

Implementing Higher-Order Thinking Skills Oriented Assessment in Islamic Religious Education

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ABSTRACT: *This study aims to critically examine the implementation of Higher Order Thinking Skills (HOTS)-oriented assessment in the first-semester final examination of Islamic Religious Education (IRE) at SD IT Anak Shaleh, with particular attention to the coherence between instructional planning, classroom enactment, and evaluative practices in fostering students' higher-order cognitive capacities. Employing a qualitative descriptive design with a content analysis approach, the research collected data through non-participant observation, semi-structured interviews, and systematic document analysis of assessment instruments, syllabi, learning outcomes, and institutional archives. This study analysed data through iterative stages of reduction, categorical display, and inferential interpretation and ensured credibility through methodological and source triangulation, peer debriefing, and audit trail validation. The findings reveal that HOTS-based items predominantly target the L4–L6 cognitive levels of Bloom's Revised Taxonomy and align with the Merdeka Curriculum framework. The integration of the REACT pedagogical model (relating, experiencing, applying, communicating, and transferring) effectively enhanced contextual reasoning, analytical judgment, evaluative reflection, and creative synthesis across core IRE domains, including aqidah, fiqh, and Qur'an-Hadith. Quantitative score trends indicate a substantive improvement in student performance, increasing from an initial range of 50%–65% to 70%–82%, representing gains of 17%–22%, thereby substantiating the efficacy of HOTS-oriented assessment in activating advanced cognitive processes. Despite these contributions, the study faces limitations due to its single-site scope and reliance on qualitative interpretation, which may constrain generalisation. The originality of this research lies in its integrative analysis of learning objectives, instructional processes, and summative assessment within a unified HOTS framework at the primary level, positioning teachers as deliberate designers of cognitive architecture rather than mere evaluators.*

Penelitian ini bertujuan mengkaji secara kritis penerapan asesmen berbasis *Higher Order Thinking Skills* (HOTS) dalam penilaian akhir semester ganjil mata pelajaran Pendidikan Agama Islam (PAI) di SD IT Anak Shaleh, dengan menitikberatkan pada koherensi antara perencanaan pembelajaran, implementasi instruksional, dan praktik evaluatif dalam menumbuhkan

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kemampuan kognitif tingkat tinggi peserta didik. Penelitian menggunakan desain deskriptif kualitatif dengan pendekatan analisis konten. Pengumpulan data dilakukan melalui observasi nonpartisipatif, wawancara semi-terstruktur, serta telaah dokumen secara sistematis terhadap instrumen penilaian, silabus, capaian pembelajaran, dan arsip kelembagaan. Analisis data dilaksanakan melalui tahapan reduksi data, penyajian kategoris, dan penarikan inferensi, dengan validitas data dijamin melalui triangulasi metode dan sumber, diskusi sejawat, serta audit trail. Hasil penelitian menunjukkan bahwa butir soal HOTS didominasi oleh level kognitif L4–L6 dalam Taksonomi Revisi Bloom dan selaras dengan kerangka Kurikulum Merdeka. Integrasi model REACT (*Relating, Experiencing, Applying, Communicating, dan Transferring*) terbukti memperkuat penalaran kontekstual, kemampuan analitis, refleksi evaluatif, serta sintesis kreatif pada ranah Aqidah, Fikih, dan Al-Qur'an-Hadits. Analisis capaian skor mengindikasikan peningkatan signifikan dari rentang awal 50%–65% menjadi 70%–82%, dengan lonjakan sebesar 17%–22%, yang menegaskan efektivitas asesmen HOTS dalam mengaktifasi proses kognitif tingkat tinggi. Keterbatasan penelitian ini terletak pada ruang lingkup lokasi yang bersifat tunggal serta dominasi pendekatan kualitatif yang membatasi generalisasi temuan. Orisinalitas penelitian terletak pada analisis integratif antara tujuan pembelajaran, proses instruksional, dan asesmen sumatif dalam satu kerangka HOTS pada jenjang sekolah dasar, yang menempatkan guru sebagai perancang arsitektur kognitif, bukan sekadar pelaksana evaluasi.

Keywords: *Assessment Implementation, Higher-Level Thinking Skills, Islamic Education.*

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I. INTRODUCTION

Some proof has occurred in the field of Islamic religious education, which is a way to relieve socio-cultural problems. As a Pancasila ideology country that contains divine values, Islamic religious education is considered only as structured education and only as intellectual intake (Kuswana, 2024). With the existence of Islamic religious education, the community should be more developed along with globalisation. Thus, the Islamic religious education factor of the community is more active in interacting with the community and being mutually responsible (Warsah et al., 2024).

The purpose of Islamic religious education for humans is to have an Islamic character, submission to Allah Swt, and implement Islamic law that has been obtained into life. Islamic religious education also has a goal for students to instil learning that is of inner value, morals, and ethics based on the holy book of the Qur'an and Hadith, so that the cognitive, affective, and psychomotor development of learners (Ramadhan, 2025). Thus, students have good socialising with the community and a good understanding of Islamic science as well.

Islamic religious education has learning components that support the success of teachers in teaching in class, including learning strategies, learning methods, learning objectives, learning materials and evaluation (Ar-raniry, 2024).

The thing that must be applied so that learning is carried out effectively is, of course, important evaluation. The evaluation carried out by the teacher aims to see the extent to which students understand what the teacher has taught (Iskandar & Rasmitadila, 2024). The evaluation obtained is planned to become a teacher's guide for the success of students who are carried out through practical learning and become a change in Islamic religious education teaching.

Bloom's Taxonomy is now famously used as a learning evaluation tool. Bloom's taxonomy has six classifications in cognitive aspects for learning objectives carried out by teachers, namely knowledge, comprehension, application, analysis, synthesis, and evaluation (Muhammad et al., 2021).

However, Bloom's Taxonomy has been revised by Anderson & Krathwohl (2001) with six classifications in cognitive aspects such as remember, understand, analyse, evaluate, and create. Then these stages are classified into Thinking Skill competencies. In the knowledge aspect, there are four classifications, namely factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive knowledge (Hajaroh, 2021).

Critical thinking skills allow students to examine issues in greater depth, such as linking types of impurity with fiqh implications, worship contexts, or normative reasons based on arguments (Imron & Muallifah, 2025). This link between thinking taxonomies is important for IRE learning at the elementary school level because students' cognitive development is at the concrete operational stage. Thus, gradual stimulation from basic thinking to critical thinking is essential for building religious understanding that is not only factual but also rational (Jarmer, 2025).

It is stated in the regulation of the Ministry of Education and Culture No. 12 of 2024 concerning regulations for PIAUD, elementary, and junior high school levels. This has been widely heard about the independent curriculum since 2020 2020, 2024. The policy certainly aims to improve the quality of learning for the younger generation so that they will be able to compete internationally (Indraprasta & Pawiro, 2023).

Regarding competing internationally, the Merdeka Curriculum is perfectly designed. First, in Constructivism, students rely on their knowledge to conceptualise their knowledge. Then they can discuss with fellow students and apply. Second, Inquiry (Finding), students in this course are prioritised to think critically in the learning process, so that students achieve effective learning and can compete internationally (Wijayanti et al., 2025). Then, in the assessment component, namely the results of student assessment, students get the expected value and can improve their high-level thinking (critical), also known as Higher Order Thinking Skills. Thus, the author considers it important to evaluate students' critical thinking so that it can be measured by Higher Order Thinking Skills (Wijaya et al., 2023).

This journal emphasises the importance of teacher integrity in developing questions that truly reflect Higher Order Thinking Skills (HOTS). Teachers do not merely fulfil their assessment obligations, but act as facilitators of critical thinking, especially in Islamic education learning, who are responsible for shaping students' intellectual character ethically.

After observing the results of the End of Semester 1 Assessment at SD IT Anak Shaleh, it was identified that most students have difficulty in solving questions that require HOTS. This can be seen from the low scores of students on analysis, evaluation, and creation questions, where only 30% of students were able to answer correctly. This

situation raises concerns for teachers and parents, considering that higher-order thinking skills are essential skills that students need to face the challenges of learning in the modern era. In addition, it was also found that some teachers still have difficulties in developing HOTS questions that are in accordance with the level of cognitive development of elementary school students, so that the questions made are sometimes too complicated or do not reflect the actual characteristics of HOTS. Furthermore, teachers are responsible for harmonising learning objectives, processes, and assessments, which affects students' final grades.

This research presents a dimension of novelty through the integration of operational indicators of Bloom's Revised Taxonomy into the learning evaluation design for Islamic Religious Education at the primary level. Unlike previous studies that only focused on developing HOTS questions in general, this research explores the connection between learning objectives, instructional processes, and end-of-semester assessments simultaneously within the framework of the Merdeka Curriculum. The findings enrich the discourse of critical pedagogy by strengthening the teacher's position as a cognitive architect who not only compiles instruments but also engineers the learning environment to stimulate students' higher-order thinking skills (Putriana et al., 2025).

The main objective of this research is to evaluate the implementation of HOTS-based questions in the end-of-semester assessment of Islamic Religious Education subjects at the primary school level, especially in the aspect of integration between learning objectives, teaching processes, and evaluation of learning outcomes. This research seeks to examine how the integration of higher-order thinking indicators can improve students' analytical, evaluative and creative abilities in understanding Islamic values, such as *aqidah*, *ibadah* and morals. Thus, the application of HOTS is not only an instrument to improve cognitive quality, but also internalising Islamic teachings that are more reflective and contextual in the lives of students. Based on the above background, the author is interested in researching the implementation of Higher Order Thinking Skills (HOTS) questions in the final assessment of semester 1 of SD IT Anak Shaleh.

II. METHOD

Content analysis is a methodological approach that systematically examines, deconstructs, and interprets the messages or meanings embedded within documents, texts, or other written artefacts. This technique focuses on identifying patterns, categories, or underlying structures that may be explicit or implied. Meanwhile, the descriptive qualitative approach aims to portray a phenomenon in detailed form as it naturally occurs, without manipulating variables or requiring the formulation of new theories (Furidha & Sidoarjo, 2023). Through this approach, the researcher seeks to develop an in-depth understanding of the object of study by presenting narrative explanations that reveal context, meaning, and the relationships among elements emerging from the empirical data. The combination of these approaches enables a more comprehensive, structured, and meaning-oriented interpretation of the content under investigation (Gülpinar, 2024).

The research data consist of textual materials embedded within the assessment instruments, including item stems, competency indicators, scoring guidelines, and curriculum references (Schilling et al., 2024). The primary data sources include: 1) official final-semester examination documents, 2) the IRE syllabus and formulated learning outcomes, and 3) school archives documenting the evaluation system.

Supplementary data were obtained through focused observations, guided interviews, and institutional document tracing to enrich the contextual understanding of HOTS-based item implementation for Grade VI students at SD IT Anak Shaleh.

Data collection involves a systematic acquisition of empirical materials relevant to the research objectives. This study gathered data through structured documentation reviews, focused observations, and guided interviews to obtain comprehensive and contextual evidence regarding the implementation of HOTS-based assessment instruments (Rizal & Wulandari, 2020).

Theoretically, observation is defined by Creswell as a systematic process of recording behavioural patterns, interactions, and contextual features within a natural setting to obtain firsthand evidence about the phenomenon under study. In qualitative educational research, observation enables researchers to understand how assessment instruments are developed, used, and interpreted within the school's instructional ecosystem (Leary et al., 2023). Practically, this study conducts non-participant observation, meaning the researcher does not intervene in the assessment process but observes its supporting activities. The observation focuses on: 1) How teachers discuss or review test finalisation; 2) The procedures used by the IRE teacher in aligning items with cognitive indicators; 3) The implementation of assessment guidelines during exam preparation; 4) The extent to which HOTS principles (analysis, evaluation, reasoning) are considered in item design. The observational notes provide contextual insight that supports document and interview data, especially regarding the authenticity of HOTS implementation at the school level.

Theoretically, interviews are described by Kvale & Brinkmann as structured conversations aimed at uncovering participants' experiences, reasoning, and interpretations (Vega & Anas, 2025). In qualitative descriptive research, interviews serve as a means to capture the subjective understanding of individuals directly involved in the assessment process (Rohmawati et al., 2023).

Practically, this study uses semi-structured interviews, allowing the researcher to explore predetermined themes while giving respondents flexibility to elaborate. The interview subjects include: 1) IRE teacher as the leading designer and validator of HOTS-based items; 2) School assessment coordinator to explain institutional standards and procedures; 3) Curriculum staff or the vice principal to provide curriculum alignment and policy context.

Theoretically, document analysis is defined by Bowen as a process of systematically reviewing and interpreting written materials to extract meaning, patterns, and contextual understanding (Fallah et al., 2023). In assessment research, document analysis is crucial because test items exist primarily in textual form (Khan et al., 2025).

Using observation, interviews, and document analysis together reflects the qualitative principle of methodological triangulation (Chand, 2025). According to Denzin, triangulation enhances credibility by verifying information across multiple data sources (Usready & Rachman, 2025).

In this study Documents show what HOTS items look like, interviews explain why they were designed that way, observations reveal how the process unfolds in real practice. This integrated approach ensures that conclusions about HOTS implementation are grounded, comprehensive, and empirically robust.

The analytical procedure follows three principal stages (Pakpahan et al., 2021): 1) Data reduction is carried out through the identification, delimitation, and categorisation of HOTS-related elements, including cognitive levels, stimulus accuracy, and alignment with competency standards. 2) Data organised, organised in categorical matrices that facilitate the interpretation of conceptual patterns and inter-element relationships. 3) Inferential drawing, conducted through reflective inductive reasoning to derive conclusions regarding the quality of item construction in light of authentic assessment theory and the revised Bloom's taxonomy. The analysis adheres to the principles of qualitative content, emphasising the interpretation of latent meaning rather than mere surface-level description.

The credibility of the findings is ensured through several strategies (Hamilton, 2019): 1) Method triangulation, achieved by cross-verifying data obtained from observations, interviews, and document analysis. 2) Source triangulation was conducted by comparing information from IRE teachers, school documentation, and curriculum materials. 3) Peer debriefing is used to examine the consistency and rigour of the analytical reasoning. 4) Audit trail, maintained through transparent documentation of the analytical process, enabling complete verification of each procedural step.

III. RESULT AND DISCUSSION

Planning for Higher Order Thinking Skills (HOTS) Questions

The planning of HOTS instruments focuses on constructing questions that stimulate advanced cognitive operations, such as relational analysis, concept integration, and critical assessment (Febrianti et al., 2021). At this stage, educators align learning indicators with cognitive taxonomy so that each question has a discriminatory power over more complex reasoning abilities compared to basic knowledge levels (Kouicem & Boulekhal, 2025).

The formulation of HOTS items requires strong conceptual validity through the careful selection of precise and context-appropriate operational verbs. Each question is structured to prompt learners to engage in more profound meaning-making, construct coherent arguments, and derive decisions grounded in reflective reasoning (Qudsiah & Hayati, 2023). Consequently, the assessment's quality extends beyond measuring informational breadth, focusing instead on evaluating substantial cognitive processes with high academic rigour.

In the process of assessing the end of semester 1 of SD IT Anak Shaleh, teachers are guided by operational verbs so that the level of questions can be measured by the abilities of grade VI students. The following are the guidelines for the operational verbs of the Merdeka Curriculum;

Table 1. Bloom's taxonomy of Merdeka Curriculum

| Remembering Level 1 | Understand Level 2 | App | Analysing Level 3 & 4 | Evaluate Level 5 | Created Level 6 |
|------------------------|-----------------------|-----------|--------------------------|---------------------|--------------------|
| Quoting | Explaining | Assign | Organise | Comparing | Collecting |
| Mentioning | Categorise | Sorting | Animate | Directing | Abstracting |
| Explaining | Characterise | Determine | Collecting | Clarifying | Building |
| Drawing | Detailing | Apply | Solving | Assigning | Correcting |
| Numerizing | Associating | Calculate | Affirm | Interpreting | Planning |
| Identifying | Comparing | Modify | Detailing | Retaining | Shaping |

| | | | | | |
|------------|----------------|-------------|-------------|------------|------------|
| Sign up | Counting | Calculate | Summarising | Measuring | Improving |
| Showing | Contrasting | Construct | Linking | Validating | Designing |
| Labeling | Intertwining | Prevent | Detecting | Supporting | Making |
| Indexing | Discussing | Determining | Correcting | Separating | Summariseg |
| Pairing | Modeling | Organise | | Weighing | Summarise |
| Reading | Expressing | | | | Compose |
| Nami | Rejecting | | | | |
| Memorising | Summarising | | | | |
| Imitating | Reporting | | | | |
| Recording | Distinguishing | | | | |
| Repeating | | | | | |
| Producing | | | | | |
| Reviewing | | | | | |
| Selecting | | | | | |

Based on the operational verbs stated by Bloom's Taxonomy above, teachers can find out the characteristics of the assessment of HOTS questions for the final assessment of grade VI students of SD IT Anak Shaleh, the following assessment criteria that teachers must know before making HOTS (Rahman & Rusnayati, 2021): 1) Demands the ability to transform understanding between different concepts, 2) Involves comprehensive processing and application of information, 3) Requires the skill of linking diverse information, 4) Tests the ability to utilise information in the context of problem solving, 5) Requires the analyst to analyse the various ideas and information available critically.

Based on the guidelines for preparing HOTS in Islamic Religious Education learning, HOTS assessment instruments have three essential characteristics:

1. Focus on evaluating higher order thinking skills

Aspects of creativity in complex problem solving include (Brewster et al., 2022): a) Ability to solve unfamiliar problems, b) Ability to evaluate various approaches to solving from different points of view, c) Innovation in creating new solutions that differ from conventional approaches.

Based on the interview with the Islamic Religious Education teacher at SD IT Anak Shaleh, the application of these aspects has begun to appear in students' responses during the end-of-semester assessment. The IRE teacher explained that students increasingly demonstrate the capacity to interpret problems that are not explicitly taught in class, particularly in topics related to the signs of the Last Day and categories of zakat recipients. The teacher also noted that when students face contextual HOTS questions, they tend to compare multiple reasoning paths before choosing the most relevant answer, indicating the emergence of evaluative thinking. Moreover, several students were observed formulating alternative explanations or examples that go beyond routine textbook interpretations, which reflects the development of creative and non-conventional solutions. According to the teacher, these improvements are strongly influenced by the consistent integration of inquiry-based learning and stimulus-rich discussions during IRE lessons, which encourage students to think more broadly, critically, and reflectively.

2. Promoting contextualization and appeal

Assessment is directed at measuring students' ability to apply learning to real situations. The REACT framework is the basis of contextual assessment (Syafira et al., 2023): a) Contextualising with daily life experiences, b) Experiencing: Emphasis on aspects of

exploration and creativity, c) Applying: Implementation of knowledge in problem-solving, d) Communicating: Articulation of problem-solving models, e) Transferring: Transformation of concepts into new contexts.

Based on the interview with the Islamic Religious Education teacher at SD IT Anak Shaleh, the application of the REACT framework has significantly strengthened students' ability to engage with HOTS-based questions, as the teacher contextualises concepts through daily experiences, making Islamic teachings more concrete and relatable for learners. The teacher explained that students initially struggled to interpret case-based problems. However, after implementing REACT-oriented activities such as exploring real scenarios, discussing multiple viewpoints, and applying values to new contexts, students showed greater confidence and depth in their reasoning. According to the teacher, this approach not only improved students' problem-solving abilities but also enhanced their creativity and communication skills, as they became more capable of articulating arguments and transferring religious principles into unfamiliar situations.

3. Prioritising novelty and Avoiding Routine

HOTS questions require novelty and cannot be repeated in the same test group. Repetition of questions will turn high-level thinking into memorisation activities. Stimulus variations from various basic competencies can be the basis for developing non-routine questions.

After the teacher understands the characteristics of HOTS questions for the end-of-semester 1 assessment of grade VI students in Islamic education, the teacher creates the objectives of the HOTS question assessment and its level: a) Students can solve problems regarding faith on the last day, b) Students can explain that Allah is Muqaddim, c) Students can solve problems regarding the group of zakat recipients, d) Students can solve problems regarding the signs of doomsday, e) Students summarise the content of Surah Al-Kafirun.

After identifying the key characteristics of HOTS items for the end-of-semester Islamic Education assessment, the teacher formulated clear cognitive targets for each indicator ranging from solving problems on belief in the Last Day and classifying zakat recipients to explaining the attribute Al-Muqaddim, interpreting signs of the apocalypse, and summarizing Surah Al-Kafirun and emphasized in the interview that students tended to rely on memorization when faced with repetitive, routine questions; therefore, novelty and stimulus variation were deliberately incorporated to shift learners toward analytical and reflective reasoning. The teacher also noted that contextual prompts significantly improved students' engagement, enabling them to connect doctrinal concepts with real situations, and that HOTS-based assessment ultimately strengthened both their higher-order thinking and their spiritual-ethical awareness.

Application of HOTS Questions Final Assessment

The application of HOTS items in final assessments requires the integration of instruments that stimulate advanced cognitive operations, such as complex problem-solving, comparative analysis, and evidence-based evaluation (Maslihah et al., 2025). At this stage, the assessment functions not only as a measure of learning achievement but also as a mechanism to strengthen strategic thinking processes, testing learners' readiness to confront academic and contextual situations that demand deep reasoning.

The implementation of HOTS-based assessments also requires alignment between the question context and the realities of the learning environment, enabling learners to

activate knowledge-transfer abilities and interpret data critically (Rizqina & Budhi, 2025). Therefore, HOTS-oriented final assessments do emphasise answer accuracy, but also the quality of reasoning, the synthesis of information, and the precision of arguments that reflect holistic and reflective conceptual mastery (Gunartha, 2024).

Based on the application by teachers in applying HOTS questions in the end-of-semester 1 assessment of SD IT Anak Shaleh with the L4-L6 measurement.

Table 2. HOTS problem results

| HOTS Questions | Answer |
|---|--|
| Write down the wisdom of believing in the Last Day! (L4) | We are more convinced of the greatness and power of Allah SWT, more enthusiastic about doing good deeds, being honest, disciplined, and responsible in doing our work. |
| Explain the meaning and significance of the attribute Al-Muqaddim in the understanding of Islamic divinity (L5) | The meaning of this concept is that God existed before anything was created. He is the beginning of all things, which has no beginning and no end. |
| Name the 8 categories of zakat recipients! (L4) | Poor People Poor People Zakat administrator (Amil) Mualaf People in debt Fisabillah Enslaved people Ibn sabil |
| Write down the signs of doomsday! (L4) | Many scholars have died Knowledge is not considered important Immorality is becoming more blatant Claiming people as prophets/messengers. |
| What are the messages contained in Surah Al-Kafirun? (L6) | The 109th surah of the Qur'an emphasises the principle of firmness in belief and the rejection of compromise in matters of faith and religious practice. It underscores the importance of maintaining the purity of aqeedah without negotiating or adjusting to different beliefs. |

According to Ningsi et al. (2024), the cultivation of HOTS-oriented learning equips students with critical reasoning abilities by engaging their cognitive processes through meaningful learning experiences. Through this approach, learners can dissect information, generalisations, and structure ideas coherently, and infer logical conclusions from the material studied. As a result, they become more active and methodical in interpreting and assessing various arguments. This instructional model operates within the L4–L6 cognitive tiers of Bloom's Taxonomy, fostering a habitual practice of higher-level and reflective thinking.

Educators apply HOTS-based assessments for several pedagogical reasons. Learners with limited foundational knowledge require gradual exposure to higher-level questions, making HOTS training an essential part of the learning process. Through

essay-type items, students also become accustomed to constructing extended, elaborative responses that strengthen their ability to articulate reasoning. In addition, HOTS assessments encourage exploratory learning, pushing students to investigate concepts more deeply rather than relying on rote understanding. This approach ultimately develops students' critical thinking and enhances their capacity to solve problems in everyday contexts. Several teachers also stressed that the success of HOTS implementation depends on the active engagement of both educators and students in carrying out their respective roles effectively.

In Islamic Religious Education at SD IT Anak Shaleh, subjects such as *Aqidah Akhlak*, *Fiqh*, and *Qur'an Hadith* are integrated to form a cohesive learning cluster. In the HOTS assessment, students are challenged with questions that require critical reflection and practical reasoning. For instance, when asked to write down the wisdom of believing in the Last Day (L4), students are expected to connect theological concepts with daily ethical behaviour. Educators observe that while students understand the basic idea, HOTS questions encourage them to elaborate on honesty, discipline, responsibility, and motivation for emphasising the connection between belief and action.

At a higher cognitive level, students are asked to explain the meaning and significance of the divine attribute *Al-Muqaddim* (L5). This requires learners to memorise, interpreting God's precedence and eternal existence. Some students initially provide simplistic definitions, but guided HOTS activities push them to reflect critically on the concept, linking theological understanding with their own reasoning. This process encourages analytical thinking, allowing students to explore abstract ideas in a structured and meaningful way.

When addressing questions about the eight categories of zakat recipients (L4), students are trained to organise information systematically. HOTS questions in this domain not only test knowledge recall but also the ability to reason about social and religious obligations. Educators assess students' ability to differentiate between categories, such as the poor, zakat administrators, emphasising comprehension of both the rules and the underlying wisdom of zakat distribution. This structured reasoning develops analytical skills while reinforcing the application of Islamic teachings in societal contexts.

Questions on the signs of doomsday (L4) aim to develop evaluative and contextual thinking. Students must identify contemporary and historical indicators, such as the decline of moral values and the prominence of false prophets. Educators guide learners to not only list these signs but also to analyse their implications, fostering a critical understanding of religious narratives. Emphasises the communicative and collaborative aspect of HOTS, where students can discuss and compare perspectives before formulating coherent answers.

Finally, at the highest level of HOTS (L6), students summarise the messages contained in Surah Al-Kafirun. This task requires synthesis and creative thinking, as learners must distil the essence of the surah while maintaining doctrinal accuracy. Responses demonstrate the ability to connect textual understanding with principles of faith, illustrating firmness in belief and rejection of compromise in religious practice. Educators observe that such questions cultivate independent thinking, reflective judgment, and spiritual awareness, showing that HOTS-based assessment can effectively enhance both cognitive and character development in Islamic Religious Education.

Evaluation and Reflection

Systematic learning evaluation is the foundation for improving the quality of HOTS learning. Within the framework of constructive alignment proposed by John Biggs, learning design must be aligned between expected learning outcomes, learning activities, and assessment (Hristov et al., 2023).

Evaluation and reflection showed very satisfactory results in the implementation of the end-of-semester assessment of HOTS questions by teachers. This quality improvement can be seen from the better alignment between planning, learning implementation and end-of-semester assessment of students.

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Table 3. Before and after results

| No | Student Name | Score Before HOTS (%) | Score After HOTS (%) | Improvement (%) |
|----|----------------|-----------------------|----------------------|-----------------|
| 1 | Aditya Pranata | 60 | 78 | 18 |
| 2 | Al Fathan | 55 | 75 | 20 |
| 3 | Albizar | 62 | 80 | 18 |
| 4 | Alby Ghani | 58 | 76 | 18 |
| 5 | Aldrian | 50 | 72 | 22 |
| 6 | Alfiansyah | 65 | 82 | 17 |
| 7 | Asyraf | 57 | 74 | 17 |
| 8 | Boby Fatir | 53 | 70 | 17 |
| 9 | Daffa | 61 | 79 | 18 |
| 10 | Ega Hardian | 56 | 73 | 17 |

Based on the data, there is a clear improvement in the critical thinking skills of Grade VI students at SD IT Anak Shaleh after being given HOTS questions. The average scores before implementing HOTS ranged from 50% to 65%, while after implementation, they increased to 70%–82%. Each student showed an improvement, ranging from 17% to 22%.

This increase indicates that HOTS questions effectively stimulate students' abilities in analysis, evaluation, and problem-solving. Students are not merely recalling facts but can apply concepts, reason critically, and connect information in more complex contexts. This demonstrates the effectiveness of HOTS in fostering critical thinking among Grade VI students.

Implementation of High-Order Thinking Skills Questions

The integration of planning, implementation, and evaluation–reflection in developing HOTS assessments forms a coherent and systematic cycle that determines the quality of end-of-semester evaluations. In the planning stage, teachers formulate indicators and objectives based on operational verbs at levels L4–L6 of Bloom's Taxonomy within the Merdeka Curriculum framework. This phase establishes the analytical, evaluative, and creative competencies expected from students, including the ability to transform concepts, process information comprehensively, and solve non-routine problems. Planning also ensures that each assessment item is context-based, novel, and non-

repetitive, thus genuinely stimulating higher-order cognitive processes (Pebriani et al., 2022).

The implementer operationalises these plans. Teachers provide contextual stimuli grounded in the REACT framework relating students' experiences, enabling exploration, applying knowledge to real situations, communicating problem-solving responses, and transferring concepts to new contexts. Student performance is observed not only through the final answers but also through the cognitive pathways demonstrated during the problem-solving process. This stage captures students' abilities to connect ideas, evaluate arguments, and generate alternative solutions, making assessment both process-oriented and outcome-oriented. This implementation phase aligns with findings in other research. For instance, a study by Halimatusadiah (2017) measured the effect of a contextual REACT strategy on elementary students' conceptual understanding in mathematics, and they found that REACTa significantly improved students' understanding and motivation.

The evaluation and reflection stage examines the alignment between initial objectives, instructional practices, and student outcomes. This analysis determines whether the HOTS instruments function effectively and whether students show measurable development in analytical, evaluative, and creative dimensions. Findings from this stage inform the refinement of subsequent assessment cycles, enabling teachers to improve indicators, enhance stimulus quality, and strengthen instructional approaches that support higher-order thinking. In his research, Nafi'ah & Faruq (2025) also discuss deep learning and contextual pedagogy, further demonstrating that when evaluation feedback is used to adjust instructional design, student engagement and higher-level learning outcomes increase, confirming that reflection-driven revisions strengthen both process- and outcome-oriented assessment practices.

Collectively, these three stages illustrate that the success of HOTS implementation is not solely dependent on the sophistication of the test items but on the holistic integration of purposeful planning, practical implementation, and reflective evaluation. Their interdependence produces a more comprehensive and accurate assessment system aligned with the broader goal of cultivating higher-order thinking among elementary school learners.

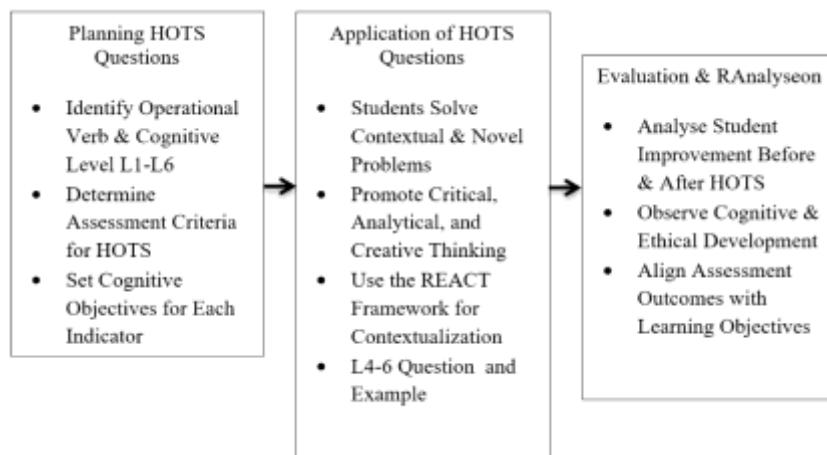


Figure 1. Planning, application, and evaluation & reflection

IV. CONCLUSION

The results showed that the application of HOTS-based questions in the end-of-semester assessment of Islamic Religious Education subjects at SD IT Anak Shaleh has experienced a significant increase, especially at the L4 to L6 cognitive levels. Teachers have not only succeeded in developing evaluation instruments that measure students' analytical, evaluative and creative thinking skills, but have also been able to integrate learning objectives, learning processes and evaluation in harmony. This success is reflected in the increase in students' ability to answer HOTS questions to reach a passing percentage of 75%, as well as the strong connection between basic competencies, learning activities, and assessment indicators, along with the confirmation that teacher competence in applying Bloom's Revised Taxonomy is crucial for strengthening higher order thinking literacy in primary schools, implies that scprioritise prioritise sustained professional development, systematic curriculum alignment, and the integration of HOTS-based strategies across daily instruction. Teachers should continuously refine their pedagogical approaches to ensure that learning experiences actively stimulate analytical reasoning, evaluative judgment, and creative problem-solving. Consequently, the educational environment becomes more conducive to cultivating students who are capable of engaging with complex concepts, applying knowledge in varied contexts, and demonstrating reflective and responsible Islamic character in real-life situations. Through the independent curriculum approach based on Constructivism and inquiry, learning Islamic Religious Education is not only about transferring normative knowledge, but also about becoming a strategic means to form reflective and contextual Islamic characters. Thus, HOTS assessment in the context of Islamic education has great potential to create students who are not only cognitively intelligent but also have spiritual and social integrity.

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