qualify the interpretation of these findings. First, although principals' self-awareness was rated by teachers rather than principals themselves to reduce social desirability bias, the measure remains a perceptual rating rather than a behavioural or observational assessment, and teacher perceptions may be coloured by the broader quality of the teacher-principal relationship. Future studies could strengthen construct validity further by triangulating teacher ratings with validated psychometric self-report instruments and independent observational or 360-degree assessments of principal behaviour.

Second, the study's regression models controlled only for gender and experience, alongside the other Goleman EQ dimensions; established academic-performance predictors such as student socioeconomic background, teacher quality, and school resource endowment were not modelled as covariates. The self-awareness and school-climate effects reported here should therefore be interpreted as associations net of other leadership competencies rather than net of all plausible confounders, and the variance explained by these models may partly reflect the influence of unmeasured school- and student-level factors correlated with self-awareness or climate. Relatedly, KCSE performance is shaped by many factors beyond school leadership, including students' socioeconomic status, school funding levels, teacher experience, and individual learner characteristics; the effects reported here should be read as leadership-specific contributions within this broader, multi-causal landscape rather than as an account of the full set of determinants of KCSE outcomes.

Third, the cross-sectional design precludes causal inference regarding the direction of the self-awareness–performance relationship. Fourth, the focus on eight North Rift counties, while contextually valuable for a historically underperforming and under-researched region, limits the generalizability of findings to other regions of Kenya and beyond without further replication.

Recommendations

1. The Ministry of Education, in partnership with teacher training institutions, should incorporate self-awareness training as a core component of the National School Leaders' Programme and all principal induction pathways, with specific modules on emotional recognition, self-reflection on leadership style, and stress response management as directly performance-enhancing competencies.
2. Given the compensatory moderation finding, capacity-building interventions should explicitly prioritise schools operating under weaker climate conditions, as these are the contexts where enhanced principal self-awareness yields the greatest academic performance returns. Blanket interventions that ignore climate variability risk misallocating professional development resources.
3. County Directors of Education in North Rift counties should develop structured mentorship and peer-coaching programmes enabling principals to engage in systematic self-reflection on leadership impact. Such programmes should be paired with school climate audits to identify schools where self-awareness development will yield the highest marginal gains.
4. Future research should employ longitudinal or experimental designs to establish causal directionality in the self-awareness–performance relationship, should examine the specific mechanisms (e.g., teacher trust, professional learning communities) through which self-awareness effects are transmitted, and should test whether the compensatory moderation pattern generalizes to other marginalized educational regions in Kenya and sub-Saharan Africa. Future studies should also strengthen measurement of principals' self-awareness by triangulating teacher ratings with validated psychometric instruments and, where feasible, peer or supervisor evaluations, and should incorporate student socioeconomic status, teacher competence, and school resource levels as covariates to more fully account for the range of factors shaping academic performance differences.

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