Islamic Education Teachers' Attitudes towards Qur'anic Literacy Instruction: Instrument Development and Initial Validation

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ABSTRACT

Instruments specifically designed to assess Islamic Education teachers' attitudes towards Qur'anic literacy instruction remain limited, despite the importance of teacher attitudes in supporting compassionate, responsive, and learner-appropriate instruction. This study aimed to develop and validate the Islamic Education Teachers' Attitudes towards Qur'anic Literacy Instruction (SGPI) instrument for use in primary schools. Instrument development involved construct conceptualisation based on the affective, behavioural, and cognitive components of attitude, a review of relevant literature, item generation, and qualitative expert evaluation. An initial pool of 15 items was administered to a pilot sample of 135 Islamic Education teachers in Sabah, Malaysia. Principal component analysis with Varimax rotation resulted in the retention of 12 items across two preliminary components, labelled Positive-Caring and Adaptive. The final pilot solution explained 63.724% of the total variance and demonstrated satisfactory factorability (KMO = .906; Bartlett's test, $\chi^2(66) = 880.946$, $p < .001$). The retained 12-item instrument was subsequently evaluated using PLS-SEM with an independent main sample of 400 Islamic Education teachers. Although the pilot-derived components were conceptually interpretable, the main-sample analysis indicated insufficient discriminant validity between Positive-Caring and Adaptive (HTMT = 1.003, 95% CI [.975, 1.029]). Accordingly, the 12 items were evaluated as indicators of an overarching SGPI construct. This specification demonstrated satisfactory indicator reliability, with outer loadings ranging from .728 to .866, high internal consistency (Cronbach's $\alpha = .955$, $\rho A = .957$, $\rho C = .960$), and convergent validity (AVE = .669). SGPI was empirically distinguishable from Qur'anic Literacy Teaching Skills (KMLAQ), with HTMT = .794 and a 95% bootstrap confidence interval of [.750, .834]. SGPI was also positively associated with KMLAQ ($\beta = .763$, $t = 36.470$, $p < .001$), with the model explaining 58.2% of the variance in KMLAQ. These findings provide preliminary support for SGPI as an overarching 12-item measure of Islamic Education teachers' attitudes towards Qur'anic literacy instruction, while further cross-validation across different teacher populations and educational contexts is recommended.

Keywords: Teacher attitudes; Islamic Education teachers; Qur'anic literacy; instrument development; construct validity.

INTRODUCTION

Qur'anic literacy instruction in primary schools provides an essential foundation for Muslim pupils' religious knowledge, understanding, and practice. In primary education, Qur'anic literacy extends beyond recognising *Hijaiyyah* letters or decoding Qur'anic text. It involves guiding pupils to read accurately, develop confidence, and establish a positive relationship with the Qur'an. The success of this process depends not only on instructional methods, learning materials, and allocated teaching time, but also on the teachers who shape pupils' learning experiences. Islamic Education teachers (IETs) teach pupils with diverse backgrounds, prior learning experiences, and levels of reading proficiency. Some pupils progress rapidly, whereas others require repeated practice, individual guidance, and a longer period of instruction. Teachers therefore need more than content knowledge and pedagogical skills; they also require patience, care, commitment, and a willingness to respond appropriately to pupils' learning needs. In this study, IET attitudes refer to teachers' beliefs, feelings, and

behavioural tendencies concerning their responsibility for teaching Qur'anic literacy. Qur'anic literacy refers to pupils' foundational ability to recognise and distinguish *Hijaiyyah* letters and to read Qur'anic words or verses with pronunciation and fluency appropriate to their level of learning. It serves as the context and object of teacher attitude in this study rather than as a pupil outcome measured directly.

Recent studies have examined IETs' readiness for online teaching, their acceptance of the Iqra' method, and their efforts to help pupils overcome difficulties in learning to read and write the Qur'an (Rerah & Mohamed, 2021; Nurseha & Saputra, 2023; Rasidi & Ismail, 2024). Collectively, these studies demonstrate that teachers' knowledge, readiness, evaluations, and responses are relevant to instructional practice. They nevertheless focus on specific teaching conditions, instructional methods, or pedagogical efforts rather than on a validated measure of IETs' broader attitudes towards Qur'anic literacy instruction. Evidence from the wider educational literature also suggests that teacher support and responsiveness matter for literacy learning. Teachers must monitor pupils' progress, identify their instructional needs, and adjust materials, tasks, and teaching strategies accordingly (van Geel et al., 2023). Teacher support, adaptive instruction, stimulation of reading engagement, and teacher enthusiasm have also been positively associated with reading performance across different educational contexts (Ho & Gan, 2023). Within Islamic education, these pedagogical responsibilities are accompanied by moral qualities such as sincerity, compassion, patience, justice, wisdom, and exemplary conduct (Mohamed et al., 2016).

Despite the importance of these qualities, general teacher-attitude instruments may not adequately capture the distinctive object and context of Qur'anic literacy instruction. Measures developed for attitudes towards the teaching profession, technology, curriculum reform, or a particular method may omit teachers' beliefs about the aims of Qur'anic education, their emotional responses when working with struggling pupils, and their inclination to sustain and adjust instructional support. A context-specific instrument is therefore required to represent the construct and target population appropriately. Accordingly, this study aims to develop and validate an instrument for measuring IETs' attitudes towards Qur'anic literacy instruction in primary schools. Specifically, it seeks to: (i) develop items grounded in attitude theory and the Islamic education literature; (ii) explore the instrument's empirical structure using pilot-study data; and (iii) assess its reliability, convergent validity, and discriminant validity using data from a main sample of primary-school IETs in Sabah, Malaysia.

REVIEW OF LITERATURE

Attitude as a Context-Specific Construct

Attitude is a psychological construct that describes how an individual evaluates an object, person, idea, situation, or practice. Fishbein and Ajzen (1975) conceptualised attitude as a learned predisposition to respond consistently to an object, whereas Eagly and Chaiken (1993) defined it as a psychological tendency expressed through an evaluation with some degree of favour or disfavour. These seminal definitions indicate that attitude must be interpreted in relation to a clearly specified object. In teaching contexts, the attitude object may be the profession, a curriculum, technology, an instructional approach, a group of pupils, or a particular subject area. Consequently, IETs' attitudes towards online teaching or the Iqra' method cannot be assumed to represent their attitudes towards the broader responsibility of Qur'anic literacy instruction. An attitude instrument should not be transferred across contexts without reconsidering its construct definition, item content, population, and intended interpretation.

Attitude is commonly represented through cognitive, affective, and behavioural components. The cognitive component concerns beliefs, knowledge, and mental evaluations; the affective component concerns emotions and feelings; and the behavioural component concerns a tendency or readiness to act. In Qur'anic literacy instruction, cognition may include beliefs about the religious and educational purposes of teaching the Qur'an. Affect may include patience, composure, and satisfaction when pupils make progress, while behavioural tendencies may include commitment, reflection, continued learning, and a readiness to assist pupils who experience difficulty. The Theory of Planned Behaviour further clarifies that attitude towards a behaviour contributes to behavioural intention alongside subjective norms and perceived behavioural control (Ajzen, 1991). Attitude does not automatically produce behaviour because action also depends on opportunities, resources, capabilities, and perceived control. In the present study, the cognitive, affective, and behavioural

components provide a conceptual framework for item generation rather than a predetermined factor structure. The instrument's dimensionality is therefore treated as an empirical question.

Attitudes of Islamic Education Teachers

Islamic education positions teachers not only as transmitters of subject matter but also as guides in pupils' intellectual, spiritual, and moral development. IET attitudes must therefore be understood in relation to the educational trust they assume, their relationships with pupils, and the values that guide their instructional responses. Mohamed et al. (2016) identified sincerity, compassion, patience, justice, wisdom, and exemplary behaviour as important aspects of teachers' moral conduct in Islamic Education. These qualities serve a pedagogical purpose because they shape how teachers advise, correct, and guide pupils. This function is particularly relevant to Qur'anic literacy instruction, where learning requires repeated practice and continuous correction of pronunciation. Harsh responses may cause less proficient pupils to feel embarrassed, fear making mistakes, or disengage from learning. Calm and constructive guidance, by contrast, can support persistence and confidence.

Islamic moral values should not be treated merely as abstract ideals. They may be expressed through observable instructional responses, such as allowing a pupil to repeat a reading, correcting mistakes without humiliation, recognising incremental progress, and providing additional assistance. Nevertheless, such practices are not equivalent to attitude itself. They represent possible manifestations of teachers' underlying beliefs, feelings, and behavioural tendencies.

Empirical Research on IETs and Qur'anic Instruction

Empirical studies involving IETs have generally examined attitude in relation to a specific instructional condition or have documented teachers' pedagogical actions. Rerah and Mohamed (2021), for example, found that IETs reported high knowledge but moderate skills and attitudes regarding readiness for online teaching. Their findings demonstrate that knowledge, skills, and attitudes are analytically distinct and that extensive knowledge does not necessarily correspond to an equally positive orientation or readiness to act. In the context of Qur'anic instruction, Nurseha and Saputra (2023) described teachers' use of guidance, practice, motivation, and strategies tailored to pupils' reading and writing difficulties. Rasidi and Ismail (2024) reviewed IETs' acceptance of the Iqra' method and highlighted the relevance of knowledge, experience, readiness, and institutional support. These studies contribute evidence about teachers' actions and acceptance of a specific method, but neither construct is equivalent to an overarching attitude towards Qur'anic literacy instruction.

This distinction is important for measurement. Knowledge concerns what teachers understand; skills concern what they can perform; acceptance concerns their evaluation of a specific method; and reported practices concern actions already undertaken. Attitude towards Qur'anic literacy instruction concerns teachers' overall evaluation of and orientation towards their instructional responsibility. Existing instruments developed for adjacent constructs cannot therefore be presumed to measure the present construct without appropriate validation.

Teacher Support and Responsive Instruction

Qur'anic literacy classrooms are likely to include pupils with different levels of prior knowledge, fluency, confidence, and need for repetition. Responsive instruction requires teachers to identify these differences and use the resulting information to guide their decisions. van Geel et al. (2023) explain that adapting instruction involves establishing appropriate learning goals, monitoring progress, diagnosing instructional needs, and modifying materials, tasks, and methods accordingly. The relevance of such responsiveness to literacy is supported by Ho and Gan (2023), who analysed PISA 2018 data from ten high-performing regions. Teacher support, adaptive instruction, stimulation of reading engagement, and teacher enthusiasm were positively associated with reading performance. Their measure of adaptive instruction included tailoring lessons to pupils' existing knowledge, providing individual help, and restructuring a lesson when pupils experienced difficulty.

These findings concern general reading literacy and cannot be transferred directly to Qur'anic reading. They nevertheless support the broader proposition that teacher support and instructional responsiveness are relevant to literacy learning. In this study, these ideas informed the conceptual coverage of the item pool but were not designated in advance as separate dimensions. Any factor labels were assigned only after the pilot data had revealed the empirical grouping of items.

The Importance of Teacher Support and Instructional Adaptation

Pupils do not develop reading proficiency at the same rate. Teachers must therefore identify pupils' current levels and determine appropriate courses of action. van Geel et al. (2023) explain that adapting instruction requires teachers to establish appropriate goals, monitor progress, identify learning needs, and modify materials, tasks, and methods on the basis of the available evidence. Such adaptation also requires a safe, motivating, and respectful learning environment. Pupils are more likely to reveal their weaknesses or ask for help when they do not fear punishment or humiliation. Emotional support and teachers' pedagogical responses should therefore not be treated as entirely separate aspects of instruction. The importance of teachers' responses is supported by Ho and Gan (2023), who analysed PISA 2018 data from ten high-performing regions. Their study found that teacher support, adaptive instruction, stimulation of reading engagement, and teacher enthusiasm were positively associated with reading performance. Adaptive instruction was operationalised through practices such as tailoring lessons to the class's knowledge and needs, providing individual assistance, and restructuring lessons when pupils encountered difficulty.

Although Ho and Gan's (2023) findings concern general reading literacy and cannot be generalised directly to Qur'anic reading, they provide contemporary empirical support for the importance of teacher support and instructional adaptation. These principles are relevant to Qur'anic literacy because pupils require varying degrees of practice, repetition, and correction. Nevertheless, teacher support and instructional adaptation are discussed here as characteristics of teachers' attitudes and responses identified in the literature. They were not predetermined as dimensions of the instrument. Item groupings and factor labels were established only after the empirical structure had emerged from the pilot-study analysis.

Need for a Context-Specific Instrument and Research Gap

The development of a new instrument requires more than the absence of an identical questionnaire. A new measure is justified when existing instruments do not align adequately with the construct definition, attitude object, population, or instructional context. Yusoff et al. (2021) emphasise that questionnaire development should begin with a clear purpose, construct definition, and target population, followed by literature review, item generation, face- and content-validity assessment, pilot testing, and the evaluation of reliability and validity.

The reviewed literature reveals three related gaps. First, studies of IET attitudes have largely focused on a particular technology, teaching condition, or instructional method. Second, research on Qur'anic instruction has described teachers' competencies, strategies, and practices without developing a psychometrically evaluated measure of the attitude underlying those responses. Third, general teacher-attitude measures may not represent the religious, relational, and pedagogical responsibilities associated with Qur'anic literacy instruction. The present study addresses these gaps by developing an instrument specifically for primary-school IETs. Cognitive, affective, and behavioural domains were used to generate an initial pool of 15 items, but the theoretical framework was not imposed as the final measurement structure. Pilot testing and component analysis were used to explore how the items clustered, while the main sample was used to assess the reliability and validity of the resulting measurement model. This procedure allows the final structure to be determined through the integration of theory, item content, and empirical evidence.

METHODOLOGY

Research Design

This study employed a quantitative, cross-sectional survey design to develop and validate an instrument for

measuring Islamic Education teachers' attitudes towards Qur'anic literacy instruction in primary schools. Instrument development was undertaken in sequential stages comprising construct conceptualisation, item generation, expert review, pilot testing, exploratory item-structure assessment, and measurement-model evaluation using an independent main sample. This staged procedure was consistent with the systematic questionnaire-development framework proposed by Yusoff et al. (2021), which emphasises the definition of the construct and target population, generation and refinement of items, expert assessment, pilot testing, and empirical evaluation of reliability and validity. The construct measured by the instrument was Islamic Education teachers' attitude towards Qur'anic literacy instruction. In this study, attitude referred to teachers' evaluative orientation towards teaching pupils to recognise, pronounce, read, and progressively improve their reading of Qur'anic text. The instrument was designed to capture teachers' affective responses, behavioural dispositions, and cognitive beliefs relating to this specific instructional responsibility. Accordingly, the instrument did not directly assess pupils' Qur'anic literacy achievement; rather, Qur'anic literacy instruction constituted the object towards which teachers' attitudes were evaluated.

Construct Conceptualisation and Item Development

The initial item pool was developed from the tripartite model of attitude, comprising affective, behavioural, and cognitive components. These components served as a conceptual framework for ensuring adequate coverage of teachers' emotions, intended or enacted responses, and beliefs concerning Qur'anic literacy instruction. They were used to guide item generation rather than imposed as a predetermined empirical factor structure. This distinction was important because conceptual domains established during item development do not necessarily correspond exactly to the dimensions subsequently identified through empirical analysis. The initial SGPI scale comprised 15 items. The items addressed positive emotional engagement in teaching, patience and emotional regulation when assisting pupils who experienced difficulty, professional commitment, reflective practice, responsiveness to pupils' learning needs, and beliefs about the educational and spiritual purposes of Qur'anic instruction. Both positively and negatively worded statements were initially included. Responses were recorded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A five-point format was selected to provide respondents with a neutral midpoint while maintaining a response structure that was straightforward and consistent across the questionnaire.

Item development was informed by the operational definition of SGPI, the literature on teacher attitudes and Islamic educational practice, and the instructional context of primary-school Qur'anic literacy. Following the recommendation of Yusoff et al. (2021), the items were written to represent the intended construct and population rather than transferring an existing general teacher-attitude scale without contextual modification.

Content Review and Instrument Refinement

The initial instrument was reviewed by university-based experts with relevant expertise in research methodology, Islamic Education, psychology, language, and psychometrics. The review focused on the conceptual relevance of each item, correspondence with the operational definition of SGPI, clarity of expression, linguistic appropriateness, and suitability for Islamic Education teachers working in Malaysian primary schools. Items identified as unclear, overlapping, or insufficiently representative of the construct were revised before pilot administration. The expert-review process provided qualitative evidence of content relevance and item clarity. No numerical Content Validity Index (CVI) is reported because the study employed a qualitative expert-validation procedure rather than a formally calculated item-level or scale-level CVI.

Pilot Testing

Instrument refinement was conducted through three pilot administrations in Sabah, Malaysia. The first pilot involved 30 Qur'anic teachers from Sabah state religious schools. Because of its limited sample size, this stage was used principally to examine preliminary internal consistency and identify wording that required clarification. A second pilot was then conducted with 30 Islamic Education teachers from Ministry of Education primary schools in the Papar district. Feedback and reliability evidence from these two preliminary stages informed further linguistic and item refinement. The third pilot involved 135 Islamic Education teachers from Ministry of

Education primary schools in Papar who had not participated in the second pilot. This sample was used to examine the preliminary empirical structure of the SGPI items. Keeping the second- and third-pilot participants separate reduced the risk that repeated exposure to the same questionnaire would influence the later pilot responses.

Exploratory Assessment of the Item Structure

The third-pilot data were analysed using IBM SPSS Statistics. Sampling adequacy and the factorability of the inter-item correlation matrix were examined using the Kaiser–Meyer–Olkin measure and Bartlett's test of sphericity. The thesis analysis used principal component analysis with orthogonal Varimax rotation as an exploratory data-reduction procedure. Component retention and item refinement were considered using eigenvalues, the interpretability of the solution, the number of salient items defining each component, factor-loading magnitude, and problematic cross-loadings. The initial 15-item solution contained unstable item groupings and cross-loadings. The analysis was therefore repeated after removing items that could not be assigned clearly to a stable component. This iterative process resulted in a 12-item pilot version. The retained items formed two interpretable preliminary clusters, containing nine and three items respectively. The clusters were labelled Positive–Caring and Adaptive only after inspecting the common meanings of their constituent items. These labels were therefore empirical and interpretive descriptions of the pilot solution rather than dimensions specified in advance.

Principal Component Analysis (PCA) with Varimax rotation was employed as an exploratory data-reduction procedure to examine the empirical grouping of the SGPI items. PCA was used to identify interpretable component patterns and to support the refinement of the initial item pool. Internal consistency was examined using Cronbach's alpha for the overall scale and for each preliminary component. Decisions to retain or remove items were not based on internal consistency estimates alone but also considered their conceptual relevance, component loadings, cross-loading patterns, and contribution to an interpretable component structure. This approach ensured that the statistical refinement of the instrument remained aligned with the intended content domain of SGPI.

Main Study Participants and Data Collection

The main validation study was conducted among 400 Islamic Education teachers in government primary schools across Sabah, Malaysia. The target population comprised teachers who were directly involved in teaching Qur'anic literacy, including Qur'anic reading and *Tasmik* activities. Teachers who were not involved in the relevant instructional activities did not meet the inclusion criterion. Participants were recruited across six geographical zones: Southeast, North, West, Sandakan, South, and Interior Sabah. The sampling strategy combined purposive eligibility with geographical allocation. Purposive screening ensured that respondents possessed the instructional experience required by the study, while zonal allocation was used to obtain representation from the geographically diverse primary-school context of Sabah. The achieved sample consisted of 178 teachers from urban schools and 222 from rural schools. Approval to conduct the research was obtained from the relevant Malaysian Ministry of Education and Sabah State Education Department authorities. Questionnaires were distributed through online Google Forms circulated with the assistance of district Islamic Education units and, where necessary, through face-to-face distribution at participating schools. Participation was voluntary, and the responses were treated confidentially.

Main-Sample Measurement-Model Assessment

The main-sample data were analysed using SmartPLS 4. The SGPI indicators were specified reflectively because the items were treated as manifestations of teachers' underlying attitudes towards Qur'anic literacy instruction. The purpose of this stage was to evaluate the measurement properties and empirical structure of the 12-item SGPI instrument in an independent larger sample rather than to repeat the exploratory analysis conducted during the pilot stage. The two-component structure identified during the pilot analysis was initially evaluated by specifying Positive-Caring and Adaptive as related components of SGPI. Indicator reliability, internal consistency reliability, convergent validity, collinearity, and discriminant validity were assessed. Particular

attention was given to discriminant validity between Positive-Caring and Adaptive because the pilot-derived components were conceptually related and required empirical evidence of distinctiveness before they could be interpreted as separate dimensions. Discriminant validity was assessed using the heterotrait-monotrait ratio of correlations (HTMT), supplemented by bootstrap confidence intervals. An HTMT value below .85 was considered a conservative criterion, while values below .90 may be acceptable for conceptually related constructs. Bootstrap confidence intervals were additionally examined to determine whether the upper confidence limit included the value of 1.00. Where the pilot-derived components did not demonstrate sufficient empirical distinctiveness, the retained indicators were subsequently evaluated as manifestations of an overarching SGPI construct. This alternative specification was theoretically defensible because the affective, behavioural, and cognitive domains had originally been used to establish the content domain for item generation rather than imposed as separate empirical dimensions.

For the final overarching SGPI specification, indicator reliability was evaluated using outer loadings, internal consistency using Cronbach's alpha, rho_A, and composite reliability (rho_C), and convergent validity using average variance extracted (AVE). Outer VIF values were examined for indicator collinearity. Discriminant validity between SGPI and the external Qur'anic Literacy Teaching Skills (KMLAQ) construct was assessed using HTMT and its bootstrap confidence interval. Finally, the relationship between SGPI and KMLAQ was examined using bootstrapping to provide evidence of the instrument's association with a theoretically relevant external construct.

Data Quality and Ethical Considerations

Before the main analyses, the dataset was screened for incomplete responses, missing values, outliers, response-pattern anomalies, and distributional characteristics. Only complete and eligible responses were retained for analysis. Although the observed indicators were not normally distributed, PLS-SEM does not require multivariate normality in the same manner as covariance-based structural equation modelling using maximum-likelihood estimation. Nevertheless, non-normality was treated as a characteristic of the data rather than the sole justification for selecting PLS-SEM. The use of PLS-SEM was aligned with the study's objectives of assessing the measurement properties of SGPI and examining its relationship with Qur'anic literacy teaching skills within the broader structural model. Administrative permission was obtained from the relevant authorities, participation was voluntary, and the confidentiality and secure handling of responses were maintained throughout the study. No personally identifying information was collected or reported.

FINDINGS

The findings are organised into three phases. The first phase describes the development of the initial 15 SGPI items based on the theoretical framework and relevant literature. The second phase presents the pilot-study findings from 135 Islamic Education teachers, in which Principal Component Analysis (PCA) with Varimax rotation was used to examine the preliminary empirical structure of the items and refine the instrument. The third phase reports the measurement-model assessment of the retained 12-item SGPI instrument using PLS-SEM with an independent main sample of 400 Islamic Education teachers. Together, these three phases illustrate the systematic progression of SGPI development from theory-informed item generation and exploratory item refinement to the evaluation of its measurement properties in an independent main sample.

Phase 1: Item Development Based on Theory and the Literature Review

The initial 15 items of the Islamic Education Teachers' Attitude (SGPI) Instrument were developed based on the ABC model of attitude, encompassing affective, behavioural, and cognitive components as below:

Table 1. Justification for Item Development and Supporting Literature

Code	Initial Component	Item Indicator	Justification and Integrated Literature Support
S1	Affective	Feeling calm and happy when teaching	Calmness and happiness represent teachers' positive emotional attachment to their teaching responsibilities. This is consistent with Peng et al. (2021), who conceptualised teacher enthusiasm as comprising positive emotional experiences and their behavioural expression in teaching.
S2	Affective	Being patient with pupils who are slow to master the learning content	Patience reflects emotional stability and a willingness to guide pupils who progress at different rates. Al-Zarnuji's educational thought emphasises learners' moral, spiritual, intellectual, and social development (Razali & Mamat, 2024). Teacher empathy also highlights the importance of sensitivity in interactions with pupils (Aldrup et al., 2022).
S3	Affective	Feeling happy when pupils demonstrate improvement	Teachers' happiness in response to pupil progress reflects intrinsic satisfaction and concern for learning outcomes. Teacher enthusiasm is associated with pupils' interest, motivation, and learning-related emotions (Peng et al., 2021).
S4	Affective	Becoming angry quickly when pupils experience difficulty mastering the learning content (R)	This item assesses negative emotional reactions and teachers' ability to regulate anger in challenging instructional situations. Patience and educators' moral character in Islamic education are consistent with research on teacher empathy and the quality of teacher–pupil interactions (Aldrup et al., 2022; Razali & Mamat, 2024).
S5	Affective	Remaining calm and confident while teaching	Calmness and confidence reflect teachers' emotional readiness to manage instruction. The rationale connecting self-confidence with *tawakal* is reinforced by literature on teachers' experience and expression of enthusiasm in teaching (Keller et al., 2018; Peng et al., 2021).
S6	Behavioural	Demonstrating good conduct while teaching	This item assesses the translation of teachers' attitudes into observable conduct and moral behaviour. The concept of *uswah hasanah* positions teachers as role models. Educator modelling is also recognised as an important mechanism for character formation (Alhamuddin et al., 2026; Razali & Mamat, 2024).
S7	Behavioural	Being unconcerned about pupils' weaknesses (R)	This item assesses the presence or absence of caring actions towards pupils experiencing learning difficulties. The values of *Rahmah* and teacher responsibility are reinforced by evidence that teacher empathy is associated with teacher–pupil interactions and pupil outcomes (Aldrup et al., 2022).
S8	Behavioural	Demonstrating full commitment to educating pupils	Commitment is reflected in teachers' dedication, effort, and sense of responsibility. The concepts of *Rahmah* and *amanah* support the inclusion of this item. Teachers' roles as moral and spiritual guides are also emphasised by Razali and Mamat (2024).
S9	Behavioural	Learning from the experiences of other teachers	This item assesses teachers' openness to professional learning and the sharing of pedagogical experiences. Professional learning can improve teachers' knowledge and instructional practices (Ventista & Brown, 2023).
S10	Behavioural	Reflecting on one's teaching	Reflection enables teachers to identify the strengths and weaknesses of their teaching. The concept of *muhasabah al-nafs* is consistent with reflective practice, which involves evaluating teachers' actions, beliefs, and pedagogical decisions for professional development (Li, 2025).
S11	Cognitive	Believing that a teacher's responsibility is to impart knowledge and develop pupils' moral character	This item assesses teachers' beliefs about the comprehensive responsibilities of educators. Islamic Education teachers are not merely transmitters of knowledge but also serve as *Murabbi*, *Mu'Allim*, *Mu'addib*, *Mudarris*, and *Mursyid*. This is consistent with the integrated development of intellectual and moral qualities (Razali & Mamat, 2024).

S12	Cognitive	Believing that Qur'anic instruction is not merely reading practice but also involves the education of the soul	This item assesses teachers' holistic understanding of Qur'anic instruction. The development of a Rabbani generation requires an integrated approach that combines knowledge, values, behaviour, spirituality, and character formation (Baba et al., 2015; Razali & Mamat, 2024).
S13	Cognitive	Believing that Qur'anic instruction is merely a technical skill (R)	This reverse-worded item examines whether teachers restrict Qur'anic instruction to the technical aspects of reading. Disagreement indicates an understanding that Qur'anic instruction also encompasses spiritual, moral, and behavioural development (Baba et al., 2015; Razali & Mamat, 2024).
S14	Cognitive	Believing that Qur'anic instruction enhances pupils' faith and piety	This item assesses teachers' beliefs concerning the spiritual objectives of Qur'anic instruction. Holistic Islamic education connects the acquisition of knowledge with moral character, faith, and piety (Sabilan et al., 2020).
S15	Cognitive	Believing that teachers' positive attitudes influence pupils' interest in learning	This item assesses teachers' beliefs about the influence of their attitudes on pupils' interest. Teacher enthusiasm is associated with pupils' motivation, interest, emotions, and engagement in learning (Peng et al., 2021).

Table 1 shows that the initial SGPI instrument comprised 15 items distributed equally across the three components of the ABC attitude model: affective, behavioural, and cognitive. Five items were developed for each component to ensure balanced conceptual coverage. The affective items assessed teachers' emotions when teaching Qur'anic literacy, including calmness, happiness, patience, confidence, and emotional regulation. The behavioural items focused on observable teaching practices, such as role modelling, concern for pupils' learning difficulties, professional commitment, collaborative learning, and reflective practice. Meanwhile, the cognitive items examined teachers' beliefs regarding their educational responsibilities and the broader moral and spiritual purposes of Qur'anic instruction. The item-development process integrated the psychological conceptualisation of attitude with the principles of Islamic education. Concepts such as *Sabr, Rahmah, Amanah, Tawakkul, Uswah Hasanah,* and *Muhasabah Al-Nafs* provided an Islamic educational foundation for the item content. These concepts were further supported by contemporary literature on teacher emotions, empathy, enthusiasm, professional learning, role modelling, and reflective practice. This integrated approach ensured that the items were theoretically grounded while remaining relevant to the professional responsibilities of Islamic Education teachers. Three items S4, S7, and S13 were reverse-worded to capture negative affective, behavioural, and cognitive orientations, respectively.

Phase 2: Pilot Study and Exploratory Component Analysis

The pilot study involved 135 Islamic Education teachers and was conducted to assess the preliminary reliability and empirical structure of the initial 15-item SGPI instrument. Principal Component Analysis (PCA) with Varimax rotation was performed iteratively to examine the preliminary component structure, identify problematic items, and refine the instrument towards a clearer and more interpretable solution:

Table 2. Results of The Preliminary Reliability and Factorability of the Initial SGPI Instrument (N=135)

Assessment	Result	Interpretation
Number of items	15	All initial SGPI items were assessed.
Cronbach's alpha	.818	Satisfactory preliminary internal consistency
KMO measure of sampling adequacy	.910	Excellent sampling adequacy
Bartlett's test of sphericity	$\chi^2(105) = 1{,}234.760$, $p < .001$	The correlation matrix was suitable for Principal Component Analysis (PCA).

Table 2 presents the preliminary reliability and factorability assessment of the initial 15-item SGPI instrument based on data from 135 teachers. The instrument recorded a Cronbach's alpha coefficient of .818, indicating satisfactory preliminary internal consistency. The Kaiser–Meyer–Olkin (KMO) value of .910 indicated excellent sampling adequacy, while Bartlett's test of sphericity was statistically significant, $\chi^2(105) = 1{,}234.760$, $p < .001$, demonstrating that the inter-item correlation matrix was suitable for further exploratory analysis. Taken together, the KMO and Bartlett's test results supported the suitability of the pilot data for component analysis. Principal Component Analysis (PCA) with Varimax rotation was therefore conducted on the initial 15 SGPI items to examine their preliminary empirical structure and identify potentially problematic items:

Table 3. Rotated Component Matrix for the 15-Item SGPI Instrument (N = 135)

Item	Component 1	Component 2	Component 3	Interpretation and Decision
S12	.863	—	—	Strong loading on Component 1; retained.
S15	.817	—	—	Strong loading on Component 1; retained.
S10	.798	—	—	Strong loading on Component 1; retained.
S11	.783	—	—	Strong loading on Component 1; retained.
S14	.753	—	—	Strong loading on Component 1; retained.
S9	.730	—	—	Strong loading on Component 1; retained.
S8	.688	.484	—	Loaded more strongly on Component 1; retained for subsequent analysis.
S3	.680	—	—	Satisfactory loading on Component 1; retained.
S5	.620	.471	—	Loaded more strongly on Component 1; retained for subsequent analysis.
S6	.604	.577	—	Problematic cross-loading with a difference of only .027 between the two loadings. So, S6 did not demonstrate a clear component association and was therefore removed.
S2	—	.877	—	Strong loading on Component 2; retained temporarily for subsequent analysis.
S1	.503	.697	—	Loaded on Components 1 and 2; provisionally retained and reassessed in the subsequent PCA.
S13	—	—	.806	Strong loading on Component 3; retained.
S7	—	—	.798	Strong loading on Component 3; retained.
S4	—	—	.713	Strong loading on Component 3; retained.

Table 3 presents the results of the initial Principal Component Analysis (PCA) with Varimax rotation, which produced a three-component solution for the 15-item SGPI instrument. Component 1 comprised ten items—S12, S15, S10, S11, S14, S9, S8, S3, S5, and S6—with primary component loadings ranging from .604 to .863. S12 recorded the highest loading (.863), followed by S15 (.817) and S10 (.798). S8 and S5 recorded primary loadings of .688 and .620 on Component 1, respectively, but also displayed secondary loadings of .484 and .471 on Component 2. As their primary loadings remained higher, both items were provisionally retained for reassessment in the subsequent analysis. Component 2 was primarily represented by S2 and S1. S2 demonstrated a strong loading of .877, whereas S1 loaded .697 on Component 2 and .503 on Component 1. Although S1 exhibited cross-loading, it was provisionally retained so that its loading pattern could be reassessed after the removal of the most problematic item. Nevertheless, the presence of only two principal items suggested that Component 2 might not represent a sufficiently stable component at this stage. Component 3 comprised S13, S7, and S4, with loadings of .806, .798, and .713, respectively. All three items demonstrated clear and satisfactory associations with Component 3, supporting their retention. Among the 15 items, S6 displayed the most problematic cross-loading pattern, with loadings of .604 on Component 1 and .577 on Component 2, producing a difference of only .027. The near-equivalent loadings indicated that S6 could not be clearly assigned to either component. Accordingly, S6 was removed, and PCA with Varimax rotation was repeated using the remaining 14

items. All other items were provisionally retained pending further examination in the subsequent analysis, as presented in Table 4:

Table 4. Rotated Component Matrix for the 14-Item SGPI Instrument (N = 135)

Item	Component 1	Component 2	Component 3	Interpretation and Decision
S12	.874	—	—	Strong and clear loading on Component 1; retained.
S15	.827	—	—	Strong and clear loading on Component 1; retained.
S10	.807	—	—	Strong and clear loading on Component 1; retained.
S11	.783	—	—	Strong and clear loading on Component 1; retained.
S14	.768	—	—	Strong and clear loading on Component 1; retained.
S9	.753	—	—	Strong and clear loading on Component 1; retained.
S8	.721	.422	—	Loaded more strongly on Component 1. The difference between the two loadings was .299; therefore, it was retained in Component 1.
S3	.699	—	—	Satisfactory and clear loading on Component 1; retained.
S5	.657	—	—	Satisfactory and clear loading on Component 1; retained.
S2	—	.863	—	Strong loading on Component 2. However, Component 2 was represented by only two items; removed together with S1.
S1	.551	.680	—	Cross-loaded on Components 1 and 2, with a loading difference of only .129. Removed because of its unclear component association and the inadequate definition of Component 2.
S13	—	—	.805	Strong and clear loading on Component 3; retained.
S7	—	—	.802	Strong and clear loading on Component 3; retained.
S4	—	—	.710	Strong and clear loading on Component 3; retained.

Table 4 presents the rotated component matrix for the remaining 14 items. Although the matrix produced a clearer loading pattern than the initial analysis, Component 2 remained inadequately defined because it comprised only two principal items, S2 (.863) and S1 (.680). A component represented by fewer than three well-performing items may be less stable and provide insufficient coverage for meaningful interpretation. Although a two-item component is not necessarily invalid, its retention requires strong theoretical and empirical justification. The interpretability of Component 2 was further weakened by the loading pattern of S1. The item loaded .551 on Component 1 and .680 on Component 2, producing a difference of only .129. This relatively small difference indicated that S1 could not be clearly associated with Component 2. In contrast, Component 3 demonstrated a clearer and more interpretable pattern, comprising S13, S7, and S4 with loadings of .805, .802, and .710, respectively. None of these items displayed substantial secondary loadings in the reported matrix. Component 1 comprised nine items—S12, S15, S10, S11, S14, S9, S8, S3, and S5—with primary component loadings ranging from .657 to .874. Although S8 recorded a secondary loading of .422 on Component 2, its primary loading on Component 1 was .721, producing a difference of .299. S8 was therefore retained because it demonstrated a clearer association with Component 1. Overall, Component 2 was considered weakly defined because it contained only two principal items, one of which, S1, exhibited problematic cross-loading. Consequently, S1 and S2 were removed, and PCA with Varimax rotation was repeated using the remaining 12 items to determine whether a clearer and more interpretable component structure could be obtained:

Table 5. Rotated Component Matrix for the 12-Item SGPI Instrument (N = 135)

Item	Component 1	Component 2	Interpretation and Decision
S12	.896	—	Strong and clear loading on Component 1; retained.
S15	.823	—	Strong and clear loading on Component 1; retained.
S8	.814	—	Strong and clear loading on Component 1; retained.
S9	.810	—	Strong and clear loading on Component 1; retained.
S10	.803	—	Strong and clear loading on Component 1; retained.

S14	.785	—	Strong and clear loading on Component 1; retained.
S11	.780	—	Strong and clear loading on Component 1; retained.
S5	.747	—	Strong and clear loading on Component 1; retained.
S3	.735	—	Strong and clear loading on Component 1; retained.
S13	—	.810	Strong and clear loading on Component 2; retained.
S7	—	.809	Strong and clear loading on Component 2; retained.
S4	—	.695	Satisfactory and clear loading on Component 2; retained.

Table 5 presents the final Principal Component Analysis (PCA) results for the remaining 12 SGPI items. The analysis produced a clear two-component solution that accounted for 63.724% of the total variance, exceeding the 60% benchmark adopted in this study. The absence of substantial cross-loadings indicated a clearer component structure than those obtained in the preceding analyses. Component 1 comprised nine items: S12, S15, S8, S9, S10, S14, S11, S5, and S3. The component loadings ranged from .735 to .896, indicating that all nine items were strongly associated with the first component. Based on their shared conceptual content, this component was labelled Positive-Caring. Component 2 comprised S13, S7, and S4, with component loadings ranging from .695 to .810. The three items displayed clear associations with the second component and provided an interpretable preliminary component. Based on their shared emphasis on teachers' responses to difficulties, pressure, and challenging instructional circumstances, this component was labelled Adaptive. Although the initial items were theoretically organised according to the affective, behavioural, and cognitive components of the ABC model, the pilot data did not reproduce this original three-component arrangement. Instead, items derived from the three theoretical domains converged into two preliminary empirical components. The PCA findings therefore refined, rather than rejected, the original theoretical foundation of the instrument. Importantly, the Positive-Caring and Adaptive labels represent preliminary, pilot-derived interpretations of the observed item groupings and were subsequently subjected to further measurement-model assessment using the independent main sample. The final component structure derived from the pilot study is summarised in Table 6:

Table 6. Final SGPI Structure Derived from the Pilot-Study PCA

Construct	Empirically Derived Component	Retained Items
Islamic Education Teachers' Attitude (SGPI)	Positive-Caring	9 items: S12, S15, S8, S9, S10, S14, S11, S5, and S3
Islamic Education Teachers' Attitude (SGPI)	Adaptive	3 items: S13, S7, and S4

Table 6 summarises the two preliminary components identified in the pilot analysis. The Positive-Caring component represents teachers' positive, supportive, and pupil-oriented dispositions towards Qur'anic literacy instruction. Its items reflect qualities such as maintaining a positive emotional orientation, demonstrating professional commitment, caring about pupils' development, and recognising the broader moral and spiritual purposes of Qur'anic instruction. The Adaptive component reflects teachers' tendency to respond constructively to instructional difficulties and challenges. Its items encompass emotional regulation, concern for pupils experiencing difficulties, and the rejection of a narrowly technical understanding of Qur'anic instruction. The labels Positive-Caring and Adaptive were assigned by interpreting the shared conceptual meaning of the items grouped within each component. At this pilot stage, these labels represented preliminary empirical interpretations rather than independently validated dimensions of SGPI. The internal consistency reliability of the final 12-item pilot instrument and its two preliminary components is presented in Table 7:

Table 7. Cronbach's Alpha Coefficients for the Final 12-Item SGPI Instrument

No.	Construct/Component	Number of Items	Cronbach's Alpha	Interpretation
1	Positive-Caring	9	.940	Excellent internal consistency
2	Adaptive	3	.669	Marginal but provisionally acceptable for exploratory research
Overall SGPI instrument		12	.818	Satisfactory overall internal consistency

Table 7 shows that the nine-item Positive-Caring component achieved a Cronbach's alpha coefficient of .940, indicating excellent internal consistency. The three-item Adaptive component recorded an alpha coefficient of .669. Although this value was slightly below the conventional .70 threshold, it was interpreted cautiously as marginal and provisionally acceptable at the exploratory stage, particularly given that the component comprised only three items. Nevertheless, its reliability and measurement performance required further examination using the main-study sample. The overall 12-item SGPI instrument recorded a Cronbach's alpha coefficient of .818, demonstrating satisfactory preliminary internal consistency. Taken together, the PCA and reliability findings supported retaining the 12-item instrument for subsequent measurement-model assessment using the independent main sample.

Phase 3: Main-Sample Measurement Model Assessment (N = 400)

The third phase involved evaluating the retained 12-item SGPI instrument using data collected from 400 Islamic Education teachers across six zones in Sabah. For reporting clarity, the 12 items retained following the pilot analysis were renumbered sequentially as S1–S12 for the main-sample analysis; therefore, these item codes do not correspond directly to the original 15-item numbering used during the pilot stage. The measurement model was assessed using PLS-SEM in SmartPLS 4. Based on the exploratory results from the pilot study, the 12 retained items initially formed two preliminary components: Positive-Caring, comprising nine items, and Adaptive, comprising three items. The two-component structure was therefore first evaluated using the main-sample data before the final specification of the SGPI construct was determined. The measurement-model assessment covered indicator reliability, internal consistency reliability, convergent validity, discriminant validity, and indicator collinearity. Particular attention was given to the discriminant validity between Positive-Caring and Adaptive to determine whether the two preliminary components identified in the pilot study could be empirically distinguished in the main sample.

Assessment of the Initial Two-Component Specification

The two-component structure identified in the pilot analysis was first evaluated using the main-sample data. In this initial specification, Positive-Caring and Adaptive were modelled as lower-order components associated with the broader SGPI construct. The relationships between SGPI and the two components are presented in Table 8:

Table 8. Relationships between SGPI and the Positive-Caring and Adaptive Components

Construct	Component	Loading	R^2
SGPI	Positive-Caring	.992	.985
SGPI	Adaptive	.936	.875

Table 8 shows that the loadings of .992 for Positive-Caring and .936 for Adaptive indicated that both components were strongly associated with the broader SGPI construct in the initial specification. The corresponding R^2 values were .985 and .875, respectively. However, strong higher-order loadings alone do not establish that Positive-Caring and Adaptive are empirically distinct components. Their discriminant validity was therefore assessed separately using the heterotrait-monotrait ratio of correlations (HTMT).

Discriminant Validity of the Pilot-Derived Components

Although Positive-Caring and Adaptive demonstrated acceptable measurement properties when examined individually, their empirical distinctiveness required further evaluation. The HTMT value between Positive-Caring and Adaptive was 1.003. Bootstrapping produced a 95% confidence interval ranging from .975 to 1.029. The point estimate exceeded the recommended .90 criterion, and the confidence interval included 1.00. These findings indicated insufficient discriminant validity between the two pilot-derived components. Consequently, Positive-Caring and Adaptive could not be supported as empirically distinct subconstructs in the main sample. Rather than retaining an inadequately differentiated two-component specification, the 12 indicators were

subsequently evaluated as manifestations of an overarching SGPI construct. This respecification was consistent with the original conceptualisation of the ABC domains as sources of item content rather than predetermined empirical dimensions.

Assessment of SGPI as an Overarching Construct

Given the insufficient discriminant validity between the two pilot-derived components, the 12 retained items were subsequently evaluated as indicators of an overarching SGPI construct. This specification is consistent with the conceptualisation of attitude as an integrated disposition in which affective, behavioural, and cognitive elements may operate jointly rather than necessarily emerging as empirically distinct dimensions within the specific context of Qur'anic literacy instruction. The assessment of the overarching SGPI specification focused on indicator reliability, internal consistency reliability, convergent validity, indicator collinearity, and discriminant validity between SGPI and Qur'anic Literacy Teaching Skills (KMLAQ).

Indicator Reliability

Indicator reliability was assessed by examining the outer loadings of the 12 retained SGPI items. The statistical significance of the loadings was further examined using bootstrapping. The results are presented in Table 9:

Table 9. Outer Loadings and Bootstrapping Results for the SGPI Indicators

Item	Outer Loading	t-value	p-value	Decision
S1	.866	63.534	< .001	Retained
S2	.839	51.694	< .001	Retained
S3	.818	47.012	< .001	Retained
S4	.777	34.456	< .001	Retained
S5	.848	55.603	< .001	Retained
S6	.835	49.719	< .001	Retained
S7	.851	56.363	< .001	Retained
S8	.728	27.324	< .001	Retained
S9	.833	53.276	< .001	Retained
S10	.791	41.894	< .001	Retained
S11	.809	44.441	< .001	Retained
S12	.813	43.068	< .001	Retained

Table 9 shows all 12 SGPI indicators demonstrated satisfactory outer loadings, ranging from .728 to .866 and exceeding the recommended value of .708. The bootstrapping results further showed that all indicator loadings were statistically significant at $p < .001$, with t-values ranging from 27.324 to 63.534. These results supported the retention of all 12 indicators in the overarching SGPI construct.

Internal Consistency Reliability and Convergent Validity

Internal consistency reliability and convergent validity were evaluated using Cronbach's alpha, rho_A, composite reliability, and average variance extracted in table 10:

Table 10. Reliability and Convergent Validity of the SGPI Construct

Assessment	Result	Recommended Criterion	Interpretation
Cronbach's alpha	.955	> .70	High internal consistency
rho_A	.957	> .70	High construct reliability
Composite reliability	.960	> .70	High internal consistency
Average variance extracted	.669	> .50	Convergent validity established

Table 10 shows that the overarching SGPI construct recorded a Cronbach's alpha coefficient of .955, a rho_A value of .957, and a composite reliability value of .960, indicating high internal consistency reliability. However, because reliability coefficients above .95 may also indicate semantic similarity or potential redundancy among indicators, these values were interpreted cautiously rather than as unqualified evidence of superior measurement quality. The AVE value of .669 exceeded the recommended threshold of .50, supporting the convergent validity of the SGPI construct.

Indicator Collinearity Assessment

Indicator collinearity was assessed using the variance inflation factor (VIF). The outer VIF values for the 12 SGPI indicators ranged from 1.928 to 3.473, indicating no severe indicator-level collinearity. Nevertheless, given the very high internal consistency coefficients, potential semantic overlap among some indicators should continue to be considered in future refinements of the instrument.

Discriminant Validity between SGPI and KMLAQ

Following the assessment of SGPI as an overarching construct, its discriminant validity from Qur'anic Literacy Teaching Skills (KMLAQ) was evaluated using HTMT:

Table 11. Discriminant Validity between SGPI and KMLAQ

Construct Pair	HTMT	95% Bootstrap CI	Decision
SGPI–KMLAQ	.794	[.750, .834]	Discriminant validity supported

Table 11 shows that the HTMT value between SGPI and KMLAQ was .794, which was below both the conservative .85 criterion and the more liberal .90 criterion. The 95% bootstrap confidence interval ranged from .750 to .834 and therefore did not include 1.00. These findings provide further evidence that SGPI and KMLAQ are empirically distinguishable constructs. Thus, although teachers' attitudes towards Qur'anic literacy instruction are theoretically related to their teaching skills, the SGPI instrument does not appear to reproduce the measurement of KMLAQ.

Relationship with Qur'anic Literacy Teaching Skills

The results demonstrated a positive and statistically significant association between SGPI and KMLAQ ($\beta = .763$, $t = 36.470$, $p < .001$, 95% CI [.720, .803]). The confidence interval did not include zero, supporting the statistical significance of the relationship. The model explained 58.2% of the variance in KMLAQ ($R^2 = .582$). Importantly, despite this strong association, SGPI and KMLAQ remained empirically distinguishable, as indicated by HTMT = .794 and its 95% bootstrap confidence interval [.750, .834]. These results provide evidence that SGPI is meaningfully associated with a theoretically relevant external construct while measuring a domain that remains empirically distinct from Qur'anic literacy teaching skills. Given the cross-sectional design, this association should not be interpreted as evidence that teachers' attitudes cause stronger teaching skills.

DISCUSSION

This study developed and evaluated the SGPI instrument through sequential stages of theory-informed item development, pilot exploration, and main-sample validation. A central finding concerns the dimensional interpretation of the instrument. Although PCA of the pilot data produced two interpretable preliminary components, labelled Positive-Caring and Adaptive, their empirical separation was not supported in the independent main sample. The HTMT value between the two components was 1.003, with a 95% bootstrap confidence interval of [.975, 1.029], indicating substantial empirical overlap and insufficient discriminant validity. Consequently, the findings do not support the use of Positive-Caring and Adaptive as separate SGPI subscales in the present sample. Instead, the 12 retained indicators were evaluated as manifestations of an overarching SGPI construct. This specification demonstrated satisfactory indicator reliability and convergent

validity, with outer loadings ranging from .728 to .866 and an AVE of .669. Internal consistency was high (α = .955, ρA = .957, ρC = .960), although these values warrant consideration of possible semantic overlap among some items. Importantly, the overarching SGPI construct remained empirically distinguishable from KMLAQ (HTMT = .794, 95% CI [.750, .834]). Taken together, the findings support a parsimonious interpretation of SGPI as an overarching attitudinal construct rather than two empirically distinct dimensions.

Empirical Refinement of the ABC Attitude Framework

The initial SGPI items were developed according to the tripartite ABC model of attitude, comprising affective, behavioural, and cognitive components. This conceptualisation is rooted in the work of Rosenberg and Hovland (1960), who proposed that attitudes involve interrelated feelings, cognitions, and behavioural tendencies. Similarly, Eagly and Chaiken (1993) defined attitude as a psychological tendency expressed through favourable or unfavourable evaluations of a particular object or issue. The exploratory analysis did not reproduce the affective, behavioural, and cognitive components as three empirically distinct factors. Instead, items representing these components converged into two preliminary components during the pilot stage, subsequently labelled Positive-Caring and Adaptive. This outcome does not indicate that the ABC framework was inappropriate or that the instrument failed to reflect its theoretical foundation. Rather, the ABC model provided the conceptual basis for defining the construct domain and generating the initial items, while the empirical analysis revealed how these elements were expressed among Islamic Education teachers in the specific context of Qur'anic literacy instruction.

Teachers may not sharply distinguish between what they feel, believe, and are inclined to do when evaluating their attitudes towards Qur'anic literacy instruction. For example, believing that Qur'anic literacy instruction contributes to pupils' spiritual and moral development may be closely associated with satisfaction with pupils' progress and continued commitment to supporting their learning. The affective, behavioural, and cognitive elements of attitude may therefore operate in an integrated manner within this instructional context.

Accordingly, the Positive-Caring and Adaptive components identified during the pilot stage may be understood as an exploratory refinement of the initial conceptual framework rather than a rejection of the ABC model. However, because the main-sample evidence did not establish adequate discriminant validity between these components, they should not be interpreted as clearly distinct empirical dimensions. Instead, they are better understood as conceptually informative, pilot-derived components situated within a broader attitudinal domain. The findings therefore favour an overarching representation of SGPI in which affective, behavioural, and cognitive elements operate in an integrated manner.

Interpretation of the Pilot-Derived Positive-Caring Component

The pilot-derived Positive-Caring component reflects a favourable, supportive, and pupil-oriented approach to Qur'anic literacy instruction. Its item content encompasses teachers' calmness and enjoyment when teaching, satisfaction with pupils' progress, confidence in the educational value of Qur'anic instruction, commitment to pupils' learning, reflective practice, and willingness to learn from other teachers. A positive attitude is therefore represented not merely by pleasant emotions but also by professional beliefs and supportive behavioural tendencies. This interpretation is consistent with the concept of teacher enthusiasm. Peng (2021) conceptualised teacher enthusiasm as involving both teachers' positive emotional experiences and the behavioural expression of those experiences during instruction. Teacher enthusiasm may contribute to a more engaging classroom environment by allowing pupils to experience the teacher's interest, confidence, and enjoyment. In the context of SGPI, teachers' calmness, satisfaction, and confidence may similarly function as psychological resources that support positive engagement in Qur'anic literacy instruction.

The caring aspect of this component is also consistent with the literature on teacher empathy. Aldrup, Carstensen, and Klusmann (2022) found that teacher empathy is associated with the quality of teacher–student interactions and teachers' capacity to provide appropriate emotional support. Empathy enables teachers to recognise pupils' learning experiences and respond sensitively to their difficulties. In Qur'anic literacy instruction, such caring may be expressed through patience, concern for pupils who experience difficulty, and a willingness to provide

continued guidance according to differing levels of mastery. The component is also compatible with the broader aims of Islamic education. Razali and Mamat (2024), in their analysis of al-Zarnuji's educational thought, emphasised the moral, intellectual, spiritual, and social development of learners. From this perspective, Islamic Education teachers are not merely responsible for transmitting technical reading skills but also for supporting pupils' broader personal and spiritual development. The label Positive-Caring was therefore assigned because the relevant items collectively reflect positive emotional engagement, concern for pupils, professional commitment, and belief in the wider educational value of Qur'anic literacy instruction.

Nevertheless, Positive-Caring should be understood as a conceptually meaningful pilot-derived component rather than as an empirically independent subscale of the final SGPI instrument. Its conceptual value lies in describing one aspect of the broader content domain represented by SGPI, but the present findings do not support scoring or interpreting it as a separate validated dimension. Further validation would be required before Positive-Caring could be interpreted and used as an independent subscale.

Interpretation of the Pilot-Derived Adaptive Component

The pilot-derived Adaptive component reflects teachers' tendency to regulate their thoughts, emotions, and behavioural responses when confronted with pupils' weaknesses or other instructional challenges. Within SGPI, adaptability does not primarily refer to technical competence in modifying teaching methods. Rather, it concerns maintaining concern for struggling pupils, avoiding an overly narrow view of Qur'anic literacy instruction, and regulating negative emotional responses during teaching. This interpretation is consistent with the adaptability framework proposed by Martin et al. (2012), in which adaptability refers to the constructive regulation of thoughts, emotions, and behaviours in response to changing, novel, or uncertain circumstances. It is also supported by Collie and Martin (2017), who applied this framework to teachers and linked adaptability with their psychological functioning and professional commitment.

Emotional regulation is particularly relevant because one of the Adaptive indicators concerns teachers' tendency to become angry. Aldrup, Carstensen, and Klusmann (2024) highlighted the importance of teachers' emotion regulation for instructional processes and teacher–student interactions. From this perspective, Adaptive captures a potentially meaningful aspect of teachers' attitudes: their tendency to maintain constructive and professionally appropriate responses when instruction becomes demanding. However, this component was represented by only three items and therefore covered a narrower content domain than Positive-Caring. More importantly, the main-sample analysis did not establish adequate discriminant validity between Adaptive and Positive-Caring. Adaptive should therefore be interpreted as a conceptually informative pilot-derived component within the broader SGPI content domain rather than as an empirically distinct subscale. Its conceptual interpretation may still contribute to understanding the content represented within SGPI, but the present evidence does not support its independent scoring or use as a validated subscale.

Future instrument development could expand the representation of cognitive, emotional, and behavioural adaptability through additional theoretically grounded items while avoiding semantic redundancy and preserving the conceptual distinction between attitude and pedagogical competence. Such refinement would allow future studies to determine whether Adaptive can emerge as a sufficiently differentiated dimension or whether it is more appropriately retained as an integrated aspect of the overarching SGPI construct.

SGPI as an Overarching Attitude Construct

The main-sample findings provide an important basis for refining the structural interpretation of SGPI. Although the pilot analysis identified two interpretable components, the discriminant-validity assessment indicated substantial empirical overlap between Positive-Caring and Adaptive. Treating them as clearly distinct dimensions would therefore overstate the differentiation observed in the main-sample data. Accordingly, the final interpretation prioritises SGPI as an overarching attitude construct represented by the 12 retained indicators. This interpretation does not imply that the conceptual meanings associated with Positive-Caring and Adaptive are unimportant. Rather, the two pilot-derived components remain useful for describing different aspects of the content domain represented within SGPI. Positive-Caring highlights favourable emotional engagement, concern

for pupils, and professional commitment, whereas Adaptive draws attention to constructive responses to instructional difficulties. Their conceptual usefulness can therefore be retained without assuming that they constitute empirically independent subscales.

The overarching interpretation is also consistent with the theoretical premise that teachers' attitudes towards Qur'anic literacy instruction may involve closely interconnected affective, behavioural, and cognitive tendencies. In practice, a teacher's beliefs about the importance of Qur'anic literacy, emotional responses towards pupils, and behavioural commitment to supporting their learning may operate together rather than independently. The empirical overlap observed between Positive-Caring and Adaptive may therefore reflect this integrated nature of teacher attitudes within the specific instructional context examined. Nevertheless, the present findings should not be interpreted as definitive evidence that SGPI can never exhibit a multidimensional structure. Rather, they indicate that the two components identified during the pilot stage were not sufficiently differentiated in the present main sample to justify their use as distinct subscales. Independent cross-validation is therefore required to determine whether a stable multidimensional structure can be reproduced or whether the overarching representation provides a more robust and parsimonious specification of SGPI.

Reliability and Construct Validity

The main-sample analysis provided evidence of satisfactory indicator reliability and convergent validity for the overarching SGPI construct. All 12 indicators exceeded the recommended outer-loading criterion, with loadings ranging from .728 to .866, and the bootstrapping results showed that all loadings were statistically significant. The AVE value of .669 further indicated that the construct accounted for a substantial proportion of the variance in its indicators. Taken together, these findings support the adequacy of the retained items in representing the broader SGPI construct. The internal-consistency coefficients were also high, with Cronbach's alpha of .955, rho_A of .957, and composite reliability of .960. These results indicate that the indicators consistently reflect a common underlying construct. However, the magnitude of these coefficients warrants cautious interpretation. Hair et al. (2022) noted that very high reliability estimates may also signal semantic similarity or potential redundancy among indicators. Thus, the present findings should not be interpreted simply as evidence that higher reliability is necessarily better.

This issue is particularly relevant to SGPI because several indicators represent closely related manifestations of favourable teacher attitudes. Future refinement should therefore examine inter-item relationships and item wording to determine whether any indicators convey substantially overlapping meanings. At the same time, item removal should not be driven solely by the objective of reducing reliability coefficients. An apparently similar item may still contribute substantively important content to the construct. Decisions concerning item retention should therefore balance statistical parsimony against adequate representation of the conceptual domain. The indicator-level VIF values, which ranged from 1.928 to 3.473, did not indicate severe collinearity among the retained indicators. This finding suggests that the high internal-consistency coefficients cannot simply be interpreted as evidence of problematic indicator collinearity. Nevertheless, potential semantic overlap remains relevant and should be examined in future refinement because statistical collinearity and conceptual redundancy are not equivalent.

The discriminant-validity findings further informed the final interpretation of SGPI. The HTMT value between Positive-Caring and Adaptive was 1.003, with a 95% bootstrap confidence interval of [.975, 1.029]. The point estimate exceeded the recommended .90 criterion, while the confidence interval included 1.00. Thus, discriminant validity between these pilot-derived components was not established. This finding does not invalidate the SGPI instrument as a whole. Instead, it indicates that Positive-Caring and Adaptive represent highly overlapping manifestations of the broader attitudinal domain captured by SGPI. Consequently, the overarching SGPI interpretation provides a more cautious and empirically defensible representation of the evidence available from the present sample.

Relationship and Distinction between SGPI and Qur'anic Literacy Teaching Skills

An important aspect of the validation evidence concerns the relationship between SGPI and Qur'anic Literacy Teaching Skills (KMLAQ). The HTMT value of .794 was below the .90 criterion, and its 95% bootstrap confidence interval [.750, .834] remained below 1.00, supporting the empirical distinction between SGPI and KMLAQ. This distinction is theoretically important because the two constructs represent related but different domains. SGPI concerns teachers' beliefs, emotional orientations, concern for pupils, and behavioural tendencies towards Qur'anic literacy instruction, whereas KMLAQ concerns their capacity to carry out the instructional process effectively. A teacher may, for example, value Qur'anic literacy instruction and demonstrate considerable concern for pupils while still requiring further development in pedagogical skills. Conversely, a teacher may possess appropriate instructional techniques without necessarily demonstrating an equally strong level of emotional engagement, patience, or commitment. Attitudes and teaching skills may therefore be related, but they should not be treated as interchangeable constructs. The HTMT result supports this distinction and provides evidence that SGPI captures an attitudinal domain rather than reproducing the measurement of Qur'anic literacy teaching competence.

At the same time, SGPI was positively and significantly associated with KMLAQ ($\beta = .763$, $t = 36.470$, $p < .001$, 95% CI [.720, .803]), with the model explaining 58.2% of the variance in KMLAQ ($R^2 = .582$). This finding indicates that teachers who reported more favourable attitudes towards Qur'anic literacy instruction also tended to report stronger Qur'anic literacy teaching skills. Importantly, the strong association did not eliminate the empirical distinction between the constructs, as demonstrated by the HTMT value of .794 and its confidence interval. Taken together, these findings provide evidence of a theoretically meaningful relationship between teachers' attitudes and their Qur'anic literacy teaching skills while maintaining their conceptual and empirical distinctiveness. However, the observed association should not be interpreted as evidence of causality. The cross-sectional and self-reported nature of the data does not establish that favourable attitudes cause stronger teaching skills. Longitudinal studies and designs incorporating external measures of teaching practice would be valuable for examining the direction and nature of this relationship more rigorously.

Theoretical, Methodological, and Practical Contributions

The study makes a methodological contribution by providing a context-specific instrument for assessing Islamic Education teachers' attitudes towards Qur'anic literacy instruction in primary schools. Rather than relying on a general teacher-attitude measure, SGPI incorporates professional responsibilities, educational values, emotional responses, and pupil-related considerations that are directly relevant to Qur'anic literacy instruction. Theoretically, the findings suggest that the affective, behavioural, and cognitive components of attitude may operate in an integrated manner within a specialised professional and religious context. The pilot-derived Positive-Caring and Adaptive components do not replace the ABC framework. Rather, they provide conceptually meaningful descriptions of how elements of the framework were reflected in the content of the SGPI items. Because adequate discriminant validity between these components was not established in the main sample, however, the final interpretation emphasises SGPI as an overarching attitude construct rather than as two clearly distinct dimensions.

The study also brings contemporary educational concepts, including teacher enthusiasm, empathy, emotional regulation, and adaptability, into dialogue with the broader aims of Islamic education. Positive-Caring highlights teachers' favourable and supportive orientation towards pupils, whereas Adaptive draws attention to constructive responses to instructional challenges. These concepts remain useful for understanding the content represented within SGPI even though the present evidence does not support treating them as separate subscales. Practically, the 12-item SGPI may provide a useful research tool for examining teachers' attitudinal orientations towards Qur'anic literacy instruction and their relationships with other educational variables. It may also have potential applications in professional-development needs assessment and programme evaluation. However, SGPI should not be used as the sole basis for evaluating individual teachers' performance. Because it relies on self-reported attitudes, its results should ideally be considered alongside other sources of evidence, such as classroom observations, interviews, pupil outcomes, and assessments of pedagogical competence.

Limitations and Directions for Future Research

Several limitations should be acknowledged. First, SGPI relies on self-reported responses and may therefore be susceptible to social-desirability bias. This concern is particularly relevant because several items address professionally and religiously desirable qualities, including patience, caring, commitment, and emotional regulation. Future studies could combine SGPI with classroom observations, interviews, pupil perspectives, or assessments provided by school leaders to obtain a more comprehensive representation of teachers' attitudes and practices.

Second, although the pilot analysis identified Positive-Caring and Adaptive as interpretable preliminary components, adequate discriminant validity between them was not established in the main sample. The present findings therefore do not support treating these components as independent validated subscales. This limitation is particularly relevant to Adaptive, which was represented by only three indicators and consequently covered a narrower content domain than Positive-Caring. Future instrument development could consider additional theoretically grounded Adaptive items to improve content coverage, provided that such additions do not introduce further semantic redundancy or blur the distinction between attitudes and teaching competence.

Third, the main sample comprised Islamic Education teachers from six zones in Sabah. Although this sampling strategy provided geographical coverage within the state, the generalisability of the measurement properties beyond Sabah remains to be established. Independent cross-validation involving teachers from other Malaysian states and different school contexts would provide stronger evidence regarding the stability of the overarching SGPI specification and whether the pilot-derived components can be reproduced.

Finally, future studies should examine measurement invariance across relevant teacher groups, including gender, teaching experience, school location, and professional-training background. Such analyses would help determine whether SGPI operates comparably across different groups. Longitudinal designs would also be valuable for examining the stability of teachers' attitudes over time and for clarifying the direction of the relationship between SGPI and Qur'anic literacy teaching skills.

CONCLUSIONS

This study developed and provided initial validation evidence for the 12-item SGPI instrument as a context-specific measure of Islamic Education teachers' attitudes towards Qur'anic literacy instruction. Although the pilot analysis identified two conceptually interpretable components, Positive-Caring and Adaptive, subsequent validation using an independent sample did not support their empirical separation (HTMT = 1.003, 95% CI [.975, 1.029]). The findings therefore support a more parsimonious interpretation of SGPI as an overarching attitudinal construct represented by 12 indicators. The overarching SGPI specification demonstrated satisfactory indicator reliability and convergent validity, with outer loadings ranging from .728 to .866 and an AVE of .669. Internal consistency was high ($\alpha = .955$, $\rho A = .957$, $\rho C = .960$), although the magnitude of these coefficients suggests that potential semantic overlap among indicators should continue to be examined. Importantly, SGPI was empirically distinguishable from Qur'anic Literacy Teaching Skills (HTMT = .794, 95% CI [.750, .834]) while demonstrating a strong positive association with KMLAQ ($\beta = .763$, $t = 36.470$, $p < .001$). Overall, the findings provide preliminary support for SGPI as an overarching measure of teachers' attitudinal orientation towards Qur'anic literacy instruction rather than as two independently interpretable subscales. Positive-Caring and Adaptive remain conceptually informative patterns emerging from the pilot analysis, but further independent validation is required before they can be treated as distinct dimensions. Future research should cross-validate the 12-item SGPI across different teacher populations and educational settings, examine potential item redundancy, and assess measurement invariance before broader application of the instrument.

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