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Reflective practice as a psychological bridge between efficacy beliefs and growth mindset in Indonesian prospective teachers

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Abstract

Self-efficacy and growth mindset are both regarded as psychological resources for teacher development, yet the process that connects them during initial teacher preparation remains unclear. This study examined whether reflective practice mediates the association between general self-efficacy and growth mindset among pre-service teachers. A cross-sectional survey was completed by 181 pre-service teachers at a state Islamic university in Indonesia, using the Indonesian versions of the General Self-Efficacy Scale and the Growth Mindset Scale and the brief Reflective Practice Questionnaire. Data were analysed with partial least squares structural equation modelling (PLS-SEM) and bootstrapping with 5,000 subsamples. Self-efficacy was positively associated with growth mindset (β = 0.435) and reflective practice (β = 0.605), and reflective practice was positively associated with growth mindset (β = 0.319). The indirect effect through reflective practice was significant (β = 0.193, 95% CI [0.091, 0.337]), indicating partial mediation that accounted for 30.7% of the total effect. The model explained 45.9% of the variance in growth mindset and showed medium out-of-sample predictive power. Building on these results, we propose the Reflective Bridge Model, which links an efficacy foundation, a reflective bridge and a growth orientation to concrete teacher education practices. The findings suggest that growth-oriented beliefs in pre-service teachers are unlikely to develop through confidence building alone and that structured reflection deserves a deliberate place in teacher education curricula. Longitudinal and multi-site studies are needed to test the direction of these associations.

1 Introduction

Teacher education faces a recurring problem: pre-service teachers can acquire pedagogical knowledge without developing the readiness to learn from failure, uncertainty and critical feedback. This readiness matters because the capacity to treat difficult experiences as information for improvement underpins sustained professional learning [1, 2]. Two beliefs have attracted particular attention as psychological resources for this capacity. Teachers' self-efficacy predicts persistence, instructional quality and well-being [3–5], and teachers' growth mindset is associated with mastery-oriented practice, intercultural competence, enjoyment and engagement, and lower burnout [6–9]. Teachers' mindsets also help explain where student mindset interventions succeed and moderate the link between students' mindsets and achievement [10, 11].

The two beliefs are positively correlated. A meta-analysis of 50 studies involving 19,555 teachers reported a small positive association between teachers' growth mindset and self-efficacy (r = 0.18) [12], and a broader meta-analysis linked incremental beliefs to adaptive self-regulation [13]. At the same time, large-scale experiments and recent meta-analyses show that the benefits of growth mindset vary across people and contexts [14–16], which underlines the need to understand how such beliefs are formed rather than only whether they matter. This literature, however, has three gaps. First, it is largely confined to direct associations and leaves open the process through which a belief about present capability ("I can cope with this") becomes connected to a belief about the malleability of ability ("my ability can develop"). Second, reflective practice has mostly been studied as an outcome of learning experiences or

as a source of self-efficacy [17], rather than as the mechanism that links the two beliefs. Third, studies of teachers' growth mindset have focused on in-service teachers [6, 12], although beliefs about ability differ between pre-service and practising teachers [18]. Pre-service teachers are forming their first professional identities [19], and teacher education is expected to build both their competence and their confidence through coursework and mentoring [20, 21].

The Indonesian context adds relevance. Teacher education in Indonesia is being reorganised around the Teacher Professional Education (Pendidikan Profesi Guru) programme, while classroom cultures remain shaped by hierarchy, examination pressure and limited space for critical self-examination. Cultural orientation and school climate predict teachers' growth mindsets [22], and teachers' stated beliefs do not always translate into practice when institutional pressures intervene. Evidence from non-Western, high power-distance settings [23] is therefore needed.

This study tests a mediation model in which reflective practice links self-efficacy and growth mindset among Indonesian pre-service teachers. It makes three contributions. Theoretically, it integrates social cognitive theory and mindset theory by specifying reflective practice as the process through which efficacy beliefs are connected to growth beliefs. Empirically, it provides evidence from pre-service teachers in a non-Western context. Practically, it translates the estimated model into the Reflective Bridge Model, an operational framework that links each component of the model to activities that teacher education programmes can implement and evaluate.

2 Theoretical background and hypotheses

2.1 Self-efficacy and growth mindset

Self-efficacy refers to beliefs in one's capability to organise and execute the courses of action required to produce given attainments [24, 25]. Growth mindset refers to the belief that intelligence and abilities can be developed through effort, strategies and help from others [1, 26, 27]. Such implicit theories form a meaning system that shapes attributions for failure and coping responses [28], and incremental beliefs predict rising achievement during demanding academic transitions [29]. The two constructs differ in object and time frame. Self-efficacy is a judgement about current capability for a class of tasks, whereas growth mindset is a lay theory about whether capability can change. A student can therefore feel capable while believing that ability is fixed ("I am a natural teacher"), or feel incapable while believing that ability can develop.

Social cognitive theory nonetheless predicts a positive link. Efficacious individuals set higher goals, persist after setbacks and interpret difficulty as surmountable [25, 30]; repeated experiences of overcoming difficulty provide evidence that ability grows. Studies with university students, teachers and language learners support this association [12, 31–35]. We therefore expect:

H1. Self-efficacy is positively associated with growth mindset.

2.2 Self-efficacy and reflective practice

Reflective practice is the deliberate examination of one's thoughts, feelings and actions during and after professional interactions, with the aim of improving future performance [36–38]. Reflection is psychologically demanding because it requires facing mistakes and discrepancies between intentions and outcomes, and the reflections of pre-service teachers often remain descriptive unless they are deliberately supported [39, 40]. Students with low self-efficacy may avoid it because errors threaten a fragile sense of competence, whereas efficacious students can treat errors as information [25]. Evidence from pre-service and in-service teachers shows that self-efficacy and reflection co-occur [17, 41]. We therefore expect:

H2. Self-efficacy is positively associated with reflective practice.

2.3 Reflective practice and growth mindset

In self-regulated learning theory, self-reflection closes the cycle of forethought and performance by attributing outcomes to controllable causes and adjusting strategies [42]. When a pre-service teacher repeatedly analyses what went wrong in a lesson, revises the plan and observes improvement, the experience provides first-hand evidence that ability responds to effort and strategy. Research on mindset origins suggests that the way failure is interpreted shapes beliefs about the malleability of ability [43], and among in-service teachers growth mindset is associated with critically reflective behaviour [44]. We therefore expect:

H3. Reflective practice is positively associated with growth mindset.

2.4 Reflective practice as a mediator

Taken together, these arguments describe a sequence. Self-efficacy supplies the security needed to examine one's own teaching; reflection turns that examination into evidence that ability can develop. If this account holds, part of the association between self-efficacy and growth mindset should run through reflective practice, while the remaining part may reflect other processes such as goal setting or persistence [13]. We therefore expect:

H4. Reflective practice mediates the association between self-efficacy and growth mindset.

Figure 1 summarises the research procedure, and Fig. 2 presents the conceptual model.

3 Methods

3.1 Research design and procedure

We used a quantitative, cross-sectional survey design. The study proceeded in eight stages (Fig. 1): formulation of the problem and hypotheses, selection and adaptation of instruments, data collection,

data preparation, evaluation of the measurement model, evaluation of the structural model, mediation analysis and development of the Reflective Bridge Model.

3.2 Participants

Participants were 181 pre-service teachers enrolled in teacher education programmes at the Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Syekh Wasil Kediri, East Java, Indonesia. Inclusion criteria were (a) enrolment in a teacher education programme, (b) having completed or currently taking coursework on education, learning or teaching practice, and (c) voluntary consent. Convenience sampling was used because no sampling frame of pre-service teachers was available.

To protect anonymity and encourage candid responses about self-perceived weaknesses, the survey did not record gender, age, semester or programme. The post hoc minimum sample size computed in SmartPLS for the weakest structural path (β = 0.319) was 85 at α = 0.05 and 90% power [45]; the sample of 181 therefore exceeded the requirement.

3.3 Measures

All instruments used a five-point response scale (1 = strongly disagree, 5 = strongly agree); higher scores indicate higher levels of each construct.

Self-efficacy. We used the 10-item General Self-Efficacy Scale [46] in its Indonesian version, which showed a unidimensional structure among university students [47]; the scale has shown comparable psychometric properties across 25 countries [48]. A sample item is “I can always manage to solve difficult problems if I try hard enough.” The scale measures general rather than teaching-specific self-efficacy [49], and findings are interpreted accordingly.

Reflective practice. We used the 10-item brief Reflective Practice Questionnaire (RPQ-10) [38], derived from the original Reflective Practice Questionnaire [50], which assesses reflection during interactions, reflection after interactions and evaluation of one’s strategies. The questionnaire was used directly, without a formal translation and cross-cultural adaptation procedure; item references to “clients” were understood as referring to students and learners in teaching practice. Its reliability and validity in the present sample were therefore examined through the measurement model (Section 4.2).

Growth mindset. We used the four favourably worded items of the Indonesian Growth Mindset Scale, based on Dweck’s framework [27]. In the Indonesian validation, the four-item model showed adequate reliability (α = 0.793) and fit (RMSEA = 0.023, CFI = 1.00) [51].

3.4 Ethical approval

and data collection

This study was approved by Universitas Islam Negeri Syekh Wasil Kediri, Kediri, Indonesia (approval letter No. B-1568/Un.33/PS2.1/PP.00.9/04/2026, issued in April 2026), and was conducted in

accordance with the ethical principles of the Declaration of Helsinki. The study was an anonymous, minimal-risk online survey of university students, and all participants provided electronic informed consent before taking part. Data were collected through an online questionnaire distributed via academic networks and class communication channels. The first page described the purpose of the study, its voluntary nature, anonymity and the right to withdraw at any time; participants gave electronic informed consent before proceeding. No personally identifying information was collected.

3.5 Data analysis

Data were analysed with PLS-SEM in SmartPLS 4 [52], which suits models that focus on explaining and predicting latent constructs and testing indirect effects [53, 54]. We first evaluated the reflective measurement model using indicator loadings, Cronbach's α, ρA, composite reliability (ρC), average variance extracted (AVE), the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT) [55, 56]. We then evaluated the structural model using inner variance inflation factors (VIF), the coefficient of determination (R^2), effect sizes (f^2), the standardised root mean square residual (SRMR) and out-of-sample predictive power with PLSpredict (10 folds, 10 repetitions) [57]. Standardised path coefficients are reported as β.

Hypotheses were tested with percentile bootstrapping (5,000 subsamples, two-tailed). The indirect effect was considered significant when its 95% confidence interval excluded zero; mediation was classified as partial when both the indirect and direct effects were significant, and its size was expressed as the variance accounted for (VAF) [58, 59]. Because all data were self-reported, we assessed common method variance with Harman's single-factor test and full collinearity VIFs [60–62]. Bootstrap confidence intervals for HTMT, PLSpredict and the common method variance tests were computed in Python (NumPy and statsmodels) using the same data and model specification.

4 Results

4.1 Descriptive statistics

No values were missing. Mean item scores were above the scale midpoint for all three constructs, and skewness and kurtosis were within ± 1 (Table 1).

Table 1
Descriptive statistics of the study constructs (N = 181)

Construct	Items	Min	Max	M	SD	M per item
Self-efficacy	10	26	50	38.93	5.82	3.89
Reflective practice	10	20	50	37.44	5.79	3.74
Growth mindset	4	9	20	15.84	2.73	3.96

Possible score ranges are 10–50 for self-efficacy and reflective practice and 4–20 for growth mindset

4.2 Measurement model

All indicator loadings were significant ($p < 0.001$) and ranged from 0.662 to 0.826 for self-efficacy, 0.665 to 0.813 for reflective practice and 0.843 to 0.881 for growth mindset (Table S1 in ESM 1). Four loadings fell between 0.66 and 0.70; they were retained because removal did not substantively improve composite reliability or AVE and because they cover content of the original scales [54]. Cronbach's α, ρA and ρC exceeded 0.89 and AVE exceeded 0.50 for all constructs (Table 2). The square root of each construct's AVE exceeded its correlations with the other constructs, and all HTMT values and the upper bounds of their 95% bootstrap confidence intervals were below 0.85 (Table 3), supporting discriminant validity.

Table 2
Reliability and convergent validity

Construct	Loading range	α	ρA	ρC	AVE
Self-efficacy	0.662–0.826	0.909	0.912	0.924	0.549
Reflective practice	0.665–0.813	0.904	0.908	0.920	0.537
Growth mindset	0.843–0.881	0.893	0.894	0.926	0.758

α = Cronbach's alpha; ρA and ρC = composite reliability; AVE = average variance extracted

Table 3
Discriminant validity: Fornell–Larcker criterion and HTMT

Construct	1	2	3	HTMT [95% CI]
1 Self-efficacy	0.741			—
2 Reflective practice	0.605	0.733		2–1: 0.656 [0.524, 0.772]
3 Growth mindset	0.628	0.582	0.871	3–1: 0.685 [0.577, 0.781] 3–2: 0.635 [0.485, 0.761]

Diagonal values are the square roots of AVE; off-diagonal values are latent variable correlations. HTMT confidence intervals are percentile bootstrap intervals based on 5,000 resamples

4.3 Structural model

Inner VIF values ranged from 1.000 to 1.577, indicating no collinearity concerns. The SRMR of 0.072 was below the 0.08 threshold [63]. Self-efficacy explained 36.6% of the variance in reflective practice (adjusted $R^2 = 0.363$), and self-efficacy and reflective practice together explained 45.9% of the variance in growth mindset (adjusted $R^2 = 0.453$), indicating moderate explanatory power. Effect sizes were large for self-efficacy on reflective practice ($f^2 = 0.577$), medium for self-efficacy on growth mindset ($f^2 = 0.222$) and small to medium for reflective practice on growth mindset ($f^2 = 0.119$). PLSpredict yielded positive Q^2predict values for all growth mindset indicators (0.306–0.359), and the PLS model produced lower

prediction errors than the linear benchmark for three of the four indicators, indicating medium predictive power [57]. Figure 3 shows the estimated model.

The first unrotated factor accounted for 42.9% of the variance in the 24 items, below the 50% threshold, and full collinearity VIFs (1.77–1.93) were below 3.3 [62]. Common method variance is therefore unlikely to account for the results, although neither test rules it out [60].

4.4 Hypothesis testing

All hypothesised direct paths were positive and significant (Table 4). Self-efficacy was associated with growth mindset (β = 0.435, t = 5.126, p < 0.001, 95% CI [0.254, 0.583]; H1 supported) and with reflective practice (β = 0.605, t = 10.918, p < 0.001, 95% CI [0.499, 0.713]; H2 supported), and reflective practice was associated with growth mindset (β = 0.319, t = 3.676, p < 0.001, 95% CI [0.167, 0.500]; H3 supported).

Table 4
Results of direct-path hypothesis testing

Hypothesis	β	SD	t	p	95% CI	f^2	Decision
H1 SE → GM	0.435	0.085	5.126	< 0.001	[0.254, 0.583]	0.222	Supported
H2 SE → RP	0.605	0.055	10.918	< 0.001	[0.499, 0.713]	0.577	Supported
H3 RP → GM	0.319	0.087	3.676	< 0.001	[0.167, 0.500]	0.119	Supported

SE = self-efficacy; RP = reflective practice; GM = growth mindset; β = standardised path coefficient; SD = bootstrap standard deviation. Percentile bootstrap confidence intervals, 5,000 subsamples

4.5 Mediation analysis

The indirect effect of self-efficacy on growth mindset through reflective practice was positive and significant (β = 0.193, SD = 0.064, t = 2.996, p = 0.003, 95% CI [0.091, 0.337]); H4 was supported. Because the direct effect remained significant after the mediator was included (β = 0.435, p < 0.001), mediation was partial. The total effect was 0.628 (95% CI [0.536, 0.719]), of which the indirect effect accounted for 30.7% (VAF) (Table 5).

Table 5
Direct, indirect and total effects of self-efficacy on growth mindset

Effect	β	SD	t	p	95% CI	Interpretation
Direct (SE → GM)	0.435	0.085	5.126	< 0.001	[0.254, 0.583]	Significant
Indirect (SE → RP → GM)	0.193	0.064	2.996	0.003	[0.091, 0.337]	H4 supported
Total	0.628	0.046	13.539	< 0.001	[0.536, 0.719]	Partial mediation; VAF = 30.7%

VAF = variance accounted for (indirect effect / total effect). Percentile bootstrap confidence intervals, 5,000 subsamples

5 Discussion

This study examined whether reflective practice links self-efficacy and growth mindset among Indonesian pre-service teachers. All four hypotheses were supported. Self-efficacy was associated with growth mindset directly and indirectly through reflective practice, and reflection carried about one third of the total association. These results suggest that growth-oriented beliefs in pre-service teachers depend not only on confidence in their abilities but also on their engagement in examining their own experience.

5.1 Self-efficacy and growth mindset

The direct association between self-efficacy and growth mindset (β = 0.435) is larger than the pooled correlation reported for in-service teachers (r = 0.18) [12]. One explanation is that our measures were general rather than domain-specific: general self-efficacy and general growth mindset may share more variance than teaching-specific measures. Another is developmental: during initial teacher preparation, when professional identity is still forming, beliefs about one's capability and about the malleability of ability may be less differentiated than among experienced teachers. Both explanations are testable with teaching-specific instruments [49] and comparative samples.

5.2 Self-efficacy and reflective practice

The association between self-efficacy and reflective practice was the strongest in the model (β = 0.605, f^2 = 0.577). This pattern is consistent with the view that reflection is costly: examining one's mistakes requires enough confidence that the examination will not confirm incompetence [25]. Prior studies have mostly treated reflection as a source of self-efficacy [17]; our results show that self-efficacy is also a strong correlate of reflective engagement. A reciprocal process is plausible, in which confidence makes reflection tolerable and successful reflection builds confidence, but cross-sectional data cannot establish it [64]. Longitudinal evidence that teacher education experiences shape pre-service teachers' self-efficacy [65, 66] makes such a cycle plausible, although very high self-efficacy is not uniformly

beneficial and can reduce the effort invested in a task [67]. For teacher education, the implication is that reflective assignments may become formalities for students who lack the confidence to engage with them honestly. The result is also consistent with research linking self-efficacy and reflection to teachers' emotion regulation and burnout [41].

5.3 Reflective practice and growth mindset

Reflective practice was associated with growth mindset beyond self-efficacy (β = 0.319). We interpret reflection as the process that turns experience into evidence: by connecting specific actions to specific outcomes, it shows the pre-service teacher that ability changes with strategy and effort. This interpretation extends findings on critically reflective behaviour among in-service teachers [44] and is compatible with the proposal that the way failure is processed shapes beliefs about ability [43]. In hierarchical, examination-oriented classrooms, reflection may help pre-service teachers move from asking "Am I good enough yet?" to asking "What can I learn from this lesson?".

5.4 The mediating role of reflective practice

The significant indirect effect supports the central argument of this study: reflection is one process through which efficacy beliefs are connected to growth beliefs. The mediation was partial, and the direct path carried 69.3% of the total effect, so reflection is one route among several. Self-regulation, mastery goals, emotion regulation and supportive supervision are plausible additional mediators [6, 13, 41]. Because a saturated three-variable model fits equally well in any causal ordering [68], the hypothesised sequence rests on theory rather than on the data alone; alternative orderings, such as growth mindset supporting reflection and reflection supporting self-efficacy, remain plausible and should be tested longitudinally.

5.5 The Reflective Bridge Model

To make the findings usable for teacher education, we translated the estimated model into the Reflective Bridge Model (Fig. 4). The model introduces no new construct; it organises the three measured constructs and the estimated paths into an operational framework with four components.

The first component, the efficacy foundation, corresponds to self-efficacy and is built through Bandura's four sources [25, 65, 69]: mastery experiences through graded microteaching, vicarious experiences through peer and video models, verbal persuasion through specific feedback, and the management of anxiety before and during teaching. Because self-efficacy showed the strongest path to reflective practice (β = 0.605), this foundation is the entry point of the model. The second component, the reflective bridge, corresponds to the three aspects measured by the RPQ-10 [38]: noticing during teaching, reviewing after teaching and evaluating strategies. It is supported by guided reflective journals, video-stimulated recall and feedback-based supervision, and it carries the indirect effect (β = 0.193; 30.7% of the total effect). The third component, the growth orientation, corresponds to growth mindset and is expressed in reading errors as information, seeking rather than avoiding feedback and valuing effort and strategy (R^2 = 0.459). The fourth component is the enabling context: teacher educators and supervisors,

mentor teachers in practicum schools and the Teacher Professional Education curriculum, together with cultural conditions such as hierarchy and examination orientation that may widen or narrow the room for reflection [22].

The model also includes a proposed feedback loop from growth orientation to the efficacy foundation, which was not estimated in this study. It reflects the expectation that pre-service teachers who believe their ability can develop will interpret later difficulties in ways that protect self-efficacy, which may be particularly relevant when the unrealistic optimism common before practicum gives way to classroom difficulties [70–72]. The model generates testable predictions: cross-lagged panel designs should show paths from self-efficacy to reflection and from reflection to growth mindset; interventions that strengthen the reflective bridge should increase growth mindset; and the strength of the bridge should vary with the supervisory and cultural context.

5.6 Implications for teacher education

The findings and the Reflective Bridge Model have three implications for teacher education programmes, including Teacher Professional Education in Indonesia. First, self-efficacy and reflection should be developed together. Microteaching, field placements and academic supervision should not only assess performance but also build confidence through graded tasks and specific feedback, because confidence is the strongest correlate of reflective engagement. Second, reflection should be structured rather than assigned as a reporting task. Guided prompts that link a specific teaching action, its outcome and a revised strategy are more likely to produce evidence of growth than open-ended journals [39, 40]; video analysis of one's own lessons and feedback-based supervision serve the same purpose [73]. Third, supervisors should create conditions in which examining mistakes does not threaten students' standing, for example by separating formative reflective conversations from summative grading. In hierarchical classroom cultures, explicit permission to question one's own practice may be a precondition for reflection to occur at all. These recommendations should be weighed against meta-analytic evidence that associations between growth mindset and academic outcomes are modest and heterogeneous [74, 75]; growth mindset is best treated as one professional resource among several rather than as a target in itself, and teachers need concrete support to translate it into classroom practice [76].

5.7 Limitations and future research

Several limitations qualify these conclusions. First, the cross-sectional design precludes causal inference, and cross-sectional mediation estimates can be biased relative to longitudinal effects [64]. Second, data came from a single Islamic teacher education institution, and the absence of demographic variables prevents tests of measurement invariance or subgroup differences. Third, all measures were self-reports; future studies should include multi-source data such as supervisor ratings or analyses of reflective journals. Fourth, self-efficacy and growth mindset were measured as general rather than teaching-specific beliefs, and the reflective practice questionnaire, developed in a broader professional context, was used without a formal cross-cultural adaptation procedure; although the measurement model supported its reliability and validity, its equivalence across languages and cultures remains

untested. Fifth, PLS-SEM is suited to explanation and prediction; future studies with larger samples could test the model with covariance-based SEM. Future research should use longitudinal or intervention designs across multiple institutions to test the components and the proposed feedback loop of the Reflective Bridge Model.

6 Conclusions

Among Indonesian pre-service teachers, self-efficacy was associated with growth mindset both directly and through reflective practice, which accounted for about one third of the total effect. Growth-oriented beliefs are therefore unlikely to develop through confidence building alone; they also depend on structured opportunities to examine one's own teaching. The Reflective Bridge Model translates these findings into an operational framework that links efficacy building, structured reflection and growth orientation to practices that teacher education programmes can implement and evaluate.

Declarations

Ethics approval and consent to participate

This study was approved by Universitas Islam Negeri Syekh Wasil Kediri, Kediri, Indonesia (approval letter No. B-1568/Un.33/PS2.1/PP.00.9/04/2026, issued in April 2026), and was conducted in accordance with the ethical principles of the Declaration of Helsinki. The study was an anonymous, minimal-risk online survey of university students, and all participants provided electronic informed consent before taking part.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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Author Contribution

H.Y.S.P.: conceptualisation, methodology, formal analysis, investigation, data curation, writing – original draft. A.J.S., M., I.H., A.P.W. and N.H.: supervision, methodology, writing – review and editing. N.R.R.: investigation, resources (data collection at UIN Syekh Wasil Kediri), writing – review and editing. A.R. and N.P.S.: validation, writing – review and editing. All authors read and approved the final manuscript.

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Data Availability

The anonymised item-level dataset and SmartPLS analysis outputs supporting the findings of this study are available from the corresponding author on reasonable request. The data are not publicly available because participants consented to the use of their responses for research purposes only, and public deposition was not included in the consent procedure.

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Figures

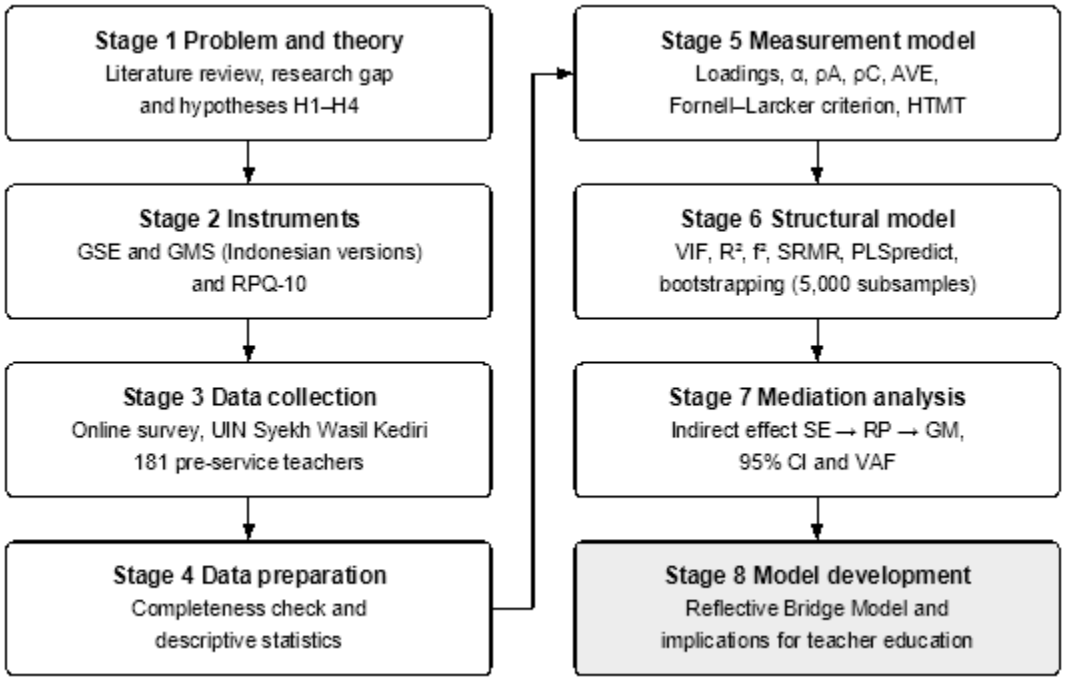

Figure 1

Research flowchart

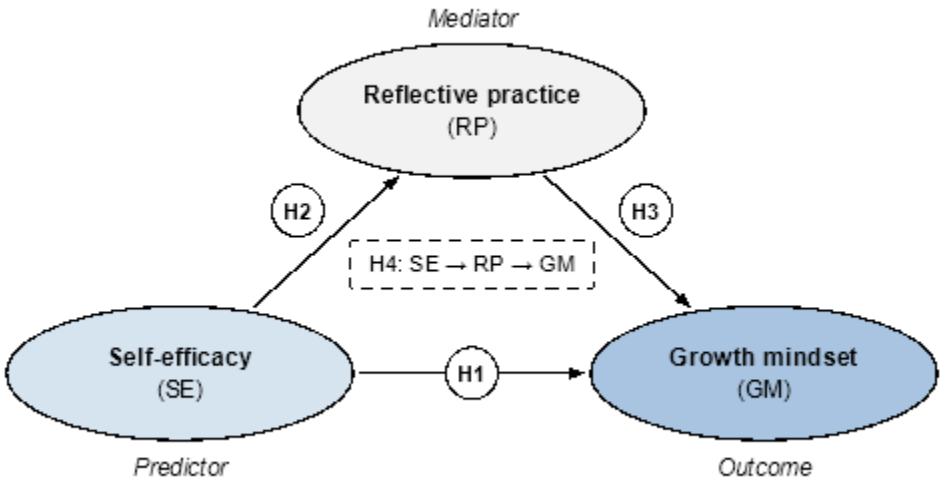

Figure 2

Conceptual model. Solid arrows represent the hypothesised direct paths (H1–H3); the dashed box denotes the hypothesised indirect path from self-efficacy (predictor) to growth mindset (outcome) through reflective practice (mediator; H4)

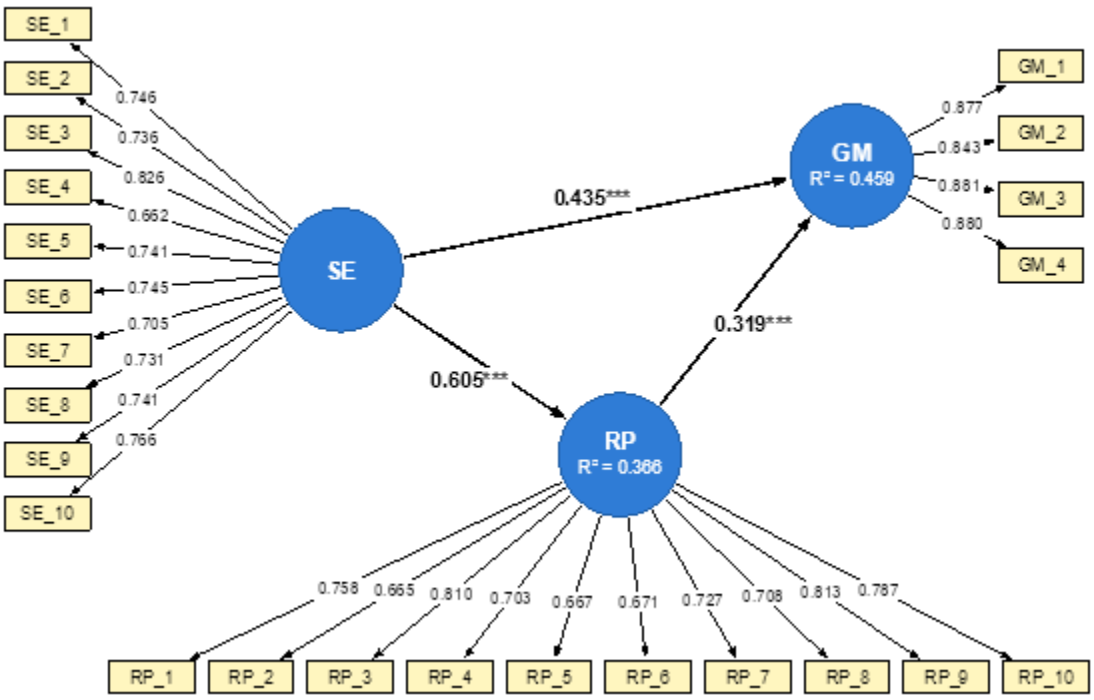

Figure 3

Estimated PLS-SEM model, redrawn from the SmartPLS 4 output. Values on the indicator arrows are standardised outer loadings, values on the structural paths are standardised path coefficients, and values inside the constructs are R^2. SE = self-efficacy; RP = reflective practice; GM = growth mindset. ***p < 0.001

Supplementary Files

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- ESM1SupplementaryTablesHendro.docx