# What Islamic Education Teachers Need To Know and Be Able To Do To Teach Students Higher-Order Thinking Skills?

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#### **ABSTRACT**

Islamic education is said to have less relevance with today's social change in society or does not provide an illustration of the sociocultural context, so students do not appreciate religious values as values that exist in everyday life. This phenomenon requires Islamic education teachers to adopt a teaching approach focusing on higher-order thinking skills (HOTS). Unfortunately, not many Islamic education teachers understand such an approach and how to implement it in their classrooms. This article is a library research study using a content analysis approach. The purpose of this article was to review the literature on HOTS and to offer Islamic education teachers the possibilities and pitfalls of employing this approach. The literature review results show that the basic thing that Islamic education teachers need to do in the 21st century is to change the orientation of their learning from Teacher Centered Learning (TCL) to Student Center Learning (SCL). Islamic education teachers need to prepare and pay attention to various aspects of implementing HOTS-based learning, from planning activities to assessment activities, which must be carried out according to the implementation procedure.

Keywords: High Order Thinking Skills, Islamic Education, Teachers.

# **INTRODUCTION**

Technically, the difference between Western and Islamic education concepts is not very contrasting, but the main purpose between these two concepts of education causes the difference. Islamic education learning is an effort to guide students with the main purpose so that they can understand, appreciate, and practice the values contained in Islam as a whole. Islamic education is also a process of direction for students to have good personalities and morality as caliphs on earth.<sup>1</sup> Thus, the teachings of Islam are consciously made as a way of life in everyday life that can provide salvation in the world and the afterlife.

Based on this role, it is known that PAI has an essential position in human life. However, currently, Islamic education has quite sharp criticisms, which state that PAI cannot change cognitive religious knowledge into "meaning" and "value" or does not encourage the inspiration of spiritual values that

students need to internalize. In addition, PAI is also less able to work together and cooperate with non-religious education programs. PAI has less relevance to social changes that occur in society or does not illustrate the sociocultural context and is statically textual, so students do not appreciate religious values as values that exist in everyday life.<sup>2</sup>

Abdullah also revealed that commentators have agreed that the condition of critical thinking skills among graduates of Islamic learning institutions is still below average. This is due to learning that still places too much emphasis on memorization activities and conservative values. That condition is also based on the results of cultural and educational values which do not support questioning religious and social values. Being part of a group and behaving according to the group's expectations is better than being different and isolated.<sup>3</sup>

Another possible cause is that Islamic education still upholds Teacher Centered Learning (TCL) instead of Student-Centered Learning (SCL). Besides, education in schools focuses only on factual/memorizing knowledge. In this case, students are considered empty containers that will be filled with knowledge by the teacher. In addition, the scoring system predominantly uses tests to test low-level cognitive abilities.<sup>4</sup>

Othman and Kassim explained that Islamic education teachers tend to be more focused on using the lecture teaching method, so teacher-centered learning affects the level of student understanding of how to apply what the teacher says. As ari explained that teachers and students have a relationship that is still doctrinaire, not critical-dynamic yet. The material of Islamic Education, including Akidah and Akhlak, is still oriented toward doctrinal methods, and the content of the material stops at the normative-theocentric level. The same thing was conveyed by Supa'at, that the teaching of Islam in madrasah aliyah was still normative and textual.

If this TCL residue is still there and carried over into the 2013 curriculum, it will have a negative impact on expectations for students to have Higher Order Thinking Skills (HOTS) abilities even though the government expects students to achieve various competencies by implementing HOTS. This is due to Indonesia's low ranking in the Program for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS) compared to any other country. Although the main focus is on mathematics and science subjects, it is no exception to be applied to Islamic Education subjects because it has also been regulated in the Alquran. Andin, Abdullah, Harun, Ismail, and Hamzah explained that technically the concept of thinking actually had been regulated in the Qur'an regarding objections to "Taqlid" which is accepting or doing everything without knowing the argument. Then, there is also an emphasis on reasoning in the Qur'an. This is evidenced by the discovery of many terms such as tafakkur (pondering), tadabbur (considering), tabassur (understanding), tawassum (imagining), nazar (thinking), itibar (taking lessons), and tadhakkur (accepting suggestions fully heart) which signifies the importance of thinking. The Qur'an calls attention to the signs of Allah SWT, both contained in the book of Allah and in the universe.

Yeo and Zhu also explained that students would more easily forget the material obtained through memorization techniques and procedural skills. However, it is different from the material obtained through a process of deep and comprehensive understanding as a variety of means of interaction between students and the learning environment complements the learning experience.<sup>12</sup> It will also greatly assist students in synthesizing, evaluating, and applying the knowledge they have acquired.<sup>13</sup>

In recent years, the world has recognized that HOTS learning is one of the important goals in education in the 21st century. Through HOTS, it is able to produce generations with critical and creative thinking skills. Johnson explained that critical thinking is a systematic mental activity in solving problems, making decisions, conducting scientific research, analyzing, and other directed activities. In

contrast, creative thinking is a mental activity producing various new ideas. In other words, analytical and reflexive activities reflect critical thinking, while original and reflective activities reflect creative thinking.<sup>14</sup>

Kurniati, Harimukti, and Jamil also explained that the ASEAN Economic Community needs quality of human resources in this era. A qualified human resource is someone with critical, systematic, logical, and creative thinking and a willingness to work together effectively. School educational institutions produce such human resources, so competent teachers are also needed to form students with the following abilities. However, the HOTS-based learning process still experiences various obstacles in Indonesia. The results of research by Subroto Rapih and Sutaryadi revealed that 8.57% of teachers did not understand the concept of HOTS. 17.14% of teachers have not yet implemented HOTS-based learning activities. In addition, 79% of teachers had difficulty in designing and implementing HOTS-based evaluations, 59% had difficulties in delivering learning materials, 45% had difficulties in designing instructional media, 38% had difficulties in designing learning devices, and 31% had difficulties in the process of preparing teaching materials. Therefore, it can be seen that the problems faced by teachers are quite complex.

Based on this description, it indicates the possibility that Islamic education teachers are still unable to contribute their thoughts regarding creative ideas as a characteristic of HOTS-based learning. Therefore, research is needed to reveal what Islamic education teachers can do to apply the HOTS approach to their learning. So that Islamic education teachers can find out things that must be maintained, improved, or eliminated in implementing HOTS-based Islamic education learning. Specifically, this study focuses on planning activities up to HOTS-based Islamic education assessment activities.

#### **RESEARCH METHOD**

This article was literature research. The purpose of this article is to review the literature on Higher Order Thinking Skills (HOTS) and to offer Islamic education teachers the possibilities and pitfalls of using this approach. The data collection technique used a document study by collecting various data sources, including books, journals, modules, and other sources relevant to the research objectives. The data collected in this study were qualitative and further analyzed using content analysis techniques. Analysis activities are carried out through several stages, starting with reading, recording (collecting data), identifying, arranging them in units according to the order of thinking patterns, then analyzing until the stage of drawing conclusions.

# **DISCUSSION**

#### The Essence of Islamic Education Teacher

Uno and Lamatenggo describe that according to Hinduism, the teacher is a symbol for a holy place that contains knowledge (*vidya*) as well as the sharing of knowledge. Teachers are defined as spiritual/psychic guides for their students. As for Buddhism, a teacher is a person who directs his students toward the truth. A student views his teacher as an incarnation of a Buddha or Bodhisattva. Then according to the Sikh religion, teachers have a meaning similar to Hinduism and Buddhism. However, its position is more important because one of the main teachings of the Sikh religion is the belief in the teachings of the Ten Sikh Teachers. Meanwhile, in the Islamic concept, teachers have a very important role.<sup>17</sup> In addition to being a teacher, he also serves as a spiritual father who conveys good advice (*mau'idhah hasanah*) to students. Thus, teachers in Islam have a very high position, as implied in a hadith Rasulullah SAW that: "The ink of a scientist (*mufti*) is more valuable than the blood of the *syuhada*." <sup>18</sup>

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Ramayulis explained that a teacher in Islam is basically someone who bears responsibility for the development of students by optimizing their full potential, both affective, cognitive, and psychomotor.<sup>19</sup> In addition to optimizing students' potential, teachers are also responsible for providing assistance to students as they develop physically and spiritually to carry out their mandate as 'abdullah and khalifatullah.<sup>20</sup> Therefore, Budiyanto and Kurniawan said that a teacher who serves the Islamic education world must also have the ability to develop potential in accordance with the demands of the times.<sup>21</sup>

The role of teachers in the 21st century has undergone a shift in meaning, which was initially limited to teaching (*mu'allim*, transfer of knowledge). However, now Islamic education teachers have an additional role as facilitators, administrators, motivators, counselors, and evaluators.<sup>22</sup> Iswadi and Richardo also explained that teachers must understand learning management. The learning management in question includes planning, implementation, assessment, and follow-up on school learning outcomes.<sup>23</sup> Islamic education teachers, in carrying out their duties and roles, must also master what is called teacher competence. Teacher competence is a combination of personal, scientific, technological, social, and spiritual abilities that formally *kaffah* standard competencies of the teaching profession.<sup>24</sup> Competence is obtained through education, training, and independent learning by utilizing learning resources.<sup>25</sup> Teacher competencies can be classified into four types: pedagogical competence, personality competence, social competence, and professional competence. To realize an educational goal, these four competencies must be implemented as a whole and cannot be separated from one another.

# Higher Order Thinking Skills (HOTS) for Islamic Education Learning

Tarbiyah islāmiyyah is a phrase in Arabic which refers to the phrase Islamic education. However, it is often found in Islamic literature that the use of the phrase tarbiyah islāmiyyah is only written as tarbiyah. Based on the lexicology of the Alquran dan sunnah, the term tarbiyah is not found, but several key terms are rooted, such as al-Rabb, Rabbayaani, Nurabbi, Yurbii, and Rabbani. According to Jumhuriyah Misr al-'Arabiyah tarbiyah is rooted in four words: rabā-yarbū (موري - الموري - المو

Tarbiyah is an activity to educate students through the provision of knowledge, using easily accepted methods so that students can apply or practice it in everyday life.<sup>28</sup> The scope and study of tarbiyah Islāmiyyah are very broad because it includes many aspects, such as educational actions, students, basic

and educational goals, teachers, Islamic education materials, educational methods, educational tools, educational evaluation, and the educational environment.<sup>29</sup> The term which is similar to *tarbiyah Islāmiyyah* is Islamic Religious Education. There are similarities between the two which both imply an effort and process of planting something (education) in a sustainable manner, a reciprocal relationship between the first person (adults, teachers) to the second person (students), and *akhlakul karimah* as the final goal. Meanwhile, from the epistemological aspect, namely coaching and optimizing potential, planting Islamic values in the soul, feeling, and thinking, as well as harmony and balance.<sup>30</sup> Rahman also explained that Islamic religious education is a part and material that comes from *tarbiyah Islāmiyyah*, so it can be said that tarbiyah Islāmiyyah is a format in the form of theoretical studies applied through the Islamic religious education process.<sup>31</sup> Therefore, it is not an exaggeration to mention that PAI is an inseparable component of the Islamic education system.

The sign that needs to be considered in carrying out learning with 21st Century competence is to implement HOTS learning.<sup>32</sup> HOTS includes critical, logical, reflective, metacognitive, and creative thinking.<sup>33</sup> Critical thinking, in this case, is not only thinking about the knowledge being learned but also about effective things for self-development.<sup>34</sup> Kuswana describes HOTS as a framework of critical and creative thinking, generally categorized as productive thinking.<sup>35</sup> In more detail, Anderson and Krathwohl explain that through the HOTS approach, students will get used to thinking critically and creatively in making decisions and solving problems related to analyzing, evaluating, and creating.<sup>36</sup> Meanwhile, Brookhart explained HOTS with three terms, including: in terms of transfer, in terms of critical thinking, and in terms of problem-solving.<sup>37</sup> The process of transfer and critical thinking will generate ideas as an alternative to solving problems.

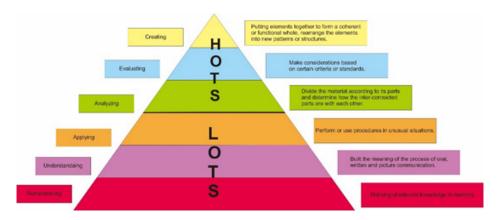
As for Bloom's taxonomy, there has been a change in the structure of cognitive domains seen in the use of nouns which verbs have replaced. More details about these changes can be seen in the following table:

Level	Bloom's Taxonomy	Anderson's Taxonomy
C1	Knowledge	Remembering
C2	Comprehension	Understanding
C3	Application	Applying
C4	Analysis	Analyzing
C5	Synthesis	Evaluating
C6	Evaluation	Creating

Table 1. Differences in Bloom and Anderson's Taxonomy

Source: Anderson, L.W., Krathwohl, D. R., & Bloom, B. S. (2001)

Based on the table, all components are converted into verbs, and some even experience changes and position changes where knowledge is transformed into the word remembering because knowledge is not a way of thinking but the result of thinking activities. Thus, remembering is an appropriate pronoun as an initial level of thinking. Evaluations that previously occupied the final level of the thought process are changed and placed after analyzing activities to replace synthesis and then end with creating activities. This is based on the hierarchical arrangement of a thought process from the easiest to the more complex process of creating.<sup>38</sup> Anderson's taxonomy is explained in the following scheme:



(adapted from Ariyana, Pudjiastuti, Bestary, and Zamroni, 2018)

The main thing that Islamic education teachers must pay attention to in implementing the cognitive process in Islamic Education learning is the SCL (Student Center Learning) learning process with a scientific approach. This approach creates an atmosphere that is very interactive, inspiring, fun, and challenging, motivates students to participate actively, and provides sufficient space for the initiative, creativity, and independence in accordance with students' talents, interests, and physical and psychological development. SCL is also an alternative approach to overcome the limitations of the TCL approach. SCL emphasizes that teachers must be able to carry out their roles well, not only as instructors but also as motivators, facilitators, and innovators.<sup>39</sup> The teacher is not only required to teach in front of the class but also plays a role in helping students to solve problems when students experience difficulties in the learning process.

The procedures that Islamic Education teachers need to know to implement HOTS-based learning include the following:

# 1. HOTS-Based Learning Planning

HOTS learning begins with the creation of a learning tool in the form of a Syllabus and lesson plan that refers to the Content Standards and is adapted to the chosen learning approach. This planning activity also includes preparing lesson plans, selecting media and learning resources, preparing learning assessment tools, and learning scenarios. Every teacher in the education unit is obliged to prepare lesson plans based on basic competency or sub-themes for one or more meetings. Helmawati explained that the principles that must be considered in preparing the lesson plan are to consider the characteristics of each student, focus on the active participation of students, develop a culture of reading and writing, give feedback, emphasize the relationship between Basic Competencies and all the components in the lesson plan, accommodating integrated thematic learning, cohesiveness across subjects, aspects of learning, and cultural diversity, and applying information and communication technology in an integrated, systematic, and effective manner.<sup>40</sup>

There are various learning methods and models in the world of education. However, these methods and models have their respective advantages and disadvantages. Thus, Islamic education teachers are expected to be able to develop or choose methods and learning models that are considered to be the most appropriate because there is no ideal method.<sup>41</sup> Islamic education teachers also cannot arbitrarily choose learning media. At least Islamic education teachers must consider five aspects, including the level of accuracy of representation, the level of interaction it can generate, the level of special abilities they master, the level of motivation they can generate, and the level of costs they require.<sup>42</sup> Islamic education teachers can take advantage of information technology in learning

at school. For example, Alquran-Hadith learning can use the internet provided by madrasas to increase students' insight into the material.<sup>43</sup> Utilization of the internet network can be used in all classes of Islamic education subjects, not only the Alquran-Hadith.

# 2. Implementation of HOTS-Based Learning

Learning is a directed and organized activity to achieve predetermined educational goals. Human resources in the learning system include teachers, students, and other educators who are facilitated with facilities and infrastructure, including classrooms, books, computers, blackboards, desks, chairs, audio-visual equipment, photography, slides and films, and other supporting equipment.<sup>44</sup> Marzuki and Feriandi also explained that parents greatly influence students' success in their studies.<sup>45</sup> Therefore, the success of Islamic education can be realized if all parties can work together, from the school, parents, the community, and so on.<sup>46</sup> The completeness and availability of facilities and infrastructure also greatly influence the success of the learning process in the classroom.<sup>47</sup>

Brookhart and McMillan explain that the classroom is a complex social environment. Economic, language, cultural, and mental health issues need to be considered by teachers in building relationships with students. A teacher is expected to be able to facilitate and support all students in their learning activities, namely not only focusing on improving the cognitive aspect but also creating a social environment and providing emotional support to students to learn.<sup>48</sup>

The HOTS approach can be applied to Islamic Education learning, including the subjects of the Alquran-Hadith, Akidah-Akhlak, Fiqh, and Islamic Cultural History. However, in its implementation, several materials must undergo adjustments and require Islamic Education teachers to think more deeply. This is because the characteristics of the content of the material will be biased if applied with the HOTS approach, such as the material of Akidah.

Islamic education teachers can apply the HOTS approach at the C4 level (Analyzing), for example, prayer material, by providing global explanations of Islamic Education material about prayer through video media on the correct prayer procedures, then students are asked to analyze the pillars of prayer. The next level is C5 (Evaluating). This stage can be done by way of an Islamic education teacher giving students an overview of the correct prayer and then assigning students to assess or evaluate the prayers they do in everyday life according to existing concepts. The last level is C6 (Creating). Islamic education teachers can fill in this stage by assigning students to make interesting prayer pictures on paper and then display them in the classroom.<sup>49</sup> However, it should be noted that in its implementation, Islamic education teachers must carefully consider the use of available time allocation so that all materials can be conveyed properly. The allocation is divided into 20% preliminary activities, 60% core activities, and 20% closing activities at each meeting.<sup>50</sup>

Technically, the teacher can carry out minimal HOTS learning by providing motivation in the classroom, such as:

- a. Open and close learning activities by asking a number of questions that refer to higher-order thinking skills.
- b. Placing brainstorming activities in the middle of the lesson encourages students to find ideas and think creatively.
- c. Giving open-ended assignments or homework to measure students' creativity and understanding of the lessons that have been delivered.<sup>51</sup>

Based on this explanation, it is known that in order for the signs for implementing HOTS learning to be realized, Islamic education teachers need to create an atmosphere that is conducive and can stimulate student HOTS. Then before the learning activity is closed, Islamic education teachers need to provide an open-ended assignment to measure student creativity and understanding. Therefore, Islamic education teachers also need to increase their creativity.

# 3. HOTS-Based Learning Assessment

Assessment or al-Taqdir ((الالتانة is a process of gathering information carried out by measuring, interpreting, describing, and interpreting the evidence of measurement results. Assessment functions to monitor the process, progress, and improvement of student learning outcomes on an ongoing basis. The assessment process includes collecting evidence regarding student achievement through tests, observations, and student work. An assessment by means of a written test can be broadly categorized into two forms of questions: selecting answers and supplying answers. Written test questions that answer by choosing among them: multiple choices, two choices (true-false, yes-no), matchmaking, and causation. The percentage of learning assessments conducted is divided by the following conditions:

- 1). Cognitive level 1 (C1) is 5%.
- 2). Cognitive level 2 (C2) is 10%.
- 3). Cognitive level 3 (C3) is 45%.
- 4). Cognitive level 4 (C4) is 25%.
- 5). Cognitive level 5 (C5) is 10%.
- 6). Cognitive level 6 (C6) as much as 5%.55

Based on this explanation, the Islamic education teacher is expected to meet the predetermined percentage. Helmawati also explained that teachers could conduct HOTS-based learning assessments through repetition, observation, assignment activities, and other forms with the following conditions:

- a. The assessment strategy design is carried out when preparing the lesson plan.
- b. The attitude aspect assessment is carried out through observation activities and other relevant assessment techniques.
- c. The assessment of aspects of knowledge is done through oral tests, written tests, and assignments tailored to the competencies being assessed.
- d. Skills assessment is done through practices, products, projects, and portfolios tailored to the competencies being assessed.
- e. Students who have not reached Minimum Standard Criteria must participate in remediation activities.
- f. The results of assessing the achievement of students' knowledge and skills are presented in the form of numbers and descriptions. <sup>56</sup>

Higher-order thinking skills tests are able to provide stimulus to students to improve and develop higher-order thinking skills as well.<sup>57</sup> Several alternative question forms that can be applied with the HOTS approach are multiple choices, multiple complex choices (true/false or yes/no), completeness, short answers, and descriptions.<sup>58</sup> However, in practice, Islamic education teachers need to make varied types of tests that will be used. This is because multiple-choice tests are the most powerful tool for measuring students' mastery of subject matter. However, the use of multiple-choice questions only emphasizes the results, while students' thought processes cannot be known. Then it is also not

known whether the student's response is the result of their thinking or the result of guessing. Multiple-choice tests also result in students not being used to providing arguments to solve problems.<sup>59</sup>

The results of multiple choice test scores were also obtained using a dichotomous model, which means that if the answer to the item is correct, it is given a score of 1 and if the wrong answer is given a score of 0. If the teacher also uses the polytomous scoring model, then the assessment activity will be much fairer because it considers the item response size. This is because the dichotomous assessment model does not yet appreciate problem-solving steps. After all, different error rates will produce the same score of 0. Therefore, in this case, the dichotomous assessment model is considered unfair.<sup>60</sup> For example, HOTS-based Islamic education questions are: How is the difference between halal and haram food according to the Alquran? (Level C4) What do you think if someone likes to eat haram? (Level C5) Make sentences to encourage people to avoid haram food! (C6). From these examples, the PAI teacher can have an idea of how to make Islamic education questions according to their cognitive level.

Apart from variations in the types of tests, the quality of the items must also be considered in the assessment. To determine test quality, item analysis is required. Analysis of test questions is an important aspect of the assessment implementation because the test item analysis results provide information about the test quality used. The test item cannot provide the desired information if it does not have good parameters.<sup>61</sup>

The steps for making HOTS questions that Islamic education teachers need to know include:

- a. Analyzing Basic Competencies that can be made about HOTS questions.
- b. Construct a question grid.
- c. Determine interesting and contextual stimuli.
- d. Write questions that are tailored to the question grid.
- e. Create scoring guidelines (rubrics) or answer keys. 62

In the next stage, Islamic education teachers need to follow up by providing remedies to students who have not reached Minimum Standard Criteria in Islamic Education learning. Meanwhile, material reinforcement is given to those who have completed by adding and developing teaching materials.<sup>63</sup> Therefore, it is known that the steps in preparing HOTS questions do not experience any significant differences from the preparation of Lower Order Thinking Skills (LOTS) questions. After the Islamic education teacher has carried out the assessment, the next step is to follow up on the results obtained by the students by doing remedial or enrichment activities.

# **CONCLUSION**

What Islamic education teachers can do in the HOTS-based learning planning process begins with the development of a syllabus and the preparation of lesson plans. The syllabus is used as a basis for the preparation of lesson plans at each meeting, while lesson plans are used as a guide in carrying out learning activities to achieve the expected competencies. Therefore, the syllabus and lesson plans are inseparable tools in the HOTS-based learning planning process. Islamic education teachers at this stage are also required to be careful and creative in choosing the appropriate methods, models, and learning media according to the material to be delivered.

It should be noted that the implementation of HOTS-based learning can be implemented in PAI learning which includes the subjects of the Alquran-Hadith, Akidah-Akhlak, Fiqh, and Islamic Cultural History. However, it will be biased if applied to the material of the Akidah. Basically, achieving the

success of Islamic Education learning requires cooperation from all parties, namely the school, parents of students, and the community. In addition, the availability and completeness of facilities and infrastructure also play an important role in the successful implementation of HOTS-based Islamic Education learning. Islamic education teachers are required to be skilled in class management, create a conducive learning atmosphere, and can stimulate student HOTS, starting from preliminary activities to closing learning and giving assignments.

In carrying out HOTS-based assessment, Islamic education teachers must carry out all predetermined assessment procedures. Each step must be carried out continuously and cannot be separated, or something is left behind. However, in its implementation, there are a number of things that Islamic education teachers need to pay attention to. Islamic education teachers need to use variations in the types of tests because these types of tests have their respective advantages and disadvantages. Apart from variations in the types of tests, the items' quality must also be considered in the assessment. Afterward, follow-up activities on the results obtained by students by doing remedial or enrichment activities as well as possible.

This literature review has attempted as much as possible in accordance with the focus or objectives to be achieved. However, some limitations and weaknesses cannot be avoided due to the limited time and the Covid-19 Virus pandemic disaster. Thus, the source of data from book references is less and more using internet references from journals and modules. It is hoped that further research can raise the same topic regarding HOTS learning in Islamic Education subjects with different methods, for example, qualitative research with a grounded theory approach to verify the theory.

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