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SELF-EFFICACY, ADVERSITY QUOTIENT, AND TEACHER COMPETENCE: THEIR ASSOCIATIONS WITH TEACHER PERFORMANCE IN PUBLIC JUNIOR HIGH SCHOOLS IN SOUTH TANGERANG, INDONESIA

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ABSTRAK

Latar Belakang: Kinerja guru berkaitan dengan keyakinan individu, respons terhadap kesulitan, dan kompetensi profesional. Penelitian ini mengkaji hubungan efikasi diri, *adversity quotient* (AQ), dan kompetensi guru dengan kinerja guru sekolah menengah pertama negeri di Kota Tangerang Selatan, Indonesia. **Tujuan Penelitian**: Penelitian ini bertujuan menganalisis hubungan ketiga variabel tersebut dengan kinerja guru. **Metode**: Penelitian menggunakan survei kuantitatif dengan desain potong lintang (*cross-sectional*) terhadap 163 guru dari enam sekolah menengah pertama negeri. Data dikumpulkan melalui kuesioner laporan diri dan dianalisis menggunakan statistik deskriptif, regresi bivariat secara terpisah, dan regresi berganda. Koefisien Cronbach's alpha yang dilaporkan adalah 0,745 untuk efikasi diri, 0,758 untuk AQ, 0,975 untuk kompetensi, dan 0,947 untuk kinerja guru. **Hasil**: Setiap prediktor memiliki hubungan positif dengan kinerja guru dalam model bivariat secara terpisah. Dalam model regresi simultan, efikasi diri tidak signifikan secara statistik (β = 0,049; p = 0,509), sedangkan AQ (β = 0,474; $p < 0,001$) dan kompetensi (β = 0,351; $p < 0,001$) tetap berhubungan positif dengan kinerja guru. Model simultan menjelaskan 62,4% varians kinerja guru (R^2 = 0,624; adjusted R^2 = 0,617), $F(3, 159) = 88,042$; $p < 0,001$. **Kesimpulan**: Temuan ini membedakan hubungan bivariat dari kontribusi statistik unik yang diestimasi dalam model simultan. Karena penelitian menggunakan desain potong lintang dan data laporan diri, hasilnya tidak menetapkan hubungan sebab-akibat. Temuan terbatas pada enam sekolah yang diteliti.

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Keywords:
Adversity Quotient; Teacher Competence; Teacher Performance; Self-Efficacy; Public Junior High Schools

ABSTRACT

Background: Teacher performance is associated with individual beliefs, responses to adversity, and professional competence. **Research Objectives**: This study aimed to examine the relationships of self-efficacy, adversity quotient (AQ), and teacher competence with teacher performance among public junior high school teachers in South Tangerang, Indonesia. **Methods**: A cross-sectional quantitative survey was conducted with 163 teachers from six public junior high schools. Data were collected through self-report questionnaires and analyzed using descriptive statistics, separate bivariate regressions, and multiple regression. The reported Cronbach's alpha coefficients were 0.745 for self-efficacy, 0.758 for AQ, 0.975 for competence, and 0.947 for teacher performance. **Results**: Each predictor was positively associated with teacher performance in separate bivariate models. In the simultaneous regression model, self-efficacy was not statistically significant ($\beta = 0.049$, $p = 0.509$), whereas AQ ($\beta = 0.474$, $p < 0.001$) and competence ($\beta = 0.351$, $p < 0.001$) remained positively associated with teacher performance. The joint model accounted for 62.4% of the variance in teacher performance ($R^2 = 0.624$; adjusted $R^2 = 0.617$), $F(3, 159) = 88.042$, $p < 0.001$. **Conclusion**: The findings distinguish bivariate associations from the unique statistical contributions estimated in the joint model. Because the study employed a cross-sectional design and relied on self-reported data, the results do not establish causal relationships. The findings are limited to the six schools included in the study.

A. INTRODUCTION

Teacher performance is an important construct in school management, but it needs to be distinguished from instructional quality and teaching productivity. Work performance generally refers to employees' execution of professional duties, whereas instructional quality concerns the quality of teaching and learning processes, and productivity more narrowly relates outputs to the resources invested in teaching (Briole, 2026; Charalambous et al., 2025; Creagh et al., 2025). In this study, teacher performance refers to the reported execution of professional duties rather than a direct measure of instructional quality or student learning outcomes. This distinction is important because perceived capability, professional knowledge, demonstrated teaching skills, and performance are related but conceptually different constructs.

Self-efficacy is one psychological factor frequently associated with work performance. It refers to an individual's belief in their capacity to organize and carry out actions required in particular situations. The present study concerns teaching self-efficacy rather than general self-efficacy. The instrument blueprint operationalizes this construct through teachers' perceived capability in instructional strategies, classroom management, student engagement, assessment, differentiation and inclusion, and professional collaboration. These domains represent beliefs about being able to perform particular teaching tasks; they do not constitute direct evidence that the tasks are performed effectively. Research has shown that teacher self-efficacy is domain-specific and that its associations with instructional practices, student outcomes, job satisfaction, and well-being vary according to the efficacy domain and outcome examined (Duan et al., 2024; Ma et al., 2025; Ortan et al., 2021; Perera et al., 2022). Self-efficacy is therefore relevant to teacher performance, but its contribution should be examined alongside other individual and organizational factors.

A second factor is adversity quotient (AQ), which describes how individuals interpret and respond to adversity. In Stoltz's framework, AQ comprises four dimensions: control, origin/ownership, reach, and endurance. For teachers, control concerns the perceived capacity to influence aspects of a difficult teaching situation; origin/ownership concerns recognizing the sources of a problem and taking responsibility for the response; reach concerns preventing a difficulty in one area from affecting other professional responsibilities; and endurance concerns judging how long a difficulty is likely to persist and sustaining effort while addressing it. These dimensions may be relevant to classroom disruption, changing student needs, administrative demands, and other challenges encountered in teachers' work. Research involving Indonesian teachers has reported associations between AQ and professional competence, psychological capital, performance, and organizational citizenship behavior (Alifuddin & Widodo, 2021; Sulistiasih & Widodo, 2022; Widodo et al., 2022).

AQ nevertheless requires conceptual differentiation from resilience, grit, coping, and psychological capital. Although these constructs concern how individuals respond to difficulties, they represent different psychological processes. Resilience focuses on adaptation or recovery following adversity, grit emphasizes sustained perseverance toward long-term goals, coping involves efforts to manage demands, and psychological capital encompasses hope, efficacy, resilience, and optimism. AQ offers a distinct framework through four dimensions: control, origin/ownership, reach, and endurance (CORE). However, conceptual distinctions do not automatically establish empirical discriminant validity. Research on resilience has also identified substantial variation in its conceptualization and measurement, particularly in relation to grit, hardiness, and other psychological resources (Biggs et al., 2024; Roslan et al., 2022; Troy et al., 2023; Wolke et al., 2025).

Empirical research has examined AQ in educational and professional settings. Adnan & Matore (2022), for example, developed an AQ index for pre-service teachers based on the CORE dimensions, while Matore et al. (2021) assessed the psychometric properties of an AQ instrument among Malaysian youth. Other studies have investigated AQ in relation to coping styles, psychological capital, and professional adaptability among nursing interns (Gou et al., 2024), resilience and coping among nursing students (Xiao et al., 2026), learning autonomy and academic achievement among Indonesian students (Safi'i et al., 2021), and career success (Zhao & Sang, 2023). These studies demonstrate the application of AQ across educational and professional populations, but do not directly establish its relationship with the performance of practicing teachers. The present study addresses this issue by examining AQ alongside self-efficacy and teacher competence to determine whether AQ retains a distinct statistical association with teacher performance after accounting for the other predictors.

The third factor is teacher competence. Competence encompasses professional knowledge and capabilities that enable teachers to plan, implement, assess, and improve learning. It should be distinguished from perceived competence, which captures an individual's assessment of their own capability; from professional knowledge, which concerns what a teacher knows; and from demonstrated pedagogical skills, which concern the application of knowledge in practice. Teacher performance, in turn, concerns the execution of professional duties over a period of work. The constructs may be related, but they are not interchangeable. Research has linked pedagogical

knowledge and classroom-management expertise with instructional quality, while also showing that the relationship between competence and student outcomes is not straightforward (König et al., 2021). Reviews and empirical studies similarly emphasize the need to connect teachers' knowledge and dispositions with observable practice and to specify the competence domains being assessed (Blömeke et al., 2022; Channa & Sahito, 2022; Kaiser et al., 2025; Yang & Kaiser, 2022).

In this study, teacher competence is assessed through questionnaire responses concerning the pedagogical, personal, professional, and social dimensions of teacher competence. The resulting scores should therefore be interpreted as teachers' reported competence, not as independent observations of demonstrated classroom skill. This measurement distinction is important when competence is examined alongside teacher performance, which is also assessed through a questionnaire. Research on instrument adaptation and scale development for secondary school teachers underscores the need to define competence domains and establish adequate psychometric evidence (Saadati et al., 2024; Sun & Qu, 2026; Tzafilkou et al., 2023). The present analysis can examine the association between reported competence and reported performance, but it cannot by itself establish that the two measures are empirically distinct.

Teacher performance is associated with a combination of individual and organizational factors. Research has linked self-efficacy and resilience to teachers' work engagement (Heng & Chu, 2023), while studies have identified relationships between perceived organizational support, self-efficacy, job satisfaction, and teacher performance (Li et al., 2025). Evidence from secondary education also indicates that self-efficacy, resilience, and principal support are positively associated with teacher job performance, whereas burnout is negatively associated with it (Tran et al., 2026). Other studies have highlighted the relevance of organizational climate, work motivation, teaching competence, and professional capabilities in explaining variations in teacher performance (Bixia & Mohamad, 2025)(Damanik & Widodo, 2024)(Kumari & Kumar, 2023)(Nasar et al., 2025). Research on teacher performance measurement has also emphasized the importance of clearly defined performance dimensions and reliable assessment instruments (Rochanah et al., 2024), while evidence from Philippine schools indicates that teacher competence and professional attitudes are associated with performance outcomes (Rudela Jr. et al., 2026).

These relationships should also be considered in light of working conditions and organizational arrangements. Workload, work intensification, and occupational stress may constrain teachers' capacity to fulfil their professional responsibilities and sustain their well-being (Creagh et al., 2025; Ghasemi, 2025; Ortan et al., 2021; Yildirim et al., 2024). Research in secondary schools in Uganda also indicates that motivation has a relatively weak association with teacher job performance compared with structured performance management practices, particularly output planning, monitoring, and review (Mbabazi et al., 2025). Taken together, this literature suggests that teacher performance cannot be adequately explained by a single personal attribute. It therefore provides a rationale for examining self-efficacy, adversity quotient (AQ), and competence simultaneously to assess their respective statistical associations with teacher performance, while recognizing that organizational and occupational conditions may also contribute to performance differences.

Teacher professionalism also has an ethical dimension that is relevant to Islamic educational perspectives. Teaching involves not only the transmission of

knowledge but also responsibility, trustworthiness (*amanah*), and commitment to fulfilling educational duties. In Islamic boarding school contexts, the integration of Islamic values and individual characteristics has been discussed as an approach to addressing students' learning difficulties (Ratnawulan et al., 2026). These perspectives provide a broader context for understanding teachers' self-efficacy, responses to adversity, competence, and performance as aspects of professional responsibility. Although Islamic ethical values were not directly examined in this study, they offer a relevant perspective for interpreting the wider significance of teacher professionalism in education.

Despite the broader literature, studies that examine self-efficacy, AQ, teacher competence, and teacher performance together remain relatively limited. Prior research involving Indonesian teachers has examined AQ in relation to performance, psychological capital, organizational citizenship behavior, and professional competence (Alifuddin & Widodo, 2021; Sulistiasih & Widodo, 2022; Widodo et al., 2022). Other studies have examined teaching self-efficacy in relation to instructional practices, classroom management, student outcomes, or teacher well-being (Duan et al., 2024; Ortan et al., 2021; Perera et al., 2022). The unresolved issue is not simply whether these variables can be placed in one model, but whether each has a distinct statistical association with teacher performance when the overlap among them is taken into account. Examining them simultaneously allows the analysis to distinguish bivariate relationships from the unique association of each predictor conditional on the other predictors. This is particularly relevant to AQ: its bivariate relationship with performance may differ from its adjusted association after self-efficacy and competence are considered. Such an analysis offers a more specific empirical contribution than presenting the combination of three predictors as novelty in itself.

South Tangerang provides the empirical setting for examining these relationships among teachers in public junior high schools (UPTD SMP Negeri). The sample was drawn from six schools classified into high, middle, and low categories. This setting allows the study to examine the relationships within a defined public-school system that includes schools assigned to different institutional categories; it does not, however, establish that the findings represent all schools in South Tangerang or other Indonesian regions. The contextual contribution is therefore bounded: it provides evidence from a local public junior high school setting in which teacher performance is considered alongside perceived teaching self-efficacy, AQ, and reported competence.

Against this background, the study examines the relationships of teaching self-efficacy, adversity quotient (AQ), and teacher competence with teacher performance among public junior high school teachers in South Tangerang, Indonesia. It first considers the bivariate association between each predictor and performance, then examines whether these associations remain statistically significant when the three predictors are entered simultaneously. The principal empirical question is whether AQ retains an association with teacher performance after accounting for self-efficacy and competence, while also assessing the corresponding adjusted associations of the other predictors. Because the study uses a cross-sectional survey and self-reported measures, the findings are interpreted as statistical associations rather than causal effects or independent demonstrations of teaching quality.

B. METHOD

This study employed a cross-sectional quantitative survey to examine the relationships among self-efficacy, adversity quotient (AQ), teacher competence, and teacher performance in six public junior high schools (UPTD SMP Negeri) in South Tangerang, Banten, Indonesia. A quantitative approach was appropriate for examining statistical relationships among measured variables using structured data and inferential analysis (Creswell & Creswell, 2022). The sampling design comprised three school strata—high, middle, and low—with two schools selected randomly from each stratum. The classification was based on school accreditation, academic and non-academic achievements, and community interest, according to the South Tangerang Junior High School Principals' Working Group (MKKSN) for 2025/2026. The accessible population comprised 275 teachers in the six selected schools, rather than the full population of 1,168 teachers across 24 public junior high schools in the city.

The main sample consisted of 163 teachers, determined from the accessible population of 275 using the Slovin formula with a 5% margin of error. The sample was allocated proportionally across the six selected schools, as shown in Table 1. Eligibility criteria required a permanent teaching assignment and at least two years of teaching experience at the respective schools. A pilot group of 30 teachers was drawn from the same six-school population but excluded from the main sample; its responses were used for preliminary item analysis.

Table 1. Distribution of the Teacher Population and Research Sample

School stratum	Public junior high school	Teacher population	Main sample	Pilot sample
High	UPTD SMPN 1	54	32	6
High	UPTD SMPN 2	54	32	6
Middle	UPTD SMPN 13	50	30	5
Middle	UPTD SMPN 21	51	30	6
Low	UPTD SMPN 19	35	21	4
Low	UPTD SMPN 20	31	18	3
Total		275	163	30

Source: Authors' research sampling records.

Data were collected through closed-ended questionnaires using five-point Likert response scales. The instruments measured four constructs: self-efficacy (X1), adversity quotient (AQ) (X2), teacher competence (X3), and teacher performance (Y). Their theoretical foundations drew on Bandura's self-efficacy theory, Stoltz's adversity quotient framework, Spencer and Spencer's competency framework, and the literature on teacher performance. The self-efficacy instrument covered instructional strategies, classroom management, student engagement, assessment, differentiation and inclusion, professional collaboration, and instructional planning. The AQ instrument addressed emotional awareness, self-regulation, relational support, optimism, adaptability, professional commitment, and self-recovery. These domains extend beyond Stoltz's four CORE dimensions: control, origin/ownership, reach, and endurance. Teacher competence covered pedagogical, personal, professional, and social competencies, while teacher performance encompassed lesson planning, instructional implementation, classroom management, the use of learning resources and technology, assessment and feedback, and professional responsibility. All instruments were completed by the teachers themselves; consequently, the resulting scores represent self-

reported assessments rather than independent observations of competence or performance. The quality of these measures depends not only on internal consistency but also on how well their items represent the intended constructs (DeVellis & Thorpe, 2021).

Preliminary item analysis was conducted using responses from 30 pilot participants drawn from the same six-school population but excluded from the main sample. Items were retained or excluded based on the reported corrected item–total correlation criterion of > .361. The final instruments comprised 25 self-efficacy items, 22 AQ items, 31 teacher-competence items, and 27 teacher-performance items. Internal consistency was assessed using Cronbach's alpha in SPSS version 27. The coefficients were 0.745 for self-efficacy, 0.758 for AQ, 0.975 for teacher competence, and 0.947 for teacher performance. These coefficients indicate internal consistency in the pilot responses but do not, by themselves, establish construct validity, factor structure, or discriminant validity. The particularly high alpha coefficients for competence and performance also warrant consideration of possible item redundancy and content overlap (DeVellis & Thorpe, 2021).

Data analysis involved descriptive statistics, Pearson correlations, separate bivariate regressions, and simultaneous multiple regression. Preliminary assumption checks included One-Sample Kolmogorov–Smirnov tests, Bartlett tests of homogeneity, and ANOVA-based linearity assessments. The Kolmogorov–Smirnov tests produced significance values of .089 for teacher performance, .066 for self-efficacy, .200 for AQ, and .067 for teacher competence. Bartlett tests for selected variable relationships produced significance values above .05 (p = .071, .200, .086, and .090). Pearson correlations and separate bivariate regressions were used to examine the relationships between each predictor and teacher performance. Multiple regression was subsequently employed to assess the simultaneous statistical associations of self-efficacy, AQ, and teacher competence with teacher performance. This approach distinguishes the bivariate relationships from the contribution of each predictor when the other predictors are considered in the same model (Field, 2024; Tabachnick & Fidell, 2021). The analysis focused on direct statistical associations among the variables and did not involve mediation or indirect-effect testing.

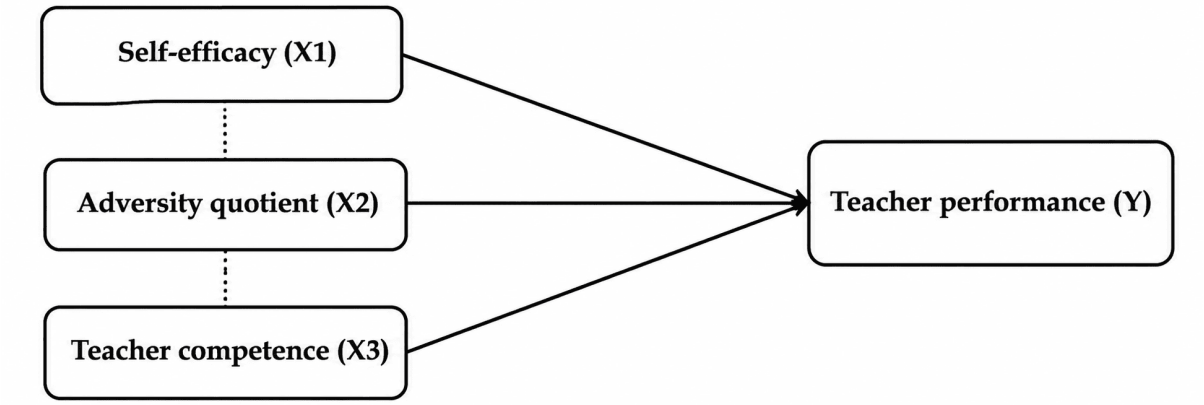


Figure 1. Analytical Framework of the Bivariate and Simultaneous Associations among Self-Efficacy, Adversity Quotient, Teacher Competence, and Teacher Performance

The results distinguish the bivariate association of each variable with teacher performance from its coefficient in the simultaneous regression model. The latter represents the statistical association of each predictor with performance after adjustment for the other two predictors. Given the cross-sectional design, the findings are interpreted as statistical associations rather than causal effects (Creswell & Creswell, 2022). Furthermore, because all four constructs were measured through questionnaires completed by the same respondents at a single point in time, the findings may be subject to common-method variance and social-desirability bias (Podsakoff et al., 2003).

C. RESULT AND DISCUSSION

Sample Characteristics and Instrument Reliability

The research involved 163 teachers from six public junior high schools in South Tangerang, Indonesia. Of these respondents, 59 were male (36.2%) and 104 were female (63.8%). In terms of employment status, 72 teachers (44.2%) were civil servants (PNS), while 91 (55.8%) were employed under the government contract-teacher scheme (PPPK). These characteristics describe the composition of the research sample and provide context for interpreting the relationships among the variables.

Table 2. Characteristics of the Research Sample (N = 163)

Characteristic	Category	n	%
Gender	Male	59	36.2
	Female	104	63.8
Employment status	Civil servant (PNS)	72	44.2
	Government contract teacher (PPPK)	91	55.8
Total		163	100.0

Source: Research data.

The descriptive statistics indicate variation in teachers' reported performance, self-efficacy, adversity quotient (AQ), and competence. Teacher performance had a mean score of 116.94 (SD = 10.067), while self-efficacy had a mean of 108.58 (SD = 7.559). The mean AQ score was 94.44 (SD = 8.063), and competence had a mean of 134.13 (SD = 10.796). Because the instruments contain different numbers of items and use different possible score ranges, these raw means should be interpreted within each construct rather than compared directly across constructs.

Table 3. Descriptive Statistics of the Research Variables

Variable	N	Mean	SD	Minimum	Maximum
Teacher performance (Y)	163	116.94	10.067	95	135
Self-efficacy (X1)	163	108.58	7.559	90	125
Adversity quotient (X2)	163	94.44	8.063	76	110
Teacher competence (X3)	163	134.13	10.796	111	154

Source: Research data, analyzed using SPSS version 27.

Instrument consistency was assessed using Cronbach's alpha after item analysis in a pilot sample of 30 teachers. The retained scales comprised 27 items for teacher performance, 25 for self-efficacy, 22 for AQ, and 31 for competence. The reported alpha coefficients ranged from 0.745 to 0.975.

Table 4. Item Retention and Internal Consistency of the Instruments

Instrument	Initial items	Items excluded	Items retained	Cronbach's alpha
Teacher performance	28	P25	27	0.947
Self-efficacy	27	S21, S23	25	0.745
Adversity quotient	22	None	22	0.758
Teacher competence	32	K4	31	0.975

Note. Pilot sample, n = 30. Items were retained or excluded based on a corrected item–total correlation criterion of > .361.

Source: Research data, analyzed using SPSS version 27.

The alpha coefficients indicate internal consistency in the pilot data, although reliability alone does not establish that the scales measure empirically distinct constructs. The particularly high coefficient for competence may reflect a coherent scale, but it can also occur when items have highly similar content. This distinction matters when interpreting the relationships between competence and teacher performance, since both constructs concern aspects of professional work.

The interpretation of AQ requires similar conceptual care. Stoltz's framework defines AQ through four dimensions: control, origin/ownership, reach, and endurance. The instrument blueprint used in this study, however, also includes emotional awareness, self-regulation, relational support, optimism, adaptability, and self-recovery. These domains may overlap conceptually with resilience, coping, grit, and emotion regulation. Research on teacher resilience, for example, has operationalized the construct through social, professional, emotional, and motivational dimensions, illustrating the multidimensional nature of resilience in educational settings (Trang & Thang, 2023). However, such conceptual overlap does not establish that these constructs are empirically equivalent or distinct. Accordingly, the AQ findings should be interpreted in relation to the questionnaire operationalization employed in this study, rather than as a definitive assessment of Stoltz's four CORE dimensions or as evidence that AQ is interchangeable with related psychological constructs (Adnan & Matore, 2022; Biggs et al., 2024; Roslan et al., 2022; Troy et al., 2023; Wolke et al., 2025).

Relationships among Self-Efficacy, Adversity Quotient, and Competence

The bivariate analyses showed positive relationships among self-efficacy, AQ, and competence. Self-efficacy was positively associated with AQ ($\beta = 0.729$, $p < 0.001$), while its relationship with competence was also positive ($\beta = 0.614$, $p < 0.001$). AQ, in turn, was positively associated with competence ($\beta = 0.659$, $p < 0.001$). These results indicate that teachers with higher scores on one construct tended to have higher scores on the related construct in the research sample.

Table 5. Bivariate Relationships among the Research Variables

Separate bivariate model	Standardized β	R^2	F	p-value
Self-efficacy with AQ	0.729	0.531	182.609	< 0.001
Self-efficacy with competence	0.614	0.377	97.539	< 0.001
AQ with competence	0.659	0.435	123.873	< 0.001
Self-efficacy with teacher performance	0.610	0.372	95.290	< 0.001

AQ with teacher performance	0.741	0.549	195.818	< 0.001
Teacher competence with teacher performance	0.694	0.481	149.225	< 0.001

Note. Each coefficient, R^2, and F statistic represents a separate bivariate regression model. These estimates indicate unadjusted associations and should not be interpreted as unique contributions after adjustment for the other predictors.
Source: Authors' analysis of survey data.

The positive association between self-efficacy and AQ is consistent with the possibility that teachers' confidence in their capacity to manage teaching demands coexists with a stronger perceived ability to respond to difficulties. However, the cross-sectional design cannot establish the temporal order of these constructs or determine whether one influences the other. Professional experience, organizational support, and psychological well-being may also be relevant to the observed relationship.

The positive relationship between self-efficacy and competence is similarly compatible with research linking teachers' efficacy beliefs to instructional choices, effort, persistence, and classroom management (Duan et al., 2024; Perera et al., 2022). Nevertheless, efficacy beliefs are not equivalent to demonstrated professional competence. Competence involves knowledge and skills that teachers apply in particular instructional situations, and its relationship with teaching quality depends partly on how those capabilities are enacted in practice (Kaiser et al., 2025; König et al., 2021; Yang & Kaiser, 2022).

The association between AQ and competence also accords with studies of Indonesian teachers that link AQ to professional competence and organizational citizenship behavior (Alifuddin & Widodo, 2021; Sulistiasih & Widodo, 2022; Widodo et al., 2022). The interpretation, however, depends on the conceptual boundaries of the measures. If AQ items capture aspects of emotional regulation, persistence, or adaptation that also appear in competence measures, shared item content may contribute to their association. The positive coefficient is therefore evidence of a statistical relationship within this sample, rather than proof of a distinct mechanism through which AQ develops professional competence.

Bivariate Relationships with Teacher Performance

In separate bivariate regression models, self-efficacy ($\beta = 0.610$, $R^2 = 0.372$, $p < 0.001$), AQ ($\beta = 0.741$, $R^2 = 0.549$, $p < 0.001$), and teacher competence ($\beta = 0.694$, $R^2 = 0.481$, $p < 0.001$) were each positively associated with teacher performance. These estimates come from three separate models and should not be interpreted as adjusted or independent effects. AQ had the largest standardized coefficient in these bivariate analyses, although differences in coefficients should be interpreted in light of the scales' reliability and construct distinctness.

The positive bivariate association between self-efficacy and performance is consistent with literature connecting teachers' efficacy beliefs to instructional practices, work engagement, job satisfaction, and well-being (Heng & Chu, 2023; Ortan et al., 2021; Perera et al., 2022). Evidence concerning student achievement is more qualified: a meta-analysis found that associations between teacher self-efficacy and student academic performance vary by efficacy domain and outcome measure (Ma et al., 2025). Teacher-reported performance, observed instructional quality, and student outcomes should therefore remain analytically distinct.

AQ was also positively associated with teacher performance in the bivariate analysis. This finding is consistent with research relating AQ to performance and professional competence among Indonesian teachers (Alifuddin & Widodo, 2021; Widodo et al., 2022). In Stoltz's conceptual framework, control, ownership/origin, reach, and endurance describe different ways of appraising and responding to adversity. In teaching contexts, these dimensions may be relevant to perceived control over classroom difficulties, willingness to take responsibility for responses, the perceived reach of a problem across work domains, and expectations about how long a difficulty will persist. These are theoretical interpretations; the present results do not test the separate contribution of each CORE dimension. The bivariate coefficient also does not show how much AQ contributes independently when competence and self-efficacy are considered simultaneously.

Competence showed a positive bivariate relationship with performance. Conceptually, this association is plausible because professional competence provides knowledge and skills relevant to lesson planning, instructional implementation, assessment, and other teaching responsibilities. Research on teacher competence emphasizes the connection between professional knowledge and instructional quality, while also recognizing that the relationship with student outcomes depends on context and measurement (Kaiser et al., 2025; König et al., 2021; Saadati et al., 2024; Yang & Kaiser, 2022). The current findings concern the measured relationship between competence and teacher performance; they do not independently establish the quality of classroom practice or the effects of competence on student achievement.

The Joint Model: Unique Contributions of the Predictors

The joint regression model provides a different perspective from the separate bivariate analyses. When self-efficacy, adversity quotient (AQ), and teacher competence were entered simultaneously, self-efficacy had a small, positive, and statistically non-significant coefficient ($\beta = .049$, $p = .509$). In contrast, AQ ($\beta = .474$, $p < .001$) and competence ($\beta = .351$, $p < .001$) retained positive, statistically significant coefficients. The overall model was statistically significant, $F(3, 159) = 88.042$, $p < .001$. These results indicate that the bivariate association between self-efficacy and teacher performance did not translate into a statistically significant unique contribution when AQ and competence were included in the model.

Table 6. Multiple Regression Predicting Teacher Performance

Predictor	B (SE)	Standardized β	t (p-value)
Self-efficacy	0.065 (0.098)	0.049	0.662 (0.509)
Adversity quotient	0.591 (0.096)	0.474	6.136 (< 0.001)
Teacher competence	0.328 (0.062)	0.351	5.247 (< 0.001)
Constant	10.122 (7.392)	—	—

Note. The three predictors were entered simultaneously. The model explained 62.4% of the variance in teacher performance ($R^2 = 0.624$; adjusted $R^2 = 0.617$), $F(3, 159) = 88.042$, $p < 0.001$.

Source: Authors' analysis of survey data.

The difference between the bivariate and joint results is substantively important. Although self-efficacy was positively associated with teacher performance

when examined separately, its coefficient became small and statistically non-significant after AQ and competence were included. This pattern suggests that the bivariate association does not represent a statistically significant unique contribution under the joint model specification. It does not establish that self-efficacy is irrelevant to teachers' professional lives; rather, its association with performance may overlap with variance shared with the other predictors.

One possible interpretation is that teachers' efficacy beliefs, perceptions of their capacity to face difficulties, and assessments of their professional competence are related aspects of their work-related experiences. When these constructs are considered simultaneously, their individual coefficients may differ from their bivariate associations. This interpretation remains tentative because the reported analyses do not establish the mechanisms underlying these relationships or determine the extent of measurement overlap. The findings can be discussed alongside research distinguishing efficacy beliefs from professional knowledge, competence, and contextual conditions (Duan et al., 2024; König et al., 2021; Yang & Kaiser, 2022).

AQ had the largest standardized coefficient in the joint model, followed by competence. This ranking applies only to the measures and sample examined here; it does not establish that AQ is inherently more important than competence across educational settings. The interpretation depends on whether the scales capture empirically distinct constructs. AQ may share features with resilience, coping, grit, and psychological capital, while competence and performance may share content relating to planning, instruction, and assessment. Because the study did not report factor-analytic or discriminant-validity evidence, it cannot determine whether the observed coefficients reflect distinct construct contributions or partially overlapping self-reports.

The simultaneous regression model was statistically significant, $F(3, 159) = 88.042$, $p < 0.001$. The regression sum of squares (10,247.584) relative to the total sum of squares (16,416.503) indicates that the model accounted for 62.4% of the variance in teacher performance ($R^2 = 0.624$; adjusted $R^2 = 0.617$). AQ ($\beta = 0.474$, $p < 0.001$) and competence ($\beta = 0.351$, $p < 0.001$) were positively associated with performance after adjustment for the other predictors, whereas the coefficient for self-efficacy was not statistically significant ($\beta = 0.049$, $p = 0.509$).

Implications for Teacher Development and School Management

The results support an integrative view of teacher performance rather than an explanation based on one personal attribute. The bivariate analyses show positive relationships between all three predictors and performance, while the joint model differentiates their unique statistical contributions. The practical implication is not to disregard self-efficacy, but to avoid assuming that strengthening confidence alone will produce measurable performance gains independently of professional competence and the capacity to respond to workplace challenges.

For school leaders, professional development may be more productive when it combines opportunities to strengthen pedagogical knowledge, practice situational decision-making, receive professional mentoring, and reflect on classroom practice. Such efforts should be considered alongside organizational conditions, including workload, administrative demands, and access to professional support. Research on teacher workload and occupational stress shows that teachers' performance and well-being are shaped not only by individual characteristics but also by the conditions under

which teaching takes place (Creagh et al., 2025; Ghasemi, 2025; Li et al., 2025; Tran et al., 2026).

The findings also underline the importance of appropriate measurement in professional development and teacher evaluation. Questionnaire-based competence scores can provide useful information about teachers' perceptions, but they should not automatically be treated as equivalent to demonstrated competence in classroom settings. Combining self-report measures with classroom observations, structured performance assessments, and evidence of professional practice would provide a more comprehensive basis for evaluating teacher development (Saadati et al., 2024; Sun & Qu, 2026; Tzafilkou et al., 2023; Rostini, et al., 2022). Research on teachers' digital and AI-related competencies may provide an additional perspective on the changing demands of professional practice (Qi et al., 2026). However, these specialized competencies should not be treated as equivalent to overall teacher competence or general work performance unless the constructs are explicitly defined and measured that way. These are implications derived from the pattern of associations and the measurement approach, rather than intervention effects tested by this research.

Limitations and Future Research

Several considerations should be taken into account when interpreting these findings. First, the sample comprised teachers from six public junior high schools in one city, selected from three school strata. Therefore, the findings should not be generalized to other regions, school types, or institutional settings without further investigation. Although school classification criteria were identified, the absence of specified scoring weights and a reproducible composite classification procedure limits the assessment of how consistently the strata could be applied. The selection procedure for individual teachers within each school also warrants clearer specification in future studies. Second, the cross-sectional design identifies statistical associations but cannot establish causal direction or temporal sequence. Third, all four constructs were measured through questionnaires completed by the same respondents, potentially introducing common-method variance and social-desirability bias. Furthermore, because respondents were drawn from six schools, within-school dependence may have affected the precision of the statistical estimates.

The measurement approach also warrants caution. Item–total correlations and Cronbach's alpha provide information about item performance and internal consistency, respectively, but do not establish the factor structure or discriminant validity of the four constructs. The operationalization of AQ requires particular scrutiny because some of its measured domains may overlap conceptually with resilience, coping, persistence, and emotion regulation. Similarly, the high internal-consistency coefficient for teacher competence may reflect strong inter-item relationships but could also indicate item redundancy. Future research should therefore examine the instruments' factor structures and discriminant validity through exploratory and confirmatory factor analyses, assess potential construct overlap, and incorporate independent assessments of teaching practice rather than relying exclusively on self-reported measures.

The statistical procedures also have implications for interpreting the regression results. The preliminary analyses included Kolmogorov–Smirnov tests, Bartlett tests of homogeneity, and ANOVA-based linearity assessments. However, the reported

Kolmogorov–Smirnov results concern the four observed variables rather than residuals from the final simultaneous regression model. Likewise, the Bartlett test results for selected variable relationships, although exceeding the .05 significance threshold, do not establish homoscedasticity in the final multiple regression. The regression assessment would also benefit from explicit examination of multicollinearity and influential observations through VIF/tolerance measures and influence statistics. Future studies should undertake and report these diagnostics for the final regression model and consider multilevel modelling or cluster-adjusted standard errors to account for the nested structure of teachers within schools. Incorporating school-level conditions and organizational factors would also provide a broader understanding of the individual and institutional factors associated with teacher performance.

CONCLUSION

Self-efficacy, adversity quotient (AQ), and teacher competence were each positively associated with teacher performance in separate bivariate analyses. In the simultaneous regression model, AQ and teacher competence retained statistically significant positive coefficients after adjustment for the other predictors, whereas the coefficient for self-efficacy was not statistically significant. This distinction indicates that the positive bivariate association of self-efficacy with performance did not represent a statistically significant unique contribution in the joint model; it does not establish that self-efficacy is unrelated to teacher performance. The joint model accounted for 62.4% of the variance in teacher performance ($R^2 = 0.624$; adjusted $R^2 = 0.617$). The findings are limited to 163 teachers from six public junior high schools in South Tangerang and should not be generalized automatically to other school types or regions. The results point to the value of professional development that combines competence-building, mentoring, and support for responding to workplace difficulties. In Islamic educational leadership, these implications may be considered in relation to amanah, professional responsibility, perseverance, and itqan as normative principles, although these values were not measured in the study. Further research should validate the instruments' factor structures and discriminant validity, use independent classroom observations or performance assessments, document sampling procedures and regression diagnostics, and account for possible school-level clustering.

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