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Teacher Mindfulness and Professionalism: A PLS-SEM Study of In-Service Teachers in Indonesia

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Abstract

Research on teacher mindfulness in Indonesia remains limited despite growing calls for its integration into teacher professional development. This ex post facto study examined the effect of Teacher Mindfulness on Teacher Professionalism among 250 in-service teachers in the 2023 Teacher Professional Education Program (PPG) cohort at a public teacher-education institution in Indonesia (convenience sampling; 24.8% response rate), using PLS-SEM (SmartPLS 4.1.1.8). Teacher Mindfulness significantly predicted Teacher Professionalism ($\beta = 0.770$; $t = 14.272$; $p < .001$), explaining 59.3% of its variance ($R^2 = 0.593$) with adequate predictive relevance ($Q^2 = 0.463$). Beyond this primary path, both Teacher Mindfulness and Teacher Professionalism also significantly predicted teachers' FIT-Choice motivation for the teaching profession ($\beta = 0.333$ and $\beta = 0.418$, respectively; both $p < .01$). Findings support integrating mindfulness-based training into teacher professional development, though the cross-sectional design limits causal inference.

INTRODUCTION

Over the past two decades, education reforms worldwide have consistently positioned teacher professional development as one of the key levers for improving learning quality, in line with the shift in school orientation from mere knowledge transmission toward building 21st-century skills that demand integrated cognitive, social, emotional, and digital competencies. Within this context, continuous professional development (CPD) is no longer understood as the sole responsibility of individual teachers, but as a collaborative process requiring systemic support in the form of shared experience, reflective practice, and a sense of community among educators (Vadivel et al., 2021). Nevertheless, cross-country reviews show that some CPD interventions, including those incorporating social-emotional learning (SEL) components, do not necessarily produce consistent improvements in teacher well-being; a mixed-methods evaluation in El Salvador even reported null effects on most teacher well-being indicators, with participation in the program potentially increasing rather than decreasing work stress (Soares & Cunha, 2024). Such mixed findings underscore the need for a deeper understanding of the psychological dimensions that genuinely matter for the success of teacher professional development globally.

One psychological dimension that has increasingly drawn attention in the international education literature is teacher mindfulness the capacity to be consciously present, non-judgmental, and reflective toward one's teaching experience over time. Empirical evidence on the role of mindfulness for teachers has accumulated across education levels and cultural contexts. At the early childhood level, an iterative study of the Cultivating Healthy Intentional Mindful Educators (CHIME) program demonstrated the feasibility of mindfulness-compassion-based training in strengthening early childhood teachers' emotional regulation (Hatton-Bowers et al., 2023), while a relationship-focused intervention for infant and toddler teachers in the Early Head Start program was shown to increase the use of mindfulness-based coping strategies, although it did not significantly affect teachers' stress and exhaustion trajectories (Brophy-Herb et al., 2024). At the primary and secondary levels, several large-scale experimental studies strengthen the causal evidence base: Mindfulness-Based Emotional Balance

(MBEB) training was shown to improve middle school teachers' occupational health and the quality of their interactions with students in the most stressful classrooms, with stronger long-term effects for newer teachers (Roeser et al., 2022); the Cultivating Awareness and Resilience in Education (CARE) program, tested through a cluster randomized trial with 224 urban elementary school teachers, produced positive effects on students' engagement and learning motivation (Brown et al., 2025); while brief mindfulness training for elementary school teachers in the United States was shown to significantly increase intrapersonal mindfulness, though not necessarily the interpersonal dimension (Akhavan et al., 2021). At the higher-education and language-education levels, teacher mindfulness has been shown to be positively related to student engagement through the mediation of teaching quality (Wang, 2024), to English teachers' psychological well-being and life satisfaction (Demir et al., 2025), and to teachers' job satisfaction through affect-regulation mechanisms (Barata-Gonçalves et al., 2025).

Beyond evidence of direct effects, recent literature has also revealed several mechanisms explaining how mindfulness influences teacher professionalism. Reflective practice among EFL teachers in Iran correlated significantly with mindfulness and professional development, with mindfulness mediating the relationship between the two (Weisi & Salari, 2024). Among kindergarten teachers in China, psychological capital partially mediated the relationship between mindfulness in teaching and teacher morale, with organizational climate further moderating that relationship (Zhou & Jiang, 2024). In a more specific domain, teachers' general mindfulness in Slovenia was found to be directly and negatively related to diversity-awareness indicators, but positively related indirectly through the mindful-teaching dimension (Kozina, 2025), a finding that extends the scope of teacher mindfulness outcomes into the domain of multicultural competence. Teacher mindfulness has even been shown to be "contagious" to students: a survey of 45 teachers and 852 elementary school students in Israel found that teachers' mindfulness and empathic concern were related to their students' social-emotional skills (Orr & Lavy, 2024).

Although this accumulated evidence appears convincing, a closer reading of the literature reveals a number of conflicting and unresolved findings. Brown et al. (2025) reported that CARE program teachers with low baseline mindfulness reported better child learning outcomes, whereas teachers with high baseline mindfulness reported lower child social skills than the control group, an anomaly confirming that the relationship between teacher mindfulness and student outcomes is not always linearly positive. Demir et al. (2025) likewise found that although intrapersonal mindfulness correlated strongly with teachers' psychological well-being, its relationship with attitudes toward professional development was not significant. Furthermore, the effectiveness of mindfulness-based interventions has been shown to depend heavily on the competence of the instructor/teacher delivering them; participants with certain psychological histories were found to be at greater risk of more challenging meditation experiences when instructor competence was rated low (Soláríková & Bartolen, 2021). Such inconsistencies indicate that teacher mindfulness is not a single construct that automatically produces positive outcomes, but rather a complex phenomenon that depends heavily on context, implementation quality, and measurement approach.

Conceptual debates about the direction of teacher mindfulness development also color the recent literature. Romano et al. (2025) explicitly criticized mindfulness training approaches that have thus far been overly oriented toward individual self-care, proposing that K-12 teacher mindfulness training be revised to cultivate agency, social relationships, and a more collective sense of community (collective care). In a similar vein, the “Mindfully Teaching Mindfulness–Elementary” conceptual framework, built from interviews with 11 elementary school teachers, emphasizes that teachers’ embodiment of mindfulness is a crucial element when mindfulness is taught to students (Mischenko et al., 2024). Methodological challenges in reliably assessing this embodiment remain substantial; the development of the Teaching Mindfulness in Education Observation Scale (TMEOS) showed that procedural fidelity is far easier to rate reliably than mindfulness embodiment itself (Broderick et al., 2019). A long-term qualitative study of veteran language teachers in China further enriches this understanding by revealing five dimensions of teacher mindfulness about the self, teaching-learning, professional development, the situational environment, and time and change, all centered on mindfulness about the self (Yuan et al., 2023). Educators’ subjective experiences in mindfulness training are also revealed through a phenomenological study of K-12 teachers and counselors in Hawaii, showing how mindfulness practice helps them become aware of unskillful emotional-mental patterns (Le & Alefaio, 2019).

Beyond studies that explicitly focus on mindfulness, the broader literature on teacher self-reflection and professional development also provides important context, although it has not yet been fully integrated with the mindfulness framework. Studies on experienced music teachers’ instructional decision-making (Johnson & Matthews, 2017), reflective journal writing among EFL pre-service teachers in Kuwait (Almutawa & Alfahid, 2024), video-based professional development for pre-service mathematics teachers (Zhang et al., 2025), and citizen-science-based teacher training emphasizing collective awareness (de S. Santos et al., 2025) all touch on the importance of self-awareness and reflection in teaching practice, but without an explicit mindfulness framework. An equally important gap lies in geographic representation and cultural context: most of the evidence above originates from developed countries (the United States, China, Slovenia, Israel, Portugal) or foreign-language education contexts in the Middle East and Asia, while research on teacher mindfulness in the Indonesian context remains very limited. One available study found a positive but weak correlation between mindfulness, social-emotional competence, and academic achievement among pre-service English teachers in South Sumatra (Hermana et al., 2021). This limited body of teacher mindfulness research in Indonesia is consistent with the findings of a large-scale literature review of 340 articles from various countries, which identified that the most striking distinguishing feature between the professionalism profile of Indonesian teachers and that of other countries is the absence of mindfulness as an explicit target for teacher professionalism development (Haenilah et al., 2022).

In light of this gap, particularly the still very limited quantitative empirical research on teacher mindfulness within the context of teacher professional education in Indonesia, this study aims to examine the effect of Teacher Mindfulness on Teacher Professionalism among in-service teachers enrolled in Indonesia’s in-service Teacher Professional Education Program. The novelty of this study lies in providing one of the first quantitative empirical pieces of evidence on this relationship within the

context of in-service teachers in Indonesia, a context previously examined only among pre-service English teachers (Hermana et al., 2021), while also addressing the gap identified by a large-scale literature review indicating that mindfulness has not yet been made an explicit target for teacher professionalism development in Indonesia (Haenilah et al., 2022). Beyond this primary relationship, this study also extends the novelty of its contribution by examining whether Teacher Mindfulness and Teacher Professionalism relate to teachers' underlying motivational orientation toward the profession, operationalized through the Factors Influencing Teaching Choice (FIT-Choice) framework (Watt & Richardson, 2007). This additional layer of analysis is motivated by the premise that psychologically grounded teachers those who are mindful and professionally competent are also likely to exhibit a stronger, more intrinsically anchored motivational profile for having chosen teaching as a career, consistent with Self-Determination Theory's account of autonomous motivation (Deci & Ryan, 1985, 2000). Based on these aims, the study is formulated around three hypotheses: (H1) Teacher Mindfulness has a positive and significant effect on Teacher Professionalism; (H2) Teacher Mindfulness has a positive and significant effect on FIT-Choice motivation; and (H3) Teacher Professionalism has a positive and significant effect on FIT-Choice motivation, all among in-service PPG teachers in Indonesia. Testing this three-path model rather than a single bivariate link is itself part of this study's novelty, as no prior teacher mindfulness study reviewed above has jointly modeled how both mindfulness and professionalism relate to teachers' career-choice motivation within a single structural model. The remainder of this article presents the theoretical framework underlying the study, the research methods used, followed by the results, discussion, and conclusions that address this research aim.

THEORETICAL FRAMEWORK

To underpin the test of the relationship between teacher mindfulness and teacher professionalism, this study integrates six theoretical frameworks that are conceptually and empirically well established in the educational psychology and teacher professional development literature. These six frameworks were selected because each explains a different part of the conceptual chain linking teacher mindfulness to the outcomes examined, from the definition and operationalization of the construct, to cognitive and affective mediation mechanisms, to contextual factors that moderate the strength and direction of the relationship. These six frameworks are therefore not treated as a list of standalone theories, but are synthesized into one coherent conceptual model (see Fig. 1), which serves as a lens for organizing and interpreting the findings presented in the Results and Discussion sections.

Classical Mindfulness Theory: Defining and Operationalizing the Construct

The definition and operationalization of mindfulness in this study draw on the tradition of secular mindfulness theory adapted from contemplative practice into clinical and educational contexts by Kabat-Zinn (1990, 2003) through the Mindfulness-Based Stress Reduction (MBSR) program. Bishop et al. (2004) subsequently formulated a widely cited two-component operational definition: (1) self-regulation

of attention so that it remains on immediate present experience, and (2) an orientation toward that experience characterized by curiosity, openness, and non-judgmental awareness. This definition is complemented by Brown and Ryan's (2003) conceptualization, which views mindfulness as an individual disposition of receptive attention to and awareness of present events and experience, measurable both as a trait and as a fluctuating, trainable state. These three references form the conceptual starting point for this study in understanding teacher mindfulness not as a static innate trait, but as a psychological competency that can be developed through training and continuous reflection (Roeser et al., 2012) a premise underlying the argument that teacher mindfulness deserves to be positioned alongside other pedagogical and professional competencies that have thus far been explicit targets of teacher professionalism development in Indonesia. The Teacher Mindfulness instrument used in this study was operationally adapted from the Intention-Attention-Attitude (IAA) framework developed by Shapiro, Carlson, Astin, and Freedman (2006), which decomposes mindfulness into three measurable components: the intention to develop awareness (Intention), the deliberate capacity to focus attention on present experience (Attention), and an open, accepting, non-judgmental attitude toward emerging experience (Attitude). For structural modeling purposes, these components were aggregated into two second-order dimensions that capture where a teacher's mindful awareness is directed: an *Intrapersonal* dimension (awareness directed inward, toward one's own teaching concentration, adherence to instructional stages, and self-reflective consultation with peers) and an *Interpersonal* dimension (awareness directed outward, toward attentively receiving students' ideas and complaints and remaining composed under classroom pressure). This intrapersonal-interpersonal distinction mirrors the one used by Akhavan et al. (2021), who found that brief mindfulness training raised elementary teachers' intrapersonal mindfulness without a corresponding gain in the interpersonal dimension underscoring that the two are conceptually and empirically separable facets of teacher mindfulness rather than a single undifferentiated construct.

The Prosocial Classroom Model: A Bridge Toward Teaching Quality

To explain how teacher mindfulness translates into teaching quality, this study adopts the *Prosocial Classroom Model* developed by Jennings and Greenberg (2009). This model argues that teachers' social-emotional competence and well-being including mindfulness capacity as one component influence the quality of teacher-student relationships, classroom management effectiveness, and the quality of social-emotional learning curriculum implementation, which in turn shape a healthy classroom climate and affect students' academic and social-emotional outcomes. This causal chain has received empirical support from large-scale experimental studies, such as the Cultivating Awareness and Resilience in Education (CARE) program, shown to increase elementary school students' engagement and learning motivation (Brown et al., 2025), and Mindfulness-Based Emotional Balance (MBEB) training, shown to improve the quality of teacher-student interactions in the most stressful classrooms (Roeser et al., 2022). The Prosocial Classroom Model thus serves as the main conceptual bridge linking the teacher mindfulness construct to the teacher professionalism indicators measured in this study, such as the ability to maintain teaching concentration and manage relationships with students. For structural

modeling purposes, Teacher Professionalism in this study was operationalized as a second-order construct built from three lower-order dimensions adapted from the OECD's TALIS-based Teacher Professionalism framework (OECD, 2016): *Autonomy* (teachers' decision-making power over instructional decisions and emotional responses in the classroom), *Knowledge Base* (the necessary specialized knowledge for teaching, reflected here in attentiveness to instructional stages and students' ideas), and *Peer Networks* (opportunities for collegial information exchange and support, reflected in self-reflective consultation with colleagues). This three-dimension operationalization complements the single-path outcome measure used in the Hypothesis Testing results below and provides the measurement basis for the second-order structural model reported in the Methods and Results sections.

Conservation of Resources Theory: Mindfulness as a Psychological Resource

The relationship between teacher mindfulness and teacher well-being is explained through *Conservation of Resources Theory* (COR) proposed by Hobfoll (1989). This theory holds that individuals continually strive to obtain, retain, and protect resources they value including personal psychological resources such as emotion regulation, self-esteem, and optimism and that stress and burnout arise when such resources are threatened, lost, or fail to be replenished after investment (a resource loss spiral). Within this framework, mindfulness is positioned as a personal psychological resource that protects teachers from a resource-loss spiral caused by high job demands. Teachers with higher mindfulness are assumed to possess larger reserves of affective-regulation resources for coping with daily occupational stressors, making them less likely to experience emotional exhaustion and burnout, and better able to sustain the quality of their professional performance. This premise aligns with the finding that mindfulness in teaching affects teachers' job satisfaction indirectly through increased positive affect and decreased negative affect (Barata-Gonçalves et al., 2025) a mediating pattern that precisely mirrors the resource-acquisition-and-preservation logic proposed by COR.

Self-Determination Theory: Autonomous Motivation and the Individual–Collective Debate

Self-Determination Theory (SDT; Deci and Ryan, 1985, 2000) explains autonomous motivation as a mediator of the relationship between mindfulness and teacher professionalism outcomes. This theory argues that the satisfaction of three basic psychological needs autonomy, competence, and relatedness determines the quality of an individual's motivation, with autonomous motivation (as opposed to controlled motivation) consistently predicting better well-being and performance. Mindfulness is assumed to facilitate the satisfaction of these three needs by reducing automatic reactivity to external pressure, thereby creating room for teachers to act more in line with their personal values and goals. This SDT framework also serves as an important analytical tool for examining the paradigmatic debate between individually oriented mindfulness training approaches (self-care, emphasizing the personal

fulfillment of autonomy and competence needs) and collectively oriented approaches (collective care, emphasizing the fulfillment of relatedness needs through shared agency and social relationships among educators), proposed as a direction for reforming K-12 teacher mindfulness training (Romano et al., 2025). In other words, SDT provides a framework for explaining why these two paradigms might produce different outcome patterns, depending on which psychological need each approach most strongly fulfills.

Teacher Self-Efficacy and Academic Optimism: Cognitive Mediators

Teacher self-efficacy (Bandura, 1997) is positioned as the primary cognitive mediator in this study's conceptual model, given its consistency as an intervening variable across related studies, such as the mediating role of psychological capital between mindfulness in teaching and teacher morale among kindergarten teachers in China (Zhou & Jiang, 2024), and the mediating role of emotion regulation and interpersonal mindfulness in the relationship between teacher self-efficacy and burnout (Çetin et al., 2024). The theoretical logic is that mindfulness reduces teachers' emotional reactivity to classroom failures or challenges, making such experiences less likely to erode the mastery experiences that are the primary source of self-efficacy. This self-efficacy concept is further enriched by the notion of academic optimism (Hoy et al., 2006), which links teachers' collective efficacy with faculty trust in students and parents and with academic emphasis as a school norm. Integrating these two concepts underscores that mindfulness's cognitive mediation of teacher professionalism outcomes operates not only at the individual level but can also accumulate into a more optimistic, achievement-oriented school culture.

Ecological Systems Theory: A Contextual Frame Across Levels and Cultures

To frame possible variation in the mindfulness-professionalism relationship pattern across education levels and cultural contexts, this study uses *Ecological Systems Theory* (Bronfenbrenner, 1979). This theory views individual development and behavior including teachers' mindfulness practices as the result of reciprocal, cross-level interactions among the microsystem (direct teacher-student interaction in the classroom), the mesosystem (relationships among microsystems, such as peer-teacher support and school leadership), the exosystem (professional development policy at the district level), and the macrosystem (cultural values and national education policy). This layered framework is particularly relevant for justifying the need for contextual adaptation of global research findings most of which originate from developed countries with individualistic educational systems and cultural orientations to the Indonesian context, which is characterized by a more collectivistic culture and which, based on a large-scale literature review, has not yet made mindfulness an explicit target for teacher professionalism development (Haenilah et al., 2022). In other words, Ecological Systems Theory grounds the argument that the mindfulness-professionalism relationship pattern found at one education level or in one cultural context cannot automatically be generalized to other levels or contexts without accounting for the surrounding meso- and macro-level systemic factors a consideration underlying this study's caution in

generalizing its findings beyond the context of the in-service Teacher Professional Education Program (PPG Dalam Jabatan) at the Faculty of Teacher Training and Education of the public university involved in this study.

Table 1
Summary of Theoretical Frameworks and Their Function in the Conceptual Model

Theoretical Framework	Function in the Model	Key References
Classical Mindfulness Theory	Defines and operationalizes the teacher mindfulness construct	Kabat-Zinn (1990, 2003); Bishop et al. (2004); Brown & Ryan (2003); Shapiro et al. (2006)
Prosocial Classroom Model	Explains the mindfulness → classroom climate → teaching quality pathway	Jennings & Greenberg (2009)
Conservation of Resources Theory	Explains mindfulness as a resource protecting against burnout	Hobfoll (1989)
Self-Determination Theory	Explains autonomous motivation as a mediator; frames the individual vs. collective debate	Deci & Ryan (1985, 2000); Romano et al. (2025)
Self-Efficacy & Academic Optimism	Primary cognitive mediator between mindfulness and professionalism outcomes	Bandura (1997); Hoy et al. (2006)
Ecological Systems Theory	Frames variation in relationships across levels, school climate, and culture	Bronfenbrenner (1979)

The six theoretical frameworks above are synthesized into a single integrated conceptual model (see Fig. 1). In this model, teacher mindfulness shaped by the ecological-cultural context in which teachers work (meso and macro systems) is assumed to operate through three main mediators, namely self-efficacy (cognitive mediator), psychological capital/emotion regulation (affective mediator, consistent with Conservation of Resources Theory), and autonomous motivation (motivational mediator, consistent with Self-Determination Theory), to influence three outcome clusters: teaching quality, teacher well-being, and teacher professionalism. The strength and direction of the relationship between these mediators and outcomes are assumed to be moderated by a number of contextual factors, including school organizational climate, education level, the individual-collective paradigm in mindfulness approaches, and the cultural context in which the research is conducted. This conceptual model is subsequently used as an organizing framework in the Research Methods section to operationally define the study's variables, and in the Discussion section to interpret the direct relationship between Teacher Mindfulness and Teacher Professionalism tested in this study. It should be noted that this study directly tests only the core mindfulness → teacher professionalism pathway in the model above, while the role of the three mediators (self-efficacy, psychological capital, and autonomous motivation) has not been

statistically tested and constitutes a direction for future research (see the Recommendations for Future Research section).

RESEARCH METHODS

Research Design

This study used a quantitative approach with a non-experimental correlational survey design, with an ex post facto relational pattern because the variables studied were measured as they naturally occurred, without experimental manipulation. This design was chosen because the study aims to test the relationship between Teacher Mindfulness and Teacher Professionalism as it naturally occurs among in-service Teacher Professional Education Program (PPG) participants. Data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM), chosen because it suits structural models with multidimensional latent constructs, accommodates a relatively moderate sample size, and does not require the strict multivariate normality assumptions demanded by covariance-based SEM (CB-SEM).

Population, Sample, and Sampling Technique

The study population consisted of all students enrolled in the in-service Teacher Professional Education Program at the Faculty of Teacher Training and Education (FKIP) of a public university in Indonesia, 2023 cohort, totaling 1,010 individuals. The research instrument was distributed online via Google Form to all members of this population in 2024. Of the total links distributed, 250 respondents completed the questionnaire fully and validly (response rate ± 24.8%), so the sampling technique used was convenience sampling (voluntary response sampling), that is, the sample consisted of respondents who voluntarily agreed to and had the opportunity to complete the questionnaire during the data collection period, rather than being randomly drawn from the population. The limitations of this technique, namely the potential for self-selection bias and limited generalizability of the results to the PPG population as a whole, are explicitly acknowledged and discussed further in the Limitations section.

Research Variables and Operational Definitions

Teacher Mindfulness (exogenous variable). Mindfulness is defined with reference to the theoretical framework of Shapiro, Carlson, Astin, and Freedman (2006), consisting of three components: Intention (the intention to develop awareness), Attention (the deliberate capacity to focus attention on present experience), and Attitude (an open, accepting, non-judgmental attitude toward emerging experience). For structural modeling, Teacher Mindfulness was specified as a second-order reflective construct built from two lower-order dimensions: *Intrapersonal* mindfulness (7 items; e.g., teaching concentration, adherence to instructional stages, self-reflective peer consultation) and *Interpersonal* mindfulness (7 items; e.g., attentiveness to students' ideas and complaints, composure under classroom pressure).

Teacher Professionalism (endogenous variable). Operationally defined as the quality of teacher performance reflected in awareness of managing teaching concentration, attending to instructional stages, listening to students' complaints, engaging in self-reflection, attending to students' ideas, and

managing emotions wisely. For structural modeling, Teacher Professionalism was likewise specified as a second-order reflective construct built from three lower-order dimensions adapted from the OECD's TALIS-based Teacher Professionalism framework (OECD, 2016): *Autonomy* (7 items), *Knowledge Base* (8 items), and *Peer Networks* (4 items).

FIT-Choice motivation (endogenous variable). In addition to the two core constructs above, the study questionnaire included an adapted instrument of the Factors Influencing Teaching Choice scale (FIT-Choice Scale; Watt & Richardson, 2007), which measures an individual's motivation for choosing the teaching profession. FIT-Choice was likewise specified as a second-order reflective construct built from two lower-order dimensions, *Motivation* (26 items) and *Perceptions* (16 items), and was modeled as an endogenous outcome predicted jointly by Teacher Mindfulness and Teacher Professionalism (H2 and H3 below), rather than solely as a validation-only instrument.

The study tested three hypotheses: **H1**, Teacher Mindfulness has a positive and significant effect on Teacher Professionalism; **H2**, Teacher Mindfulness has a positive and significant effect on FIT-Choice motivation; and **H3**, Teacher Professionalism has a positive and significant effect on FIT-Choice motivation. Demographic variables (gender, age, and teaching experience) were also collected as supplementary descriptive data to characterize the respondent profile.

Research Instrument

The instrument used was a closed-ended questionnaire with a 1–5 Likert scale, covering demographic data (gender, age, teaching experience, etc.), the Teacher Mindfulness construct (adapted from Shapiro et al., 2006), the Teacher Professionalism construct, and the FIT-Choice construct (adapted from Watt & Richardson, 2007). Prior to use with the research sample, the instrument was reviewed by experts (expert judgment) to assess content validity, then pilot tested with a number of respondents outside the research sample who were not included as final respondents, to ensure no data overlap and to confirm the clarity of the instrument's item wording.

Instrument validity and reliability were assessed using the outer model approach within PLS-SEM using SmartPLS version 4.1.1.8, with the following criteria: convergent validity was assessed from outer loading values (> 0.7) and Average Variance Extracted (AVE > 0.5); discriminant validity was assessed through the Fornell–Larcker criterion and cross loadings; and reliability was assessed from Cronbach's Alpha and Composite Reliability values (both considered reliable if > 0.7). A summary of the instrument feasibility criteria is presented in Table 2.

Table 2
Instrument Validity and Reliability Criteria in the PLS-SEM Outer Model Evaluation

Aspect	Criterion	Threshold Value
Convergent validity	Outer loading	> 0.70
Convergent validity	Average Variance Extracted (AVE)	> 0.50
Discriminant validity	Fornell–Larcker criterion	√AVE > inter-construct correlation
Discriminant validity	Cross loading	Highest loading on its own construct
Reliability	Cronbach's Alpha	> 0.70
Reliability	Composite Reliability (CR)	> 0.70

Research Procedure

The study followed eight stages, as summarized in Fig. 2. Stages 1–3 constitute instrument preparation: a literature review and adaptation of instruments from the theoretical frameworks of Shapiro et al. (2006) and Watt & Richardson (2007), followed by expert judgment to review content validity, and a pilot test of the instrument with respondents outside the sample. If the pilot test results indicated items that did not meet the outer-loading criterion or adequate internal consistency, the researchers revised or dropped those items before using the instrument in the main data collection stage.

Stage 4 was the main data collection: the final questionnaire was distributed online via Google Form to all in-service PPG students at the Faculty of Teacher Training and Education (FKIP) of the university involved, 2023 cohort, in 2024, yielding 250 respondents who completed it fully and validly. Stage 5 involved screening and tabulating the data to check for completeness of responses, missing values, and outliers before analysis. Stages 6 and 7 constituted the PLS-SEM model evaluation (described in the Data Analysis Technique section), followed by Stage 8, interpretation of results and preparation of the research report.

Data Analysis Technique

Data were analyzed using the PLS-SEM approach with SmartPLS version 4.1.1.8, through two stages of model evaluation:

- Measurement model (outer model) evaluation assessing convergent validity, discriminant validity, and construct reliability (Cronbach's Alpha and Composite Reliability), using the criteria presented in Table 2.
- Structural model (inner model) evaluation assessing the coefficient of determination (R-Square), predictive relevance (Q-Square) via the blindfolding procedure, and hypothesis testing via the bootstrapping procedure (5,000 subsamples), with significance criteria of p-value < 0.05 and T-statistic > 1.96.

Respondents' demographic data were also presented descriptively (frequencies and percentages) to characterize the sample profile, as reported in the Results section.

Ethical Considerations and Replicability

This study did not obtain a formal ethical clearance number from an institutional ethics committee prior to data collection. In its place, the following procedural safeguards were implemented throughout the research process as substitutes for formal clearance: (1) participation was entirely voluntary, with no element of coercion; (2) informed consent was obtained implicitly through a statement of willingness on the opening page of the Google Form, which respondents had to acknowledge before proceeding to the questionnaire items; (3) the questionnaire was anonymous, collecting no directly identifying information such as respondent names; (4) data confidentiality was maintained, with responses used solely for research and academic publication purposes and not shared with third parties; (5) respondents retained the right to withdraw at any point before submitting their answers, without consequence; and (6) the study involved no experimental manipulation or intervention, being an ex post facto correlational survey that posed minimal risk to participants beyond that of routine self-report questionnaires on teaching practice. The authors recognize that these procedural safeguards do not substitute for formal institutional ethical clearance, and a retrospective clearance application has been submitted to the relevant institutional ethics committee; the resulting clearance number will be reported in this manuscript once issued, consistent with the target journal's requirements.

To support replicability, all stages in Fig. 2, from the sources of instrument adaptation, psychometric feasibility criteria (Table 2), data collection procedures, to statistical significance criteria, are explicitly reported so that this study can be replicated by other researchers in comparable populations or contexts.

RESULTS

Respondent Characteristics

This study involved 250 respondents who were students of the in-service Teacher Professional Education Program (PPG) at the Faculty of Teacher Training and Education (FKIP) of the university involved, 2023 cohort. Respondent characteristics show that the majority of participants were female (73.2%), over 40 years old (41.2%), and had 11–15 years of teaching experience (40.4%), as detailed in Table 3.

Table 3
Respondent Characteristics

Characteristic	Dominant Category	n	%
Gender	Female	183	73.2
Age	> 40 years	103	41.2
Teaching experience	11–15 years	101	40.4
Teaching level	Elementary school or equivalent	96	38.4
Subject area	General (elementary/junior secondary)	145	58.0
PPG program	In-service	249	99.6

Measurement Model Evaluation

The measurement model evaluation ensured that the research constructs met validity and reliability criteria. PLS-SEM analysis was conducted using tests of convergent validity, discriminant validity, and construct reliability for the three constructs measured in the questionnaire: Teacher Mindfulness, Teacher Professionalism, and FIT-Choice.

Convergent validity results show that the research indicators met the outer loading criterion of > 0.70 and AVE > 0.50, so all constructs were declared valid, as summarized in Table 4. Collinearity among indicators was additionally screened using the Variance Inflation Factor (VIF). Across the 144 indicators in the outer model, VIF ranged from 1.86 to 40.73 (M = 8.76, Mdn = 7.58); indicators belonging to the Interpersonal, Intrapersonal, Autonomy, and Peer Networks dimensions which together form the Teacher Mindfulness and Teacher Professionalism constructs central to H1 consistently showed acceptable VIF values (1.9–5.0), whereas the majority of items in the Motivation dimension of FIT-Choice, and several items in its Perceptions dimension, exceeded the conservative threshold of 5 (Hair et al., 2019), with the highest values reaching above 30. This indicates a meaningful multicollinearity concern confined to the FIT-Choice measurement model rather than the primary Teacher Mindfulness–Teacher Professionalism measurement structure; it is addressed openly in the Research Limitations section rather than treated as resolved.

Table 4
Convergent Validity

Construct	Loading Range	AVE	Status
Teacher Mindfulness	0.715–0.920	0.766	Valid
FIT-Choice	> 0.70	0.753	Valid
Teacher Professionalism	0.725–0.929	0.794	Valid

Discriminant Validity

Discriminant validity was tested using the Fornell-Larcker criterion, cross loadings, and the Heterotrait-Monotrait Ratio (HTMT). The results in Table 5 show that the square root of AVE for each construct (diagonal values) exceeds its correlations with other constructs, indicating that all constructs exhibit adequate empirical distinctiveness.

Table 5
Fornell–Larcker Criterion (Discriminant Validity)

Construct	FIT-Choice	Teacher Mindfulness	Teacher Professionalism
FIT-Choice	0.868	–	–
Teacher Mindfulness	0.655	0.875	–
Teacher Professionalism	0.675	0.770	0.891

As a further, more conservative check, the Heterotrait-Monotrait Ratio (HTMT; Henseler et al., 2015) was computed among the three focal constructs. All values fell well below the conservative 0.85 threshold, confirming discriminant validity among Teacher Mindfulness, Teacher Professionalism, and FIT-Choice (Table 5b). HTMT values involving the lower-order dimensions that form Teacher Mindfulness and Teacher Professionalism (e.g., Interpersonal, Intrapersonal, Autonomy, Knowledge Base, Peer Networks) are not reported here, as these dimensions are components of their respective higher-order constructs by construction and are not intended to be empirically distinct from them.

Table 5
b. Heterotrait-Monotrait Ratio (HTMT)

Construct Pair	HTMT
Teacher Mindfulness Teacher Professionalism	0.786
Teacher Mindfulness FIT-Choice	0.666
Teacher Professionalism FIT-Choice	0.680

Construct Reliability

All constructs had Cronbach's Alpha and Composite Reliability values above 0.70, so the instrument was declared reliable, as presented in Table 6.

Table 6
Construct Reliability

Construct	Cronbach's Alpha	Composite Reliability
FIT-Choice	0.992	0.992
Teacher Mindfulness	0.968	0.973
Teacher Professionalism	0.985	0.986

Structural Model Evaluation

Structural model evaluation was conducted to determine the ability of Teacher Mindfulness and Teacher Professionalism to explain Teacher Professionalism and FIT-Choice motivation, respectively, as visualized in Fig. 3.

Coefficient of Determination (R-Square) and Predictive Relevance (Q-Square)

The R-Square value for Teacher Professionalism (0.593) indicates that 59.3% of the variance in Teacher Professionalism is explained by Teacher Mindfulness in this study's model, which falls into the moderate category. The R-Square value for FIT-Choice (0.501) indicates that Teacher Mindfulness and Teacher Professionalism jointly explain 50.1% of its variance, also falling into the moderate category. The blindfolding procedure results show a Q-Square value of 0.463 for Teacher Professionalism and 0.373 for FIT-Choice (both $Q^2 > 0$), indicating that this study's model has adequate predictive relevance for both endogenous constructs. Model fit was additionally assessed via the standardized root mean square residual (SRMR), which was 0.048 for the estimated model well below the conventional 0.08 threshold, indicating a good overall model fit. A table summarizing the R-Square and Q-Square values is presented in Table 7.

Table 7
R-Square and Predictive Relevance (Q-Square) Values

Endogenous Construct	R^2	Q^2	Interpretation
Teacher Professionalism	0.593	0.463	Moderate, adequate predictive relevance
FIT-Choice	0.501	0.373	Moderate, adequate predictive relevance

Hypothesis Testing

The PLS-SEM bootstrapping results (5,000 subsamples), presented in Table 8, show that Teacher Mindfulness has a positive and significant effect on Teacher Professionalism (path coefficient = 0.770; $t = 14.272$; $p < .001$; $f^2 = 1.457$, a large effect size), so H1 is accepted. This finding indicates that the higher a teacher's mindfulness, the higher their level of professionalism. Beyond this primary path, the results also show that Teacher Mindfulness has a positive and significant effect on FIT-Choice motivation (path coefficient = 0.333; $t = 3.213$; $p = 0.001$; $f^2 = 0.090$, a small-to-moderate effect size), so H2 is accepted, and that Teacher Professionalism has a positive and significant effect on FIT-Choice motivation (path coefficient = 0.418; $t = 3.802$; $p < .001$; $f^2 = 0.143$, approaching a moderate effect size), so H3 is accepted. Inner VIF values for the two predictors of FIT-Choice were both 2.46, well below the conservative threshold of 5, indicating that the significance of H2 and H3 is not an artifact of multicollinearity between Teacher Mindfulness and Teacher Professionalism at the structural (inner-model) level in contrast to the outer-model collinearity concern noted for the FIT-Choice indicators themselves (see Measurement

Model Evaluation and Research Limitations). Together, these findings indicate that teachers who are more mindful and more professionally competent also report a stronger motivational orientation toward having chosen the teaching profession, with Teacher Professionalism showing the comparatively larger effect of the two.

Table 8
Hypothesis Testing Results

Hypothesis	Construct Relationship	Path Coefficient	t-statistic	p-value	Decision
H1	Teacher Mindfulness → Teacher Professionalism	0.770	14.272	< .001	Accepted
H2	Teacher Mindfulness → FIT-Choice	0.333	3.213	0.001	Accepted
H3	Teacher Professionalism → FIT-Choice	0.418	3.802	< .001	Accepted

DISCUSSION

The Effect of Teacher Mindfulness on Teacher Professionalism

The hypothesis testing results show that Teacher Mindfulness has a positive and significant effect on Teacher Professionalism ($\beta = 0.770$; $t = 14.272$; $p < 0.001$), with the model explaining 59.3% of the variance in Teacher Professionalism ($R^2 = 0.593$) and demonstrating adequate predictive relevance ($Q^2 = 0.463$). This finding explicitly addresses the study's aim regarding the relationship between teacher mindfulness and teacher professionalism in the context of teacher professional education (PPG) in Indonesia: teachers with higher levels of mindfulness tend to exhibit higher professionalism, operationalized in this study as awareness in managing teaching concentration, attending to instructional stages, listening to students' complaints, engaging in self-reflection, attending to students' ideas, and managing emotions wisely.

The strength of the relationship found in this study ($\beta = 0.770$; $t = 14.272$; $p < .001$) is considerably larger than comparable path coefficients reported in similar PLS-SEM studies. Among EFL teachers in Iran, for instance, the path from mindfulness to professional development was also positive and significant, but with a substantially smaller effect ($\beta = 0.462$; $t = 5.399$; $p < .001$; Weisi & Salari, 2024), where mindfulness functioned as a partial mediator between reflective practice and professional development rather than as the direct, unmediated predictor tested in the present model. A similar positive direction, though without a directly comparable standardized path coefficient for the mindfulness–outcome link, was reported among lecturers in China, where teacher mindfulness was positively related to teaching quality, which in turn mediated student engagement (Wang, 2024). Beyond confirming that the direction of the mindfulness-professionalism relationship replicates across different cultural contexts and model

structures, the numerical comparison with Weisi and Salari (2024) suggests that the direct pathway tested in the present study may capture a larger share of the total mindfulness-professionalism association than pathways that pass through an intervening reflective-practice construct a pattern consistent with the basic premise of classical mindfulness theory, which views mindfulness as a trainable competency that shapes professional behavior directly, rather than merely as a static innate trait (Kabat-Zinn, 1990, 2003; Bishop et al., 2004; Brown & Ryan, 2003).

Interpretation within the Theoretical Framework: Possible Underlying Mechanisms

The magnitude of the path coefficient in this study can be interpreted through several complementary theoretical frameworks. First, the Prosocial Classroom Model (Jennings & Greenberg, 2009) argues that teachers' social-emotional competence and mindfulness capacity influence classroom climate and the quality of teacher-student relationships. Within this framework, this study's findings can be interpreted as an indication that teachers who are consciously present and non-judgmental toward their teaching experience (the Intention–Attention–Attitude components; Shapiro et al., 2006) are better able to maintain focus on instructional stages, respond reflectively to students' complaints, and manage their emotions wisely all of which are indicators of Teacher Professionalism measured in this study.

Second, from the perspective of Conservation of Resources Theory (Hobfoll, 1989), mindfulness can be viewed as a personal psychological resource that protects teachers from resource depletion caused by job demands. Teachers with higher mindfulness are assumed to possess larger reserves of affective-regulation resources for coping with daily classroom stressors, making them better able to sustain the quality of their professional performance. This pattern aligns with findings that mindfulness in teaching affects teachers' job satisfaction indirectly through increased positive affect and decreased negative affect (Barata-Gonçalves et al., 2025).

Third, teacher self-efficacy (Bandura, 1997) and academic optimism (Hoy et al., 2006) offer a cognitive-mediation explanation: mindfulness is assumed to reduce teachers' emotional reactivity to classroom failures or challenges, making such experiences less likely to erode the mastery experiences that are the primary source of self-efficacy, which in turn is reflected in higher-quality professional performance. A similar cognitive-mediation pattern has been reported for the mediating role of psychological capital between mindfulness in teaching and teacher morale among kindergarten teachers in China (Zhou & Jiang, 2024), and for the mediating role of emotion regulation and interpersonal mindfulness in the relationship between teacher self-efficacy and burnout (Çetin et al., 2024). This study has not statistically tested these mediators, so the mechanism underlying the direct Teacher Mindfulness–Teacher Professionalism relationship found here remains a proximal-level explanation; testing a mediation model is one of the recommendations for future research.

Alignment with the Research Gap and the Indonesian Context

This finding provides one of the first quantitative empirical pieces of evidence on the relationship between teacher mindfulness and teacher professionalism in the context of teacher professional education (PPG) in Indonesia a context previously identified as still very limited in research and, to date, dominated by studies among pre-service English teachers (Hermana et al., 2021). The strong and significant path coefficient found in this study contributes to filling the gap identified by a large-scale review of 340 articles, which noted that the most striking distinguishing feature between the professionalism profile of Indonesian teachers and that of other countries is the absence of mindfulness as an explicit target for teacher professionalism development (Haenilah et al., 2022). In other words, these results provide empirical justification for the argument that mindfulness should be considered an explicit target of teacher professional development programs in Indonesia, including within the in-service PPG curriculum.

Viewed through the lens of Ecological Systems Theory (Bronfenbrenner, 1979), the magnitude of the path coefficient found within the Indonesian in-service PPG context a cultural context generally characterized as more collectivistic than the North American and European contexts in which most of the initial teacher mindfulness evidence was generated indicates that the strength of the mindfulness-professionalism relationship does not depend solely on individualistic versus collectivistic cultural orientation. Nevertheless, this study did not directly test meso-level (school support) or macro-level (national education policy) contextual factors that, according to this framework, also moderate the strength of this relationship, so generalize the findings across other levels and school contexts in Indonesia with caution.

As an additional note, the paradigmatic debate between individually oriented (self-care) and collectively oriented (collective care) mindfulness approaches, proposed as a direction for reforming K-12 teacher mindfulness training (Romano et al., 2025), cannot be directly addressed by this study, because the Teacher Mindfulness instrument used (adapted from the Intention-Attention-Attitude framework; Shapiro et al., 2006) is oriented toward teachers' individual experience and does not measure the collective/relational dimension of mindfulness. This is one conceptual limitation that must be taken into account when interpreting this study's findings more broadly.

The Effect of Teacher Mindfulness and Teacher Professionalism on FIT-Choice Motivation

Beyond the primary Teacher Mindfulness–Teacher Professionalism path, this study's structural model also revealed that Teacher Mindfulness ($\beta = 0.333$; $t = 3.213$; $p = .001$) and Teacher Professionalism ($\beta = 0.418$; $t = 3.802$; $p < .001$) each positively and significantly predicted teachers' FIT-Choice motivation. These findings extend the novelty of this study beyond a single bivariate relationship: rather than treating FIT-Choice merely as a validated but untested instrument, the results indicate that teachers who are more mindful and more professionally competent also report a stronger motivational orientation toward the teaching profession. Interpreted through Self-Determination Theory (Deci & Ryan, 1985, 2000), this pattern is consistent with the premise that mindfulness reduces automatic reactivity to external

pressure, thereby creating room for teachers to act more autonomously in ways that reinforce their sense of intrinsic engagement with the profession they have chosen. That the effect of Teacher Professionalism on FIT-Choice (β = 0.418) is somewhat larger than that of Teacher Mindfulness (β = 0.333) further suggests that professional competence may anchor teachers' occupational motivation more strongly than mindful awareness alone, an interpretation that merits closer theoretical attention in future research (see Recommendations for Future Research).

It is important to note, however, that because FIT-Choice items ask teachers to retrospectively rate the factors that originally influenced their decision to enter the teaching profession, the cross-sectional association reported here should not be read as evidence that current mindfulness or professionalism levels caused that original career choice. A more conservative and theoretically defensible reading is that more mindful and more professionally competent teachers currently recall or endorse their original motivations for entering teaching more strongly a reinforcement or reinterpretation pattern rather than a temporally backward causal one. This distinction is elaborated further in the Research Limitations section below.

Research Limitations

Several limitations of this study must be openly acknowledged. First, the sampling technique used was convenience sampling (voluntary response sampling) with a response rate of approximately 24.8% (250 of 1,010 population members), which may introduce self-selection bias for example, a tendency for more reflective teachers or those with more free time to participate more readily and limits the generalizability of the findings to the entire population of in-service PPG students at the Faculty of Teacher Training and Education (FKIP) of the university involved, let alone to the Indonesian teacher population in general.

Second, the research design is a non-experimental, cross-sectional correlational survey, so the path coefficient found cannot be interpreted as evidence of a causal relationship between Teacher Mindfulness and Teacher Professionalism; the possibility of a reciprocal relationship (e.g., more professional teachers also being better able to sustain a mindful state) or the influence of an unmeasured third variable cannot be ruled out.

Third, all data were collected via self-report questionnaires, making them susceptible to social desirability bias and common method bias, particularly because both predictor and criterion variables were measured using the same instrument and data source (the teachers themselves) at a single point in time.

Fourth, although FIT-Choice was modeled here as an outcome jointly predicted by Teacher Mindfulness and Teacher Professionalism (H2 and H3), its items retrospectively measure factors that influenced teachers' original decision to enter the profession; consequently, the significant paths to FIT-Choice are best interpreted as evidence of association between teachers' current psychological standing and their retrospective endorsement of career-choice motivations, not as evidence that mindfulness or professionalism temporally preceded and caused that original decision.

Fifth, this study did not obtain a formal ethical clearance number prior to data collection, relying instead on the procedural safeguards described in the Ethical Considerations and Replicability section (voluntary participation, implicit informed consent, anonymity, confidentiality, right of withdrawal, and absence of experimental intervention); a retrospective clearance application has been submitted, and the resulting number will be reported once issued.

Sixth, the outer-model collinearity diagnostics revealed a meaningful multicollinearity concern among the indicators of the FIT-Choice construct: while indicators of the Teacher Mindfulness and Teacher Professionalism dimensions showed acceptable VIF values (1.9–5.0), the majority of items in FIT-Choice's Motivation dimension, and several items in its Perceptions dimension, exceeded the conservative VIF threshold of 5 (Hair et al., 2019), with values as high as 40.7. This suggests substantial item redundancy within the FIT-Choice instrument as adapted for this sample, and indicates that the H2 and H3 path coefficients involving FIT-Choice, although statistically significant and unaffected by inner-model collinearity (Inner VIF = 2.46 for both predictors), should be interpreted with caution pending a re-examination and likely reduction of redundant Motivation and Perceptions items in future use of this instrument.

Theoretical and Practical Implications

Theoretical implications. This study's findings strengthen the relevance of mindfulness as an important psychological predictor of teacher professionalism outside the cultural context in which most of the underlying theory originated, and provide preliminary evidence supporting the positioning of mindfulness alongside other pedagogical and professional competencies that have thus far been explicit targets of teacher professionalism development in Indonesia (Roeser et al., 2012). The additional finding that both Teacher Mindfulness and Teacher Professionalism significantly predict FIT-Choice motivation further extends this contribution by linking the mindfulness literature to the teacher career-choice motivation literature two bodies of research that, to date, have largely developed independently of one another.

Practical implications. For organizers of the Teacher Professional Education Program (PPG) and education policymakers, this finding suggests the potential benefit of integrating mindfulness-based training (for example, a brief module based on the Intention-Attention-Attitude framework) into continuous professional development curricula for in-service teachers, as a complementary, not a replacement strategy alongside existing pedagogical and professional competency training. The additional association with FIT-Choice motivation suggests that such training may also have a secondary benefit of reinforcing teachers' sense of occupational purpose, which could be relevant to teacher retention efforts. However, given the correlational nature of this study, claims about the effectiveness of mindfulness training interventions for improving teacher professionalism or retention require further testing through experimental or quasi-experimental designs before being recommended as policy.

Recommendations for Future Research

Based on the findings and limitations above, several specific directions for future research can be recommended. First, future research should use a longitudinal design to establish the temporal ordering between mindfulness/professionalism and FIT-Choice motivation, and should decompose the FIT-Choice outcome into its Expectancy–Value Theory-based sub-dimensions (Watt & Richardson, 2007) for example, examining whether Teacher Mindfulness and Teacher Professionalism relate more strongly to altruistic-social motivation than to personal utility motivation among in-service PPG teachers in Indonesia.

Second, future research should test the mediating roles of teacher self-efficacy, emotion regulation/psychological capital, and autonomous motivation (consistent with Self-Determination Theory; Deci & Ryan, 1985, 2000) in explaining the mechanism underlying the relationship between Teacher Mindfulness and Teacher Professionalism, given that this study tested only the direct relationship without mediators. Third, longitudinal or experimental designs (for example, a pre-post evaluation of a mindfulness training program with a control group) are needed to strengthen causal claims that this study's cross-sectional correlational design cannot test.

Fourth, future research should use probability sampling techniques (for example, stratified random sampling based on teaching level and region) to strengthen the generalizability of findings to the broader Indonesian teacher population, given the limitations of convenience sampling in this study, and should include a more in-depth descriptive analysis of teacher mindfulness by gender and other demographic variables. Fifth, mindfulness instruments measuring the collective/relational dimension (collective care), not only the individual dimension as in the Intention-Attention-Attitude framework used in this study, need to be developed and tested in the Indonesian context to address the individual-collective paradigmatic debate raised by Romano et al. (2025).

Sixth, more systematic integration of quantitative survey data and qualitative interview data through an explanatory sequential mixed-methods design would enrich understanding of how teachers make sense of and practice mindfulness in their daily teaching, while also helping to explain the quantitative findings in a more contextualized manner.

Seventh, given the collinearity concern identified in the Motivation and Perceptions dimensions of the FIT-Choice instrument (see Research Limitations), future research should conduct an item-purification analysis for example, using outer-weight significance and modification indices to identify and remove redundant items before re-estimating the H2 and H3 paths with a psychometrically leaner FIT-Choice measure.

CONCLUSION

This study aimed to examine the relationship between teacher mindfulness and teacher professionalism within the context of the in-service Teacher Professional Education Program (PPG) in Indonesia, and the PLS-SEM analysis results show that Teacher Mindfulness has a positive and significant effect on Teacher Professionalism ($\beta = 0.770$; $t = 14.272$; $p < .001$), with the model explaining 59.3% of the variance

in Teacher Professionalism ($R^2 = 0.593$) and demonstrating adequate predictive relevance ($Q^2 = 0.463$), so H1 is accepted. Beyond this primary path, Teacher Mindfulness ($\beta = 0.333$; $t = 3.213$; $p = .001$) and Teacher Professionalism ($\beta = 0.418$; $t = 3.802$; $p < .001$) each also positively and significantly predicted teachers' FIT-Choice motivation, so H2 and H3 are accepted as well. Together, these findings confirm that teachers with higher levels of mindfulness, reflected in their ability to maintain teaching concentration, follow instructional stages appropriately, listen to students' complaints and ideas, engage in self-reflection, and manage emotions wisely, tend to exhibit higher levels of professionalism, and that both qualities are in turn associated with a stronger motivational orientation toward the teaching profession.

Theoretically, these results strengthen the relevance of mindfulness as an important psychological predictor of teacher professionalism outside the cultural context in which most of the underlying theory originated, while also filling a literature gap regarding the absence of mindfulness as an explicit target for teacher professionalism development in Indonesia. Practically, these findings indicate the potential benefit of integrating mindfulness-based training into continuous professional development curricula for in-service teachers as a complementary strategy to existing pedagogical and professional competency development. Nevertheless, given the cross-sectional correlational design and the fact that all data were collected via self-report questionnaires, conclusions regarding the causal direction of this relationship must be interpreted with caution, and further testing through longitudinal, experimental, or quasi-experimental designs is strongly recommended to strengthen causal evidence and to test the mediating mechanisms underlying this relationship.

Declarations

DECLARATION OF GENERATIVE AI USE

In preparing this article, the authors used Claude.ai (Anthropic) to assist with translation and language refinement. Claude.ai is not listed as an author of this article, and full responsibility for the content, data accuracy, interpretation, and conclusions presented rests with the human authors.

DECLARATION OF COMPETING INTEREST

The authors declare that there is no conflict of interest in the conduct of this research or the writing of this article.

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Figures

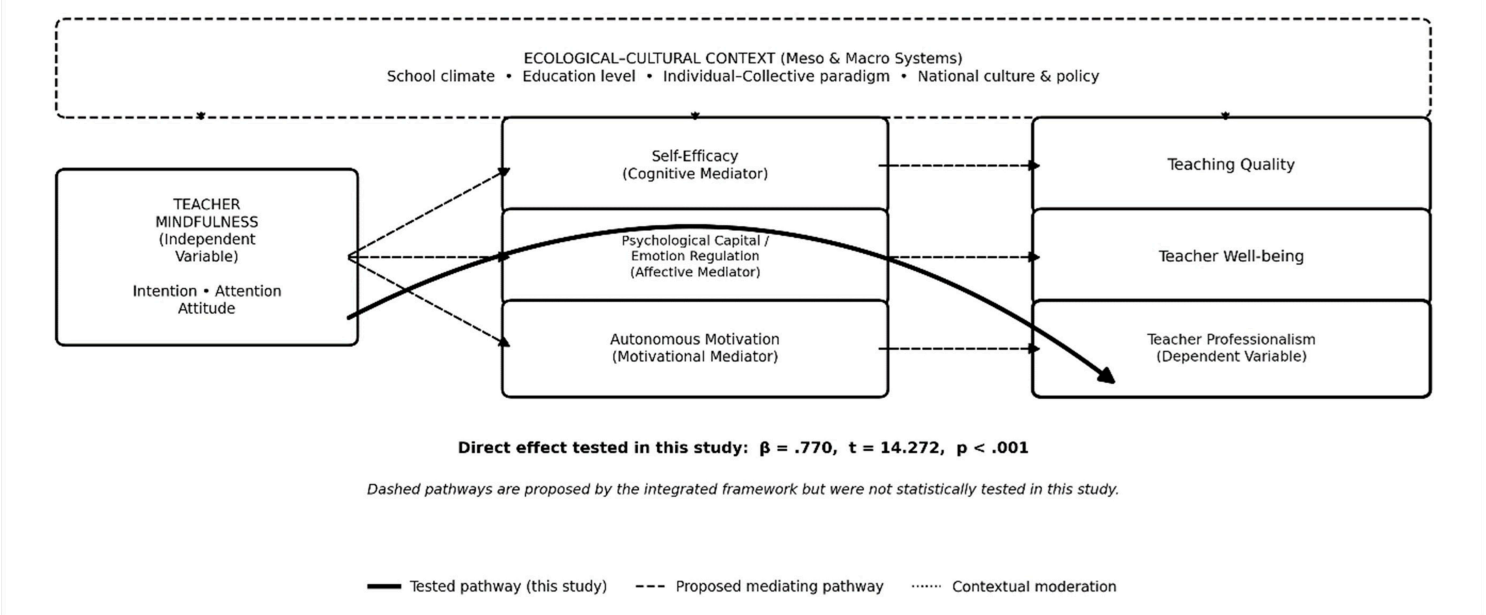


Figure 1

Integrated conceptual framework of the relationship between teacher mindfulness and professionalism, well-being, and teaching-quality outcomes

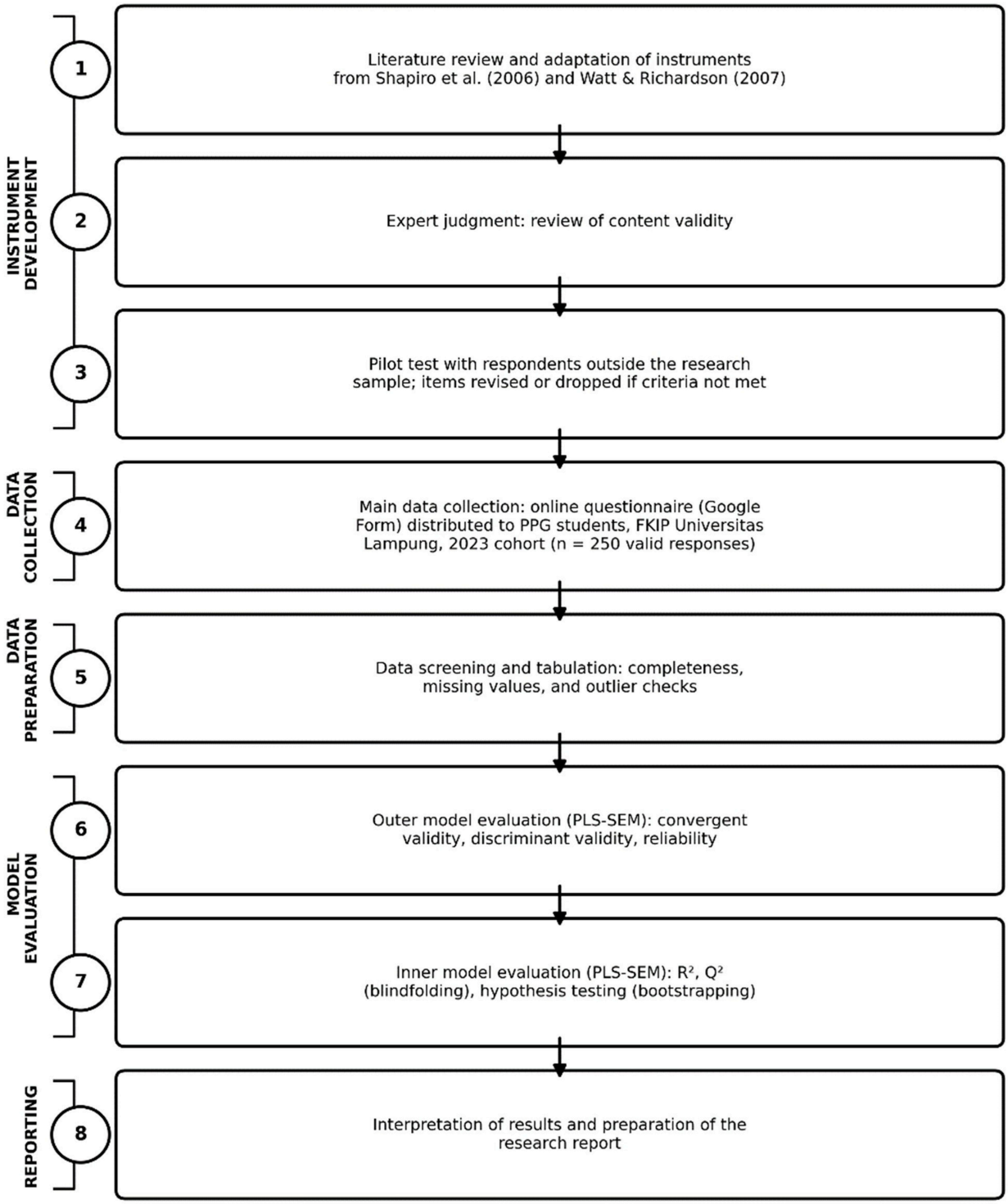


Figure 2

Research procedure, from instrument development to report writing

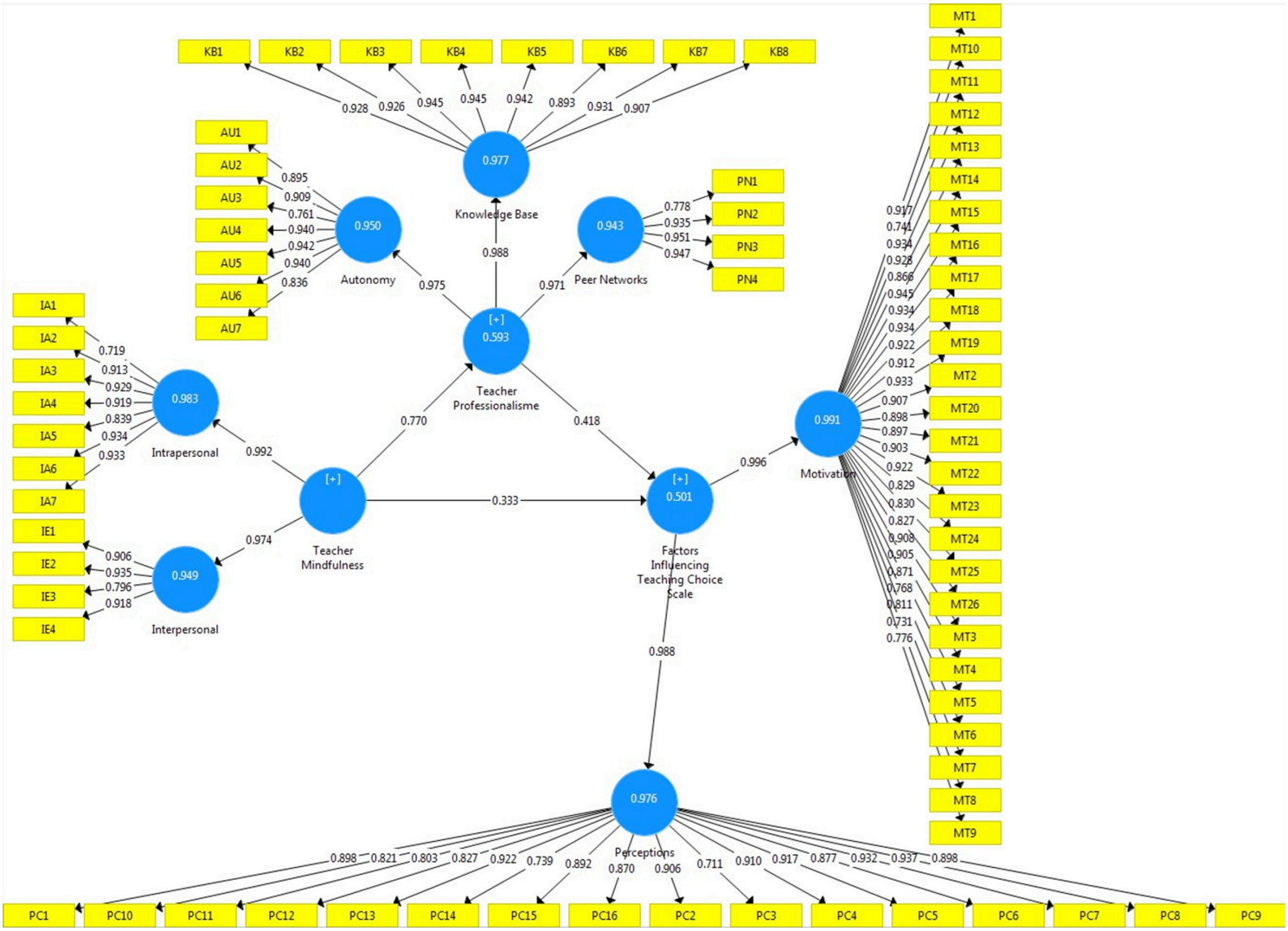


Figure 3

PLS-SEM structural model results for the relationships among Teacher Mindfulness, Teacher Professionalism, and FIT-Choice motivation

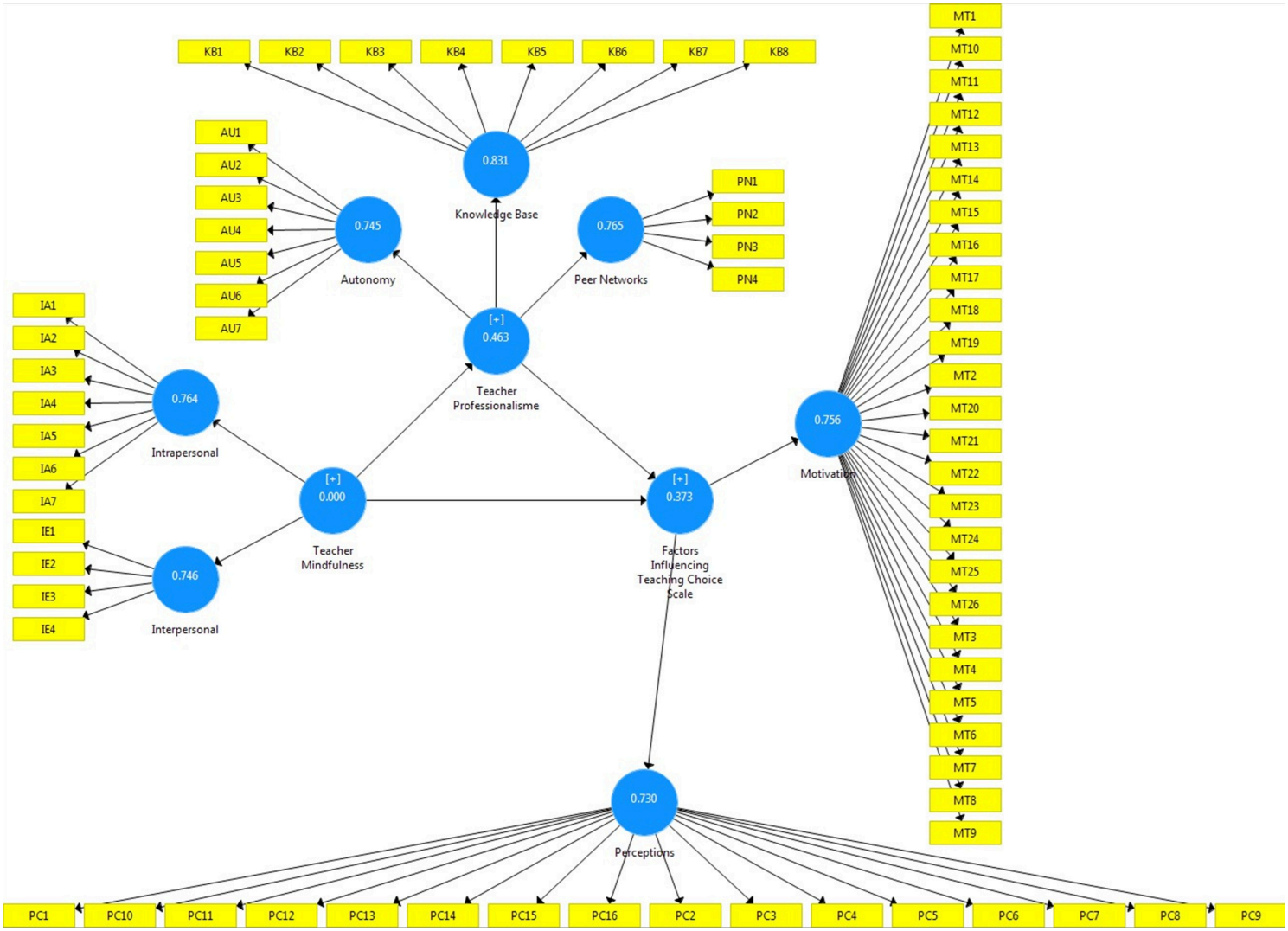


Figure 4

PLS-SEM blindfolding procedure results (predictive relevance, Q^2) for the Teacher Professionalism and FIT-Choice constructs

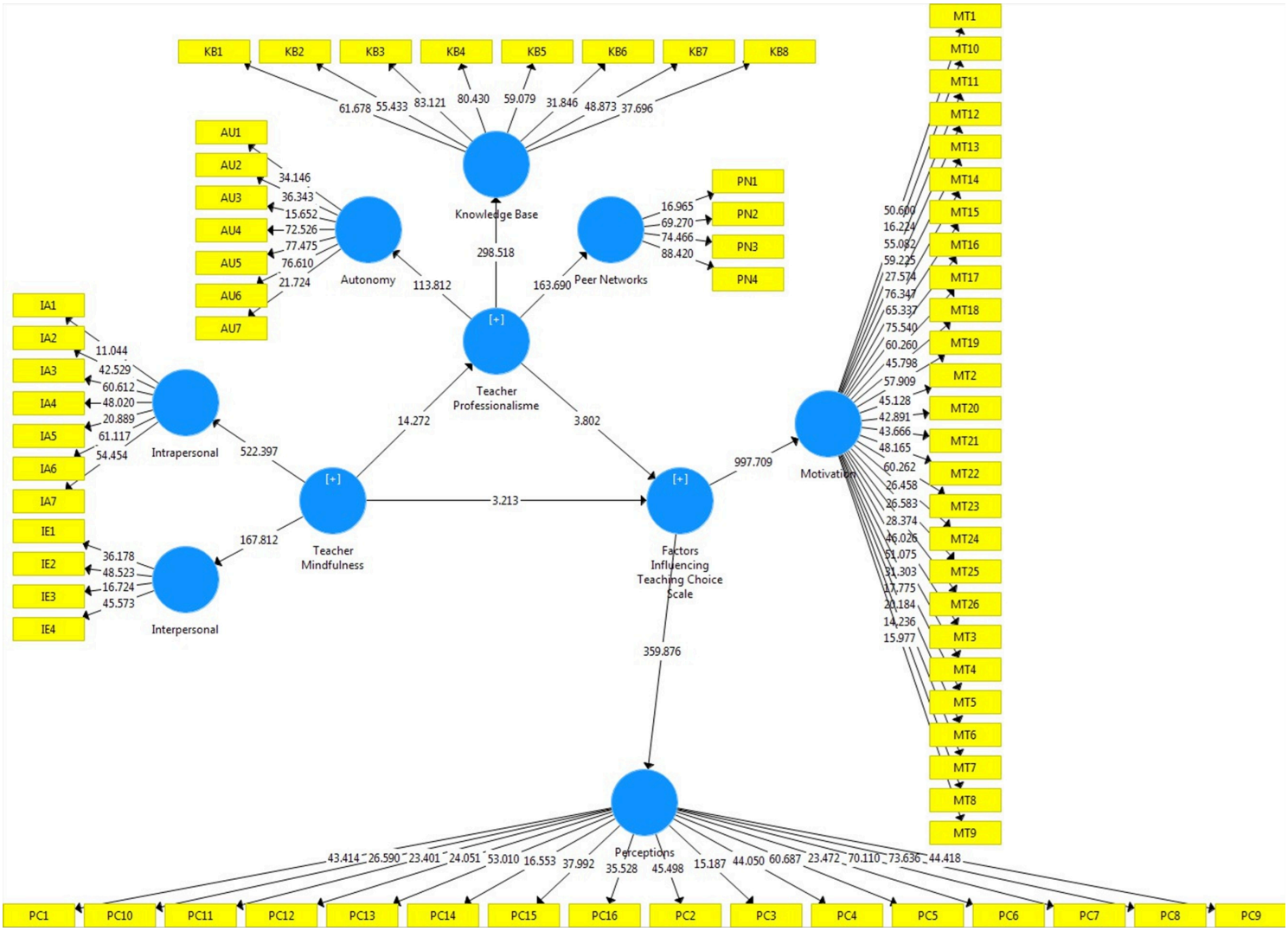


Figure 5

PLS-SEM bootstrapping procedure results (hypothesis testing, t-statistics) for the paths among Teacher Mindfulness, Teacher Professionalism, and FIT-Choice