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A Discovery-Based Learning Model Focused on Higher-Order Thinking Skills in Aqidah Akhlak Instruction to Enhance Students' Emotional and Spiritual Intelligence

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Abstract

This study aims to develop and evaluate the validity, practicality, and effectiveness of a HOTS-oriented Inquiry-Based Discovery Learning (IDL) model in the teaching of Aqidah Akhlak to enhance students' higher-order thinking skills and emotional-spiritual intelligence. This study employed a Research and Development (R&D) approach using a modified Borg & Gall model. The research subjects included teachers and students at a public Madrasah Aliyah in Pesisir Selatan Regency. Data were collected through observation, interviews, expert validation, a practicality questionnaire, and pre- and post-tests following the implementation of the model. Qualitative data were analyzed descriptively, while quantitative data were analyzed using Aiken's V, the practicality percentage, the paired-sample t-test, and N-Gain. The results of the study indicate that the HOTS-based IDL model meets validity criteria with Aiken's V values ranging from 0.77 to 0.82, is practical with a practicality level of 79.32%–80.25%, and is effective based on N-Gain values ranging from 0.38 to 0.86, which fall into the moderate to high category. The implementation of this model has proven effective in enhancing students' analytical, evaluative, and creative abilities while strengthening their emotional and spiritual intelligence through active and reflective learning grounded in Islamic values. These findings indicate that the integration of HOTS into the IDL model contributes to the development of Aqidah Akhlak learning that is oriented not only toward cognitive achievement but also toward the development of emotional and spiritual intelligence as holistic goals of Islamic education.

Keywords: Aqidah Akhlak; Emotional-spiritual intelligence; Higher-order thinking skills; Inquiry-based discovery learning.

Introduction

Islamic education is essentially not only oriented towards mastering knowledge, but also directed towards developing students with faith, noble morals, and emotional and spiritual intelligence as a preparation for facing life (Khasanah, 2023; Munawarsyah, 2023). This goal aligns with the role of the Aqidah Akhlak subject, a crucial pillar of education in madrasas (Casudi et al., 2025; Hilalludin et al., 2025). Through this subject, students are not only guided to understand the concepts of faith and morals theoretically, but also guided to internalize Islamic values in their daily attitudes, behaviors, and decision-making (Ismet et al., 2025; Mahfud & Zahriyah, 2025; Tambak et al., 2021). Therefore, Aqidah Akhlak learning is required to integrate the development of cognitive, affective, and spiritual aspects in a balanced manner so that the

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goals of Islamic education can be realized more holistically (Rukmana et al., 2024; Rusdiana et al., 2026).

However, the practice of teaching Aqidah Akhlak at the State Islamic Senior High School in Pesisir Selatan Regency still shows various limitations. The learning process is still dominated by a teacher-centered approach, with an emphasis on delivering material and memorizing concepts (Hanton et al., 2021; Oktiasari et al., 2021). This learning pattern causes students to primarily master information textually rather than building a deep conceptual understanding. As a result, critical, analytical, and creative thinking skills have not developed optimally, while the Islamic values learned have not been fully internalized in students' lives (Fries et al., 2021; Shin & Jeong, 2021). This condition indicates that teaching Aqidah Akhlak still requires innovation in learning models that are more active, reflective, and meaningful.

This issue is reinforced by the results of a preliminary study conducted at a State Islamic Senior High School in Pesisir Selatan Regency. The research findings indicate that students' emotional and spiritual intelligence abilities are still in the category that needs improvement (Anwar et al., 2020; Ma & Wang, 2022). Furthermore, the implementation of problem-based learning *Higher Order Thinking Skills* (HOTS) by teachers has also not been optimal, so the learning process has not fully encouraged students to analyze, evaluate, and generate ideas independently (Eka Putra & Iswantir, 2021; Selirowangi et al., 2024). This finding demonstrates a gap between the learning objectives of Aqidah Akhlak, which emphasize character building, and learning practices that are still oriented toward achieving basic cognitive aspects (Afifah et al., 2025). This condition underpins the need to develop learning models that better align with the demands of Islamic education and the needs of 21st-century learning.

The development of 21st-century education demands that students possess higher-order thinking skills as an essential competency in facing social change, scientific development, and technological advancement (González-Salamanca et al., 2020). HOTS encompasses not only the ability to analyze, evaluate, and create, but also encourages students to construct knowledge through active, critical, creative, and reflective thinking processes (Ragab et al., 2024). In the learning of Aqidah Akhlak, the development of HOTS is crucial because Islamic values are not simply understood as rote material, but must be understood in depth to serve as a foundation for shaping students' attitudes, character, and behavior (Adzidzah & Yudiawan, 2024). Thus, the learning of Aqidah Akhlak requires a strategy that integrates higher-order thinking skills with the development of emotional and spiritual intelligence.

One of the learning models that is considered to have characteristics that meet these needs is *Inquiry Discovery Learning* (IDL). This model places students at the center of learning through systematic investigation, discovery, analysis, and problem-solving activities (Lukitasari et al., 2020). The integration of IDL with the HOTS approach provides opportunities for students to build knowledge based on meaningful learning experiences while developing critical, creative, and reflective thinking skills (Ismail et al., 2024). In the context of learning Aqidah Akhlak, this process is expected to not only improve mastery of religious concepts but also strengthen emotional and spiritual intelligence through the internalization of Islamic values at every stage of learning.

Several previous studies have reported the effectiveness *Inquiry Discovery Learning* and HOTS approaches to improving student learning outcomes and thinking skills (Mitarlis et al., 2020; Muhayati et al., 2023). However, most of this research still focuses on cognitive aspects and has not integrated the development of emotional and spiritual intelligence as the primary learning outcome (Alanazi et al., 2024). On the other hand, research that specifically develops learning models *Inquiry Discovery Learning* HOTS-based learning in the subject of Aqidah Akhlak, with an orientation toward improving students' ESQ, is still relatively limited (al Aliyawinata et al., 2021; Arifin et al., 2025). This gap indicates the need for a learning model capable of connecting higher-order thinking skills with character development and emotional-spiritual intelligence within the framework of Islamic education.

Based on these problems, this study aims to develop and test the Model *Inquiry Discovery Learning* HOTS-based model in Aqidah Akhlak learning at the State Islamic Senior High School in Pesisir Selatan Regency. The model was developed through needs analysis, theoretical

foundation preparation, and testing the model's validity, practicality, and effectiveness in improving students' higher-order thinking skills and emotional-spiritual intelligence. This research is expected to provide empirical contributions to the development of more innovative Islamic Religious Education learning models, while enriching studies on the integration of HOTS and ESQ as a holistic goal of Aqidah Akhlak learning.

Method

Types and Settings of Research

This research uses an approach Research and Development (R&D) by adapting the modified Borg and Gall model to develop Model *Inquiry Discovery Learning* (IDL) based *Higher Order Thinking Skills* (NOISE) (Ernawati et al., 2025; Sholihah et al., 2025) in the learning of Aqidah Akhlak. The research aims to produce a valid, practical, and effective learning model through the stages of needs analysis, product development, expert validation, revision, trial, and model refinement. The research development flow is shown in Figure 1.

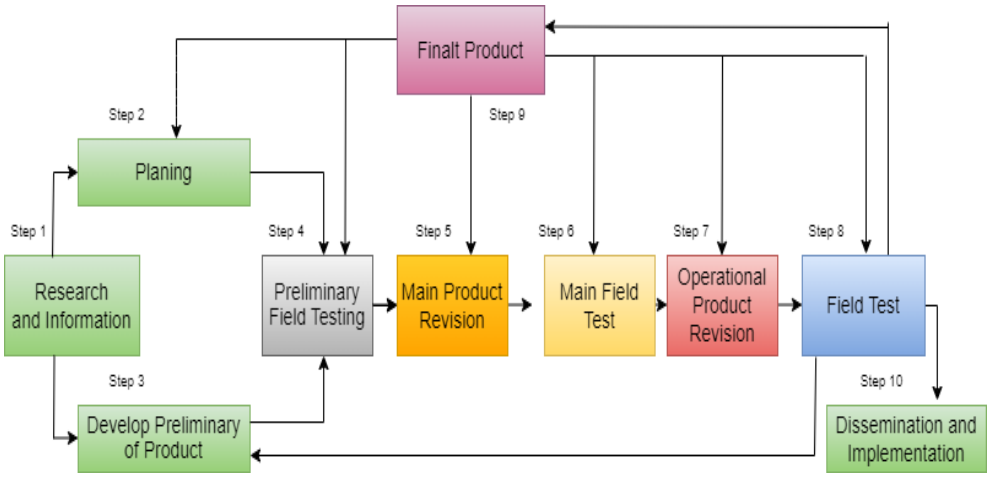


Fig 1. Stages of Developing a HOTS-Based Inquiry Discovery Learning Model

The research was conducted in MAN 1, MAN 2, MAN 3, and MAN 4, Pesisir Selatan Regency, West Sumatra in the 2022/2023 Academic Year. The research population was 745 class X students (Phase E), with a sample of 238 students which is determined using the Isaac and Michael table at a 5% error level and is distributed proportionally in each madrasah. The population and sample distributions are presented in Table 1.

Table 1. Distribution of Population and Research Sample

Madrasah	Population	Sample
MAN 1 South Coast	184	59
MAN 2 South Coast	298	95
MAN 3 South Coast	144	46
MAN 4 South Coast	119	38
Amount	745	238

The research subjects were 10th-grade students taking the Aqidah Akhlak (belief, morality, and character) course. The subject selection was based on the subject's characteristics, which are oriented toward fostering faith, morality, and character through an integrative and holistic approach, making it suitable for the application of the model. *Inquiry Discovery Learning* HOTS-based in improving high-level thinking skills as well as emotional and spiritual intelligence of students.

Data Collection and Analysis Techniques

Data collection is carried out in stages according to the stages of development research to obtain information regarding the needs, validity, practicality and effectiveness of the Model (Haakman et al.,

2021; de Hond et al., 2022). *Inquiry Discovery Learning* (IDL) based *Higher Order Thinking Skills* (HOTS). Data were collected using qualitative and quantitative approaches through observation, semi-structured interviews, documentation studies, expert validation, questionnaires, HOTS tests, and questionnaires. *Emotional Spiritual Quotient* (ESQ) given before (*pre-test*) and after (*post-test*) model implementation (Rahman et al., 2024; Suharjo et al., 2025). A summary of data collection techniques is presented in Table 2.

Table 2. Data Collection Techniques and Research Instruments

Research Stage	Technique	Instrument	Data Obtained
Needs analysis	Observation, interviews, documentation	Observation sheets, interview guidelines, curriculum documents	Learning conditions and model development needs
Product validation	Expert validation	Validation sheet	Validity of models, learning devices, and instruments
Practicality test	Questionnaire	Teacher and student response questionnaire	The level of practicality of the model
Effectiveness test	HOTS test and ESQ questionnaire (*pre-test* and *post-test*)	HOTS and ESQ instruments	Increasing HOTS and spiritual emotional intelligence

The data obtained were analyzed in stages according to the research objectives. Qualitative data were analyzed using the Miles and Huberman model, while quantitative data were analyzed descriptively and inferentially (Dumiyati et al., 2023; Rahman et al., 2025). Content validity was tested using Aiken's V, reliability using Cronbach's Alpha, and construct validity using Confirmatory Factor Analysis (CFA) through LISREL 8.8. Practicality was analyzed based on the percentage of teacher and student responses, while the effectiveness of the model was analyzed using N-Gain and Paired Sample t-Test with the help of SPSS 24 (Asipi et al., 2022). The model is declared effective if it shows a minimum increase in the moderate category and there is a significant difference between the scores.*pre-test* and *post-test* ($p < 0.05$). A summary of data analysis techniques is presented in Table 3.

Table 3. Summary of Data Analysis Techniques

Research Stages	Analysis Techniques	Result Criteria
Needs analysis	Descriptive analysis (Miles & Huberman)	Overview of initial conditions and model development needs
Validity test	Aiken's V	Model and device declared valid
Reliability test	Cronbach's Alpha	The instrument is declared reliable
Construct validity test	CFA (LISREL 8.8)	The construct meets the criteria *goodness of fit*
Practicality test	Percentage analysis	Determining the level of practicality of the model
Effectiveness test	N-Gain and *Paired Sample t-Test*	Determine the improvement and significance of model effectiveness

Results

Needs Analysis and Theoretical-Philosophical Basis for Model Development Inquiry Discovery Learning Based Higher Order Thinking Skills in Learning the Faith and Morals

The initial stage of the research was carried out through *research and information collecting* and *planning* in accordance with the Borg and Gall development procedures, literature reviews, learning observations, teacher interviews, analysis of Independent Curriculum documents, and analysis of teacher and student needs were conducted. All of these activities aimed to obtain an empirical and conceptual basis for developing the Model. *Inquiry Discovery Learning* (IDL) based *Higher Order Thinking Skills* (NOISE).

The results of the literature review show that research on *Inquiry Discovery Learning*, HOTS, and *Emotional Spiritual Quotient* (ESQ) experienced quite rapid development during the 2020–2024 period. A search of the Scopus database found 929 relevant publications, consisting of 120 publications regarding *Inquiry Discovery Learning*, 632 publications about HOTS, and 177 publications on ESQ. Although the number of studies is relatively large, most still examine the three variables separately. Research that integrates the model *Inquiry Discovery Learning* HOTS-based approaches to improving ESQ in Aqidah Akhlak learning in Islamic Senior High Schools are still very limited. These findings indicate a research gap and reinforce the urgency of developing the proposed model.

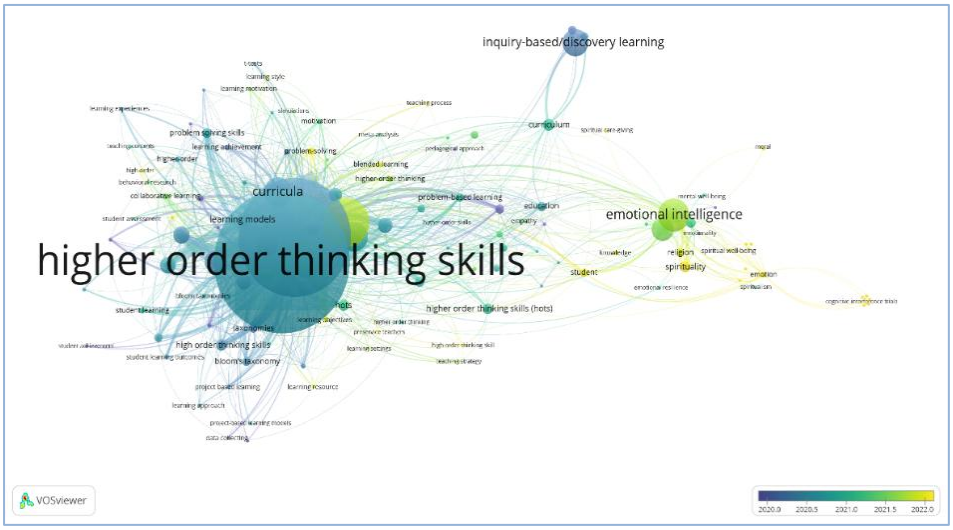


Fig 2. Literature Search Results on the Scopus Database for 2020–2024

Field studies conducted through observations and interviews at four State Islamic Senior High Schools (Madrasah Aliyah) in Pesisir Selatan Regency revealed that the teaching of Aqidah Akhlak (Islamic Creed) is still dominated by a teacher-centered approach. The learning process emphasizes material delivery and concept memorization, thus preventing students from adequately developing higher-order thinking skills or reflectively internalizing religious values. Teachers also cited limitations in learning models, tools, and media as obstacles to implementing HOTS-oriented learning.

Table 4. Results of the Preliminary Study of Aqidah and Ethics Learning

Aspect	Key Findings
Learning	Still dominated by lecture methods and centered on the teacher.
SOUND	Analytical, evaluation and creative abilities have not developed optimally.
ESQ	Strengthening emotional and spiritual intelligence has not been integrated into learning.
Teacher	Requires a learning model that is innovative, systematic, and easy to implement.
Learners	Expect more active, contextual, and meaningful learning.

A needs analysis revealed a gap between the ongoing learning of Aqidah Akhlak and the expected learning. A questionnaire survey of 238 students yielded an average score of 4,50 and against 8 teachers of Aqidah Akhlak amounting to 4,69, both of which are in the category very needed. This finding shows that teachers and students both need learning models that are able to develop high-level thinking skills (*Higher Order Thinking Skills* (HOTS) while strengthening emotional and spiritual intelligence. Analysis of the Independent Curriculum also shows that although learning outcomes have led to the formation of faith, morals, and social responsibility, its implementation in the classroom has not been optimal in fostering higher-order thinking skills. Therefore, the Independent Curriculum Model was developed. *Inquiry Discovery Learning* HOTS-based which integrates constructivism theory, *Inquiry Discovery Learning*, HOTS, and Islamic educational values through the process *meditation, meditation, effort,* and *reflection* The results of the preliminary study

serve as an empirical and conceptual basis for developing a model that will then be tested for validity, practicality, and effectiveness.

Prototype Model Development Inquiry Discovery Learning Based Higher Order Thinking Skills Integrated with Islamic Aqidah and Ethics Learning

The next stage is planning and initial product development (*develop preliminary form of product*) based on the results of the needs analysis. At this stage a prototype model is designed. *Inquiry Discovery Learning* (IDL) based *Higher Order Thinking Skills* (HOTS) integrated into Aqidah Akhlak learning. The prototype development focused on the needs of teachers and students, the characteristics of the Independent Curriculum, and the theoretical and philosophical foundations formulated in the previous stage. The product developed not only consists of a learning model but also a set of integrated learning tools to support the model's implementation in the classroom. All products are designed to facilitate student-centered learning (*student-centered learning*), encourages inquiry and discovery activities, and develops higher-order thinking skills which include analytical skills (*analyze*), evaluate (*evaluate*), and create (*create* In addition, each learning component is designed to integrate the strengthening of emotional and spiritual intelligence through reflection activities, problem-solving, value discussions, and the application of Islamic teachings in the context of everyday life.

Table 5. Developed Product Prototypes

Product	Description and Function
HOTS-Based IDL Model Book	Contains the conceptual basis of the model, learning syntax, social system, reaction principles, support system, as well as instructional and accompanying impacts as guidelines for model implementation.
Teacher's Guide	Contains instructions for implementing learning, activity scenarios, learning strategies, assessments, and alternatives for IDL-based classroom management.
Student Teaching Module	Presenting Aqidah Akhlak material designed using an inquiry approach, concept discovery activities, HOTS exercises, value reflection, and ESQ strengthening.
Research Instruments	Consisting of validation instruments, observations, questionnaires, HOTS tests, ESQ instruments, as well as practicality and effectiveness sheets used to evaluate the quality of the model.

The model prototype is structured as a unified learning system consisting of a model book, teacher's guide, student learning module, and research instruments. The model book serves as a conceptual reference, the teacher's guide contains learning implementation steps, while the student learning module is designed to develop higher-order thinking skills through inquiry, analysis, reflection, and internalization of Aqidah Akhlak values. This research also produced validation instruments, observations, questionnaires, HOTS tests, and spiritual emotional intelligence instruments to evaluate the validity, practicality, and effectiveness of the model. All developed products were further validated by experts before being field-tested.

Model Validity Analysis Inquiry Discovery Learning Based Higher Order Thinking Skills

Prototype Model *Inquiry Discovery Learning* (IDL) based *Higher Order Thinking Skills* (HOTS) was then validated by five experts with expertise in curriculum development, education, Islamic education, educational psychology, and madrasah education. The validation process aimed to assess the conceptual suitability of the model, the completeness of the learning tools, and the feasibility of its implementation before field trials. The construct validity of the model was analyzed using Linear Structural Relations (LISREL) version 8.8 through testing *goodness of fit* and *loading factor* on the five main components of the model, namely learning syntax, social system, reaction principle, support system, as well as instructional impact and accompanying impact.

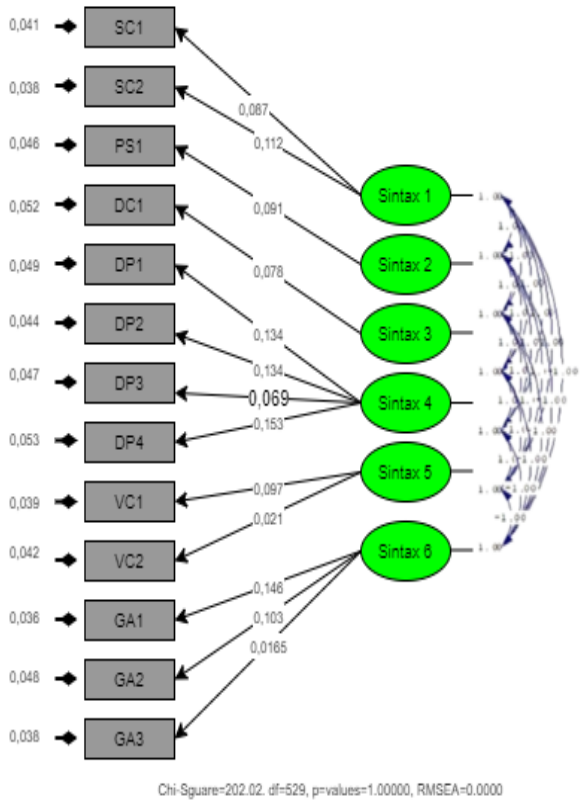


Fig 3. Results of the Analysis of the Validity of the Model Constructs Using LISREL

The results of the analysis show that the model meets the criteria. *Goodness of fit* with value p-value = 1,00 (>0,05). All indicators also have loading factor above 0.50, so that each component is declared capable of adequately representing the model construct. These findings indicate that the HOTS-based IDL Model has good construct validity and is worthy of being continued to the next testing stage. In addition to construct validity, content validity assessment is carried out using the index Aiken's V for all the learning tools developed. The assessment results indicate that all components have met the valid to very valid categories.

Table 6. Product Development Validation Results

Product	Nilai Aiken's V	Category
HOTS-Based IDL Model Book	0,80	Valid
Teacher's Guide	0,79	Valid
Student Teaching Module	0,77	Valid
Research Instruments	0,82	Very Valid

The validation results show that all learning devices are in the category valid until very valid, with Aiken's V values ranging between 0,77–0,82, so that it is suitable for use after being refined according to validator input. The revision focuses on refining the learning syntax, integration *Inquiry Discovery Learning* and HOTS, adjustments to the Independent Curriculum, and strengthening of emotional and spiritual intelligence indicators. Additionally, improvements were made to the appearance, material structure, and user guides. *Focus Group Discussion* (FGD) involving experts, teachers, and practitioners. The revised results further strengthened the model's quality, making it ready for implementation in the field trial phase.

The Practicality of the Inquiry Discovery Learning Model Based on Higher Order Thinking Skills through the Implementation of Aqidah Akhlak Learning

The implementation results show that the Model *Inquiry Discovery Learning* (IDL) based *Higher Order Thinking Skills* (HOTS) can be applied well by teachers in learning Aqidah Akhlak. Teachers are able to implement each learning syntax systematically, while students are actively involved in identifying problems, collecting and analyzing information, discussing, concluding, and reflecting on the application of Aqidah Akhlak values in everyday life. Interviews with teachers and students showed that the learning tool is easy to use, interesting, and able to increase learning participation and develop higher-order thinking skills. Overall, the results of observations, interviews, and user responses indicate that the model has a good level of practicality, so it is worthy of use and continued to the effectiveness testing stage.

Model Effectiveness Inquiry Discovery Learning Based Higher Order Thinking Skills in Improving Students' Higher-Order Thinking Skills and Spiritual Emotional Intelligence

Level *operational field testing* aims to test the effectiveness of the model *Inquiry Discovery Learning* (IDL) based *Higher Order Thinking Skills* (HOTS) in improving high-level thinking skills (*Higher Order Thinking Skills*) and the emotional and spiritual intelligence of students in the subject of Aqidah Akhlak. The implementation test was carried out on 238 students of class XI of State Islamic Senior High School of Pesisir Selatan Regency for the 2022/2023 Academic Year The effectiveness of the model was analyzed through HOTS tests, spiritual emotional intelligence questionnaires, learning observations, and statistical analysis using yes and N-Gain.

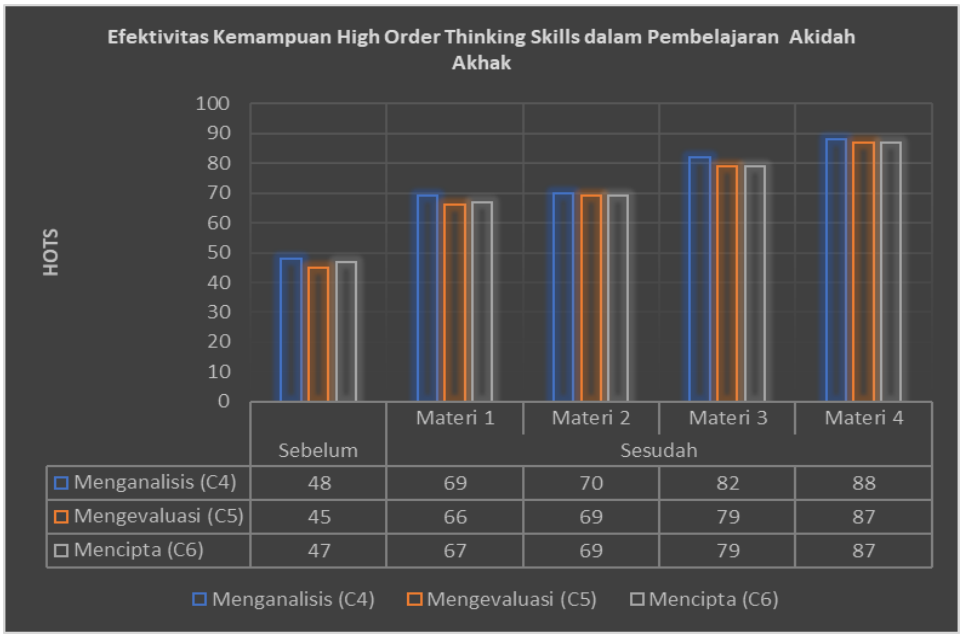


Fig 4. Graph of Students' Higher Order Thinking Skills Abilities

The implementation results show that students' HOTS skills have improved across all learning materials. Prior to the model's implementation, higher-order thinking skills were still in the low category, with an achievement in the analysis aspect (C4) of 48%, evaluation (C5) 45%, and creation (C6) 47%. After the model was implemented, all aspects increased gradually in each learning material until reaching the very good category in the fourth material, namely C4 is 88%, C5 is 87%, and C6 is 87%. These findings indicate that the HOTS-based IDL model is able to facilitate students in developing the ability to analyze, evaluate, and create solutions to various issues of faith and morality systematically. Statistical analysis using N-Gain and yes (Sig. < 0.05) shows that the increase in HOTS abilities occurred significantly in each learning material.

Table 7. Summary of HOTS Ability Improvement

Material	Previous Score	Score After	N-Gain	Category

I. Respecting Parents and Teachers	41,92	60,36	0,51	Currently
II. The story of Prophet Lut (peace be upon him).	41,92	62,41	0,57	Currently
III. The Beauty of Asmaul Husana	41,92	72,26	0,84	High
IV. Wisdom, Iffah, Syaja'ah, and 'Adalah	41,92	78,34	1,01	High

Based on Table 7, students' HOTS abilities increased gradually, from the moderate category in the first and second materials to the high category in the third and fourth materials. This increase indicates that the application of syntax. *Inquiry Discovery Learning* HOTS-based learning model is able to develop students' analytical (C4), evaluation (C5), and creativity (C6) skills in understanding and solving Aqidah Akhlak problems based on Islamic values. Overall, the implementation results prove that the model is effective in improving higher-order thinking skills through student-centered learning with inquiry, discovery, reflection, and problem-solving activities. In addition to HOTS capabilities, this study also tests the model's effectiveness in improving students' spiritual emotional intelligence. Measurements were carried out before and after the model implementation using a spiritual emotional intelligence questionnaire given to all respondents.

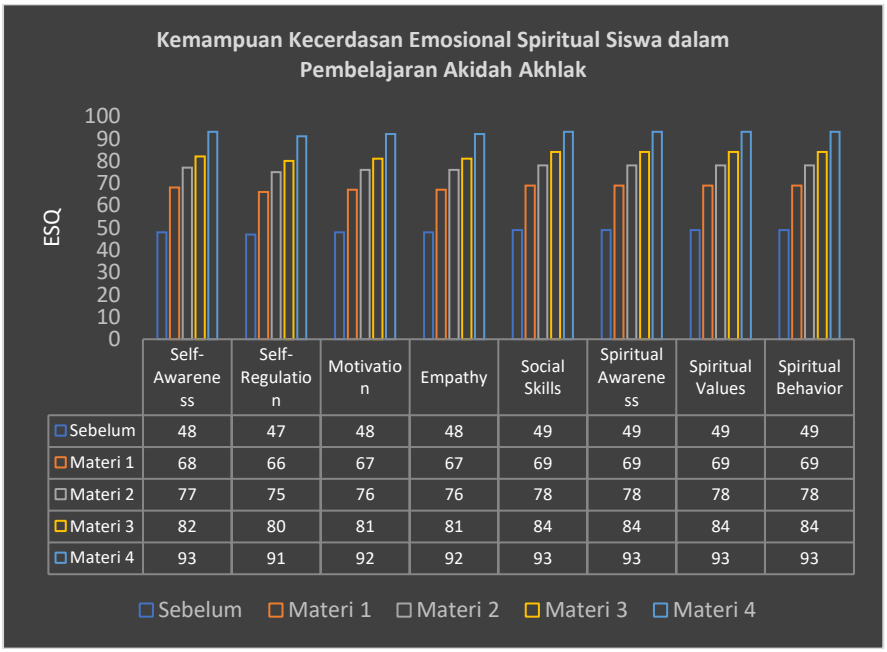


Fig 5. Graph of Increase in Students' Spiritual Emotional Intelligence

The results of the study showed a consistent increase in all indicators of emotional and spiritual intelligence. Prior to the implementation of the model, all indicator scores were in the low category. Poor (47–49%). After learning using the HOTS-based IDL model, achievement increased to 66–69% in the first material, it increased again to 75–84% in the second and third materials, and achieve 91–93% in the fourth material which is included in the category Very good These results indicate that the inquiry-based learning process not only develops higher-order thinking skills, but also strengthens students' self-awareness, empathy, emotional control, moral responsibility, and spiritual awareness. Statistical analysis using N-Gain and yes (Sig. < 0.05) shows that the increase in spiritual emotional intelligence occurred significantly in each learning material.

Table 8. Summary of Increased Spiritual Emotional Intelligence

Material	Previous Score	Score After	N-Gain	Category
I. Respecting Parents and Teachers	77,13	108,54	0,38	Currently

II. The story of Prophet Lut (peace be upon him).	77,13	123,27	0,56	Currently
III. The Beauty of Asmaul Husana	77,13	132,13	0,66	Currently
IV. Wisdom, Iffah, Syaja'ah, and 'Adalah	77,13	148,35	0,86	High

Based on Table 8, the emotional and spiritual intelligence of students increased gradually, from the medium category in the first material to the high category in the fourth material (N-Gain = 0.86). This increase indicates that the syntax of *Inquiry Discovery Learning* HOTS-based learning is able to encourage students to discuss, reflect, examine the values of Aqidah Akhlak, and relate them to everyday life. The results of the analysis also show that the effective model significantly improves higher-order thinking skills and spiritual emotional intelligence (Sig. < 0.05), making it suitable for use as an alternative learning method for Aqidah Akhlak in Madrasah Aliyah.

Contribution Higher Order Thinking Skills in Models Inquiry Discovery Learning on Students' Spiritual Emotional Intelligence as a Holistic Goal of Aqidah and Ethics Learning

The results of the study show that *Higher Order Thinking Skills* (HOTS) in the model *Inquiry Discovery Learning* contribute to the development of students' emotional and spiritual intelligence in Aqidah Akhlak learning. Through analysis, evaluation, and creativity, students not only develop higher-order thinking skills but also increase self-awareness, emotional control, empathy, responsibility, and the ability to internalize the values of faith and morals in everyday life. Thus, HOTS acts as a bridge between concept mastery and emotional and spiritual character development.

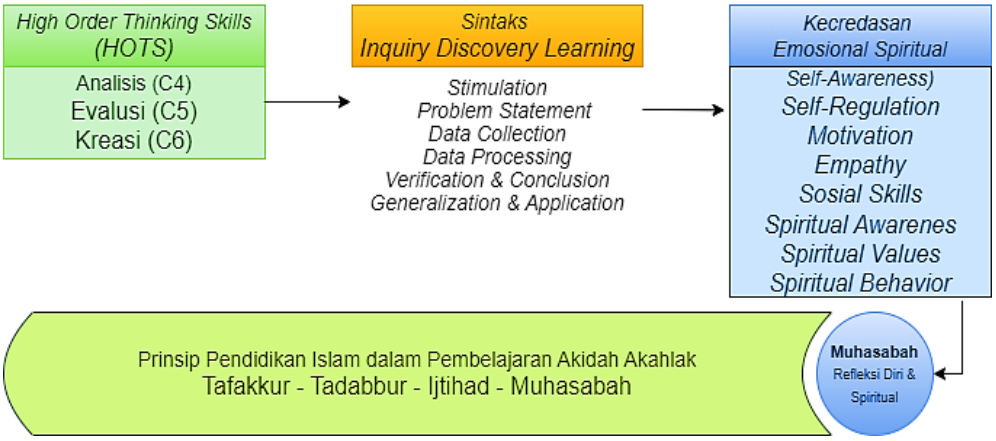


Fig 6. Model Contribution *Inquiry Discovery Learning* Based *Higher Order Thinking Skill* Son Students' Spiritual Emotional Intelligence

The model developed also integrates Islamic educational values through the process *thought*, *contemplation*, *ijtihad*, and *reflection* in each learning syntax. Figure 6 shows that the stages *Inquiry Discovery Learning*, starting from *stimulation*, *problem identification*, *data collection*, *data processing*, *verification*, until *generalization and applying*, encouraging students to think reflectively, solve problems, and internalize the values of Akidah Akhlak. These findings indicate that the model is suitable for use as an alternative to Akidah Akhlak learning, capable of developing higher-order thinking skills as well as emotional and spiritual intelligence in an integrated manner.

Dissemination and Implementation

The dissemination stage is carried out after the Model *Inquiry Discovery Learning* (IDL) based *Higher Order Thinking Skills* (HOTS) was declared valid, practical, and effective. Dissemination was carried out through scientific publications, workshops for Madrasah Aliyah teachers, and the distribution of learning tools through digital media. The implementation results showed that teachers were able to apply the model according to the developed syntax, while students became more active in discussions, critical thinking, reflection, and relating the Aqidah Akhlak material to everyday life.

Responses from teachers and workshop participants also indicated that the model was easy to understand, aligned with the Merdeka Curriculum, and had the potential to be implemented in other madrasahs. Empirically, the application of the HOTS-based IDL model has transformed the teaching of Aqidah Akhlak from teacher-centered to active, contextual, and reflective learning. This change has resulted in increased higher-order thinking skills and strengthened students' emotional and spiritual intelligence, making the model a suitable alternative for teaching Aqidah Akhlak in Islamic Senior High Schools (Madrasah Aliyah).

Table 9, Comparison of Conditions Before and After Model Implementation *Inquiry Discovery Learning* HOTS-based

Aspect	Before Model Implementation	After Model Implementation
Learning Orientation	Teacher-centered through lectures and memorization.	Student-centered through inquiry, discovery, discussion, and reflection activities.
Cognitive Domain	Dominant in remembering and understanding concepts.	Developing to the ability to analyze (C4), evaluate (C5), and create (C6).
Understanding the Concept of Aqidah Akhlak	Normative and theoretical in nature.	Contextual and related to real life.
Learning Activities	Students tend to be passive, receiving information from the teacher.	Students actively seek information, discuss, solve problems, and conclude learning outcomes.
Emotional Intelligence	Self-awareness, empathy, and emotional control have not developed systematically.	Self-awareness, empathy, responsibility, and the ability to work together develop through reflection and discussion activities.
Spiritual Intelligence	Religious values are understood as theory.	The values of faith and morals are internalized through reflection, contemplation, and application in daily life.
Learning Syntax	Not using inquiry stages systematically.	Using syntax *stimulation*, *problem identification*, *data collection*, *data processing*, *verification*, as well as *generalization and applying*.
Learning Outcomes	Mastery of the material places more emphasis on memorization.	There is an increase in HOTS abilities as well as the formation of emotional and spiritual intelligence.

Based on the implementation results, it can be concluded that the model *Inquiry Discovery Learning* HOTS-based learning can transform Aqidah Akhlak learning from memorization-oriented learning to learning that emphasizes analysis, evaluation, creation, and reflection on values. This change not only improves students' higher-order thinking skills but also strengthens emotional and spiritual intelligence, the primary goals of Islamic education. Thus, the developed model provides a theoretical contribution to the development of HOTS-based Aqidah Akhlak learning models while also providing a practical contribution as a learning alternative relevant to the demands of 21st-century education and the implementation of the Independent Curriculum.

Discussion

The present study developed a HOTS-oriented Inquiry Discovery Learning (IDL) model for Aqidah Akhlak instruction and examined its validity, practicality, and effectiveness in supporting higher-order thinking and emotional–spiritual intelligence. The findings converge across the development stages. The needs analysis showed that both students and

teachers perceived a strong need for a more active, contextual, and reflective learning model, while the developed products including the model book, teacher guide, student module, and assessment instruments received Aiken's V coefficients ranging from .77 to .82. Practicality ratings of approximately 79.32%–80.25% further indicated that the model could be implemented by teachers and was positively received in classroom use. More importantly, students' higher-order thinking performance increased across the learning sequence: initial performance in analysis (C4), evaluation (C5), and creation (C6) was 48%, 45%, and 47%, respectively, whereas by the fourth instructional unit these indicators reached 88%, 87%, and 87%. Emotional–spiritual indicators followed a similarly progressive pattern, increasing from approximately 47%–49% before implementation to 91%–93% in the final unit. These converging results suggest that the developed model was feasible for classroom use and that its implementation period was accompanied by substantial improvement in both cognitive and emotional–spiritual outcomes. Nevertheless, because the effectiveness evidence relies primarily on pre–post comparisons and N-Gain rather than a randomized comparison condition, these improvements should be interpreted as changes associated with model implementation rather than definitive causal effects.

The improvement in HOTS is broadly consistent with contemporary international evidence on inquiry-oriented learning. A systematic review by Dah et al. (2024) found that inquiry-based environments can support conceptual understanding, reasoning, problem solving, and higher-order competencies, although outcomes vary according to instructional design and the degree of guidance. Similarly, Strat et al. (2024), reviewing 142 empirical studies on inquiry-based science education, found positive cognitive, pedagogical, and affective outcomes but emphasized that productive inquiry requires deliberate instructional support. De Jong et al. (2024) go further by rejecting a simple opposition between inquiry and direct instruction; effective learning environments typically combine students' active investigation with explicit guidance, explanation, and feedback. This point is especially relevant to the present model because the IDL syntax is accompanied by a teacher guide, structured learning modules, problem prompts, reflection activities, and explicit HOTS tasks rather than leaving students to discover concepts without instructional support. Research on responsive scaffolding reaches a comparable conclusion: the quality of teacher guidance during inquiry can shape whether student autonomy produces productive reasoning rather than cognitive overload (Sasse et al., 2025). Thus, the current findings are better explained by structured inquiry supported by scaffolding than by discovery activity alone.

The findings also align with studies specifically concerned with higher-order and critical thinking. Arifin et al. (2025), in a systematic review and meta-analysis of inquiry-based science learning, reported a substantial overall positive effect on critical-thinking performance, while Alanazi et al. (2024) showed that guided discovery combined with scaffolding can promote higher-order thinking. García-Carmona (2025) argues that higher-order reasoning should not be reduced to the mechanical performance of difficult tasks; rather, it involves the capacity to analyze information, evaluate alternatives, justify judgments, and construct reasoned solutions. This conceptualization closely corresponds to the present model's movement from problem identification and information gathering toward data processing, verification, generalization, and application. Comparable Indonesian evidence also exists. Prayogi et al. (2024) reported that inquiry-oriented learning supported critical thinking among prospective STEM teachers, while Riadi et al. (2024) found that a developed blended-inquiry model improved analysis, evaluation, and creation skills in Indonesian higher education. These parallels suggest that the cognitive gains found in Aqidah Akhlak are part of a broader pattern in which structured inquiry provides repeated opportunities for learners to interrogate problems, compare evidence, construct explanations, and revise conclusions.

What distinguishes the current study, however, is that higher-order reasoning is embedded within religious and moral learning rather than a conventional science or STEM context. This contextual distinction matters. Alotaibi's (2025) systematic review demonstrates that Islamic education teachers can foster HOTS when learning moves beyond literal recall toward analysis, questioning, interpretation, and reasoned evaluation. Jarmer (2025), writing from a different religious-education tradition, likewise shows that religious education can facilitate several forms of critical judgment when students are encouraged to examine religious concepts, meanings, and their social or ethical implications rather than merely reproduce received information. These international findings support the premise that intellectual challenge is not incompatible with religious formation. In Aqidah Akhlak, analysis and evaluation can instead provide cognitive routes through which learners examine the meaning and application of moral principles. The present study extends this proposition by incorporating reflection, value discussion, and application alongside analysis, evaluation, and creation, thereby situating HOTS within a pedagogical sequence directed toward both intellectual understanding and value internalization.

The concurrent improvement in emotional and spiritual intelligence adds another dimension to this argument. Spiritual intelligence has been conceptualized as the capacity to draw upon spiritual resources, values, meaning, discernment, self-awareness, and transcendence in navigating everyday life (Amram, 2022). Anwar et al. (2020) similarly found meaningful relationships between dimensions of spiritual intelligence grounded in an Islamic perspective and emotional intelligence. The pattern observed in this study—improvements in self-awareness, self-regulation, motivation, empathy, social skills, spiritual awareness, spiritual values, and spiritual behavior—is therefore theoretically plausible when inquiry is combined with reflective engagement in moral problems. Yet the findings should not be taken to imply that HOTS automatically produces spiritual intelligence. Rather, the model deliberately links cognitive activity with reflection on Aqidah Akhlak values. This interpretation is strengthened by Indonesian studies. Suharjo et al. (2025) developed a Sufi-oriented experiential learning model that integrated religious experience with emotional–spiritual development, while Sholihah et al. (2025) reported that a guided-inquiry model explicitly integrated with Islamic values supported both active learning and value-oriented behavior. Thus, what appears important is not inquiry in isolation but the intentional coupling of inquiry with culturally and religiously meaningful reflective experiences.

The Indonesian evidence also helps explain why the model's validity and practicality matter alongside its learning outcomes. Maulidnawati Jumrah et al. (2026) reported that a HOTS-based RADEC model in an Integrated Islamic Elementary School could combine structured learning phases with critical-thinking development, demonstrating that HOTS-oriented innovation is feasible within explicitly Islamic educational settings. The present model extends that direction to Madrasah Aliyah and to the specific content of Aqidah Akhlak. Research from the requested author profile offers a related methodological comparison: Koderi et al. (2023) developed and evaluated a locally contextualized learning product for madrasah students and showed that instructional innovation can become more meaningful when pedagogical design is connected to learners' cultural environment. Likewise, Erlina et al. (2025) showed in Islamic education that problem-centered learning can combine academic learning with the internalization of religious-moderation values. Even research outside Islamic studies points in a compatible direction: Sidik et al. (2025) found through systematic review that problem- and project-oriented learning environments facilitate critical thinking, problem solving, and creative engagement. Collectively, these studies reinforce the current model's attempt to combine structured active learning with contextual value formation rather than treating cognitive and character outcomes as separate educational agendas.

Theoretically, the findings refine the relationship between constructivist inquiry, revised Bloom's taxonomy, and Islamic value education by suggesting that HOTS can function not simply as a cognitive endpoint but as a reflective bridge between conceptual understanding and value internalization. Analysis enables students to examine moral situations in depth, evaluation requires reasoned judgment, and creation provides opportunities to formulate ethically grounded responses; however, the transition from cognition to emotional–spiritual development is most plausibly supported when these processes are intentionally accompanied by *tafakkur*, *tadabbur*, value deliberation, application, and *muhasabah*. Pedagogically, Aqidah Akhlak teachers should therefore combine inquiry tasks with explicit scaffolding, authentic moral problems, collaborative discussion, reflection, formative feedback, and opportunities to relate Islamic concepts to everyday decisions rather than replacing direct explanation with unguided discovery. Digital media can supplement this process when they increase access, visualization, engagement, and reflection, consistent with evidence that technology-supported inquiry can strengthen complex thinking when embedded within a coherent learning design (Ormanci & Cepni, 2026). Policy-wise, madrasah curriculum implementation should support teacher professional development in HOTS-oriented religious pedagogy, provide validated model books and modules, strengthen inquiry-based assessment, and permit contextual pedagogical innovation while maintaining the substantive aims of Aqidah Akhlak. The present findings do not, however, justify claims concerning social-media behavior, media literacy, clinical mental health, or online identity because those outcomes were not measured; emotional–spiritual intelligence should not be treated as a clinical mental-health indicator.

The principal contribution of this study lies in developing and testing an integrated learning architecture in which HOTS-oriented Inquiry Discovery Learning is deliberately connected to emotional–spiritual formation within Aqidah Akhlak. Previous inquiry studies have predominantly emphasized cognitive, scientific, or problem-solving outcomes, while religious-education research has often treated moral and spiritual development separately from higher-order cognition. The developed model connects these domains through a sequenced process of stimulation, problem identification, information gathering, analysis, verification, generalization, application, and value reflection, supported by a model book, teacher guide, student module, and integrated instruments. Its novelty therefore lies less in the individual use of inquiry, HOTS, or Islamic values each of which is well established than in their systematic integration within one R&D-tested pedagogical system for Madrasah Aliyah. The study also contributes preliminary empirical evidence that a model can be simultaneously judged valid and practical while cognitive and emotional–spiritual indicators improve during implementation. This contribution should nevertheless be framed as evidence of feasibility and promising educational effectiveness, rather than proof that the model is superior to alternative inquiry, discovery, or conventional approaches.

Several limitations delimit these conclusions. The field implementation was confined to public Madrasah Aliyah in Pesisir Selatan Regency, which limits generalization to private madrasahs, other provinces, and different educational levels. More importantly, the pre–post effectiveness analysis did not include a randomized or matched comparison group; consequently, maturation, repeated testing, teacher effects, differences among instructional units, and other contemporaneous influences cannot be completely separated from the observed improvements. Emotional–spiritual intelligence was also assessed largely through questionnaire-based indicators and may therefore be susceptible to self-report and social-desirability effects, particularly in a religious-education context. The relatively short implementation period does not establish whether gains in HOTS or emotional–spiritual intelligence persist or transfer to behavior outside the classroom. Future studies should

employ larger multi-regional samples, controlled or quasi-experimental designs, longer follow-up periods, independent classroom observations, behavioral indicators of value enactment, and mixed-method inquiry into students' reasoning and reflective experiences. Structural modeling could further test whether changes in HOTS mediate emotional–spiritual development, while comparative studies could determine whether the integrated model provides incremental benefits over conventional inquiry, discovery learning, or existing Aqidah Akhlak instruction.

Conclusion

This study shows that the Inquiry-Discovery Learning (IDL) Model, which is based on Higher-Order Thinking Skills (HOTS), has a strong theoretical and philosophical foundation through the integration of constructivism, the inquiry-discovery approach, HOTS, and Islamic educational values. This model, developed in the form of a model textbook, teacher's guide, student learning modules, and research instruments, has been proven to meet criteria ranging from valid to highly valid, is practical for use in the classroom, and is effective in enhancing students' analytical and evaluative skills as well as their creativity, while simultaneously strengthening their emotional and spiritual intelligence. These findings indicate that the HOTS-based IDL model is capable of holistically integrating cognitive, emotional, and spiritual aspects, making it suitable for implementation as an alternative approach in teaching Aqidah Akhlak that is more active, reflective, and meaningful, as well as aligned with the implementation of the Merdeka Curriculum and the demands of 21st-century education.

Based on these findings, the HOTS-based IDL model is recommended as an innovation in the teaching of Aqidah Akhlak, supported by teacher training, the development of inquiry-based activities, the use of digital technology, and the provision of a wider variety of learning resources to make the learning process more contextual and participatory. Theoretically, this study reinforces the concept that HOTS not only plays a role in the development of cognitive abilities but also contributes to the formation of learners' emotional and spiritual intelligence. However, this study is still limited to its implementation at the State Madrasah Aliyah in Pesisir Selatan Regency, with a relatively short implementation period. Therefore, it is recommended that future research test the model across a wider geographical area and educational levels, conduct longitudinal studies to examine long-term impacts, and integrate digital technology to enhance the effectiveness and sustainability of the model's implementation.

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