Higher-Order Thinking Skills in Primary School: Teachers' Perceptions of Islamic Education

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Abstract: One curriculum policy in countries, including Indonesia, is to provide students with higher-order thinking skills (HOTS) to meet the challenges of the 21st century, and success in doing so is closely related to the competence of teachers in integrating HOTS in the learning process. This study investigated HOTS implementation in Islamic Education (PAI) in primary schools in Indonesia. This study employed a case study design involving 58 PAI teachers in primary schools from several West Java, Indonesia regencies. The data were collected by distributing questionnaires with short answers followed by semi-structured interviews of 10 participants. Inductive and thematic data analysis was carried out to identify, evaluate, and create themes expressed by participants with the assistance of NVivo 12. Triangulation and expert review methods were used for instrument and data validation. This study explored five findings: teacher understanding, teaching resource support, instructional strategies, and student knowledge levels. This research contributes to improving the quality of PAI learning in HOTS-oriented primary schools, and policymakers can use its findings in determining the direction of the HOTS-based PAI curriculum. Policymakers should stress the importance of increasing teacher competence in mastering the HOTS concept comprehensively in planning, implementation, and evaluation. Support from various parties in optimizing HOTS-oriented PAI learning is a necessity for teachers.
*Keywords***:** curriculum, higher-order thinking skills, Islamic education, Indonesia.

Today, curricula and educational objectives worldwide have focused on developing students' thinking skills (Yeung, 2015; Zohar & Schwartzer, 2005). Indonesia is no exception. In the 2013 curriculum, which is the applicable curriculum in Indonesia, teachers must equip students with high-level thinking skills (HOTS), including the ability to analyze, evaluate and create (Anderson & Krathwohl, 2001; Vidergor, 2018). The logical consequence of these

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demands is that teachers must design teaching and learning to integrate HOTS in all subjects, including Islamic Education (PAI – *Pendidikan Agama Islam*) at every level of education (Apino & Retnawati, 2018; Hidayat, 2020). Integration in each subject is intended to teach students to organize thoughts, concepts, ideas, and other skills to analyze and make a synthesis by producing an innovation or creation as the peak of their work (Witte & Beers, 2003). If a teacher does not have the appropriate skill set, it is challenging to expect students to excel in higher-level thinking and reasoning. (Jungwirth, 1990; Zohar & Schwartzer, 2005). Thus, a teacher influences students' success in gaining these skills (Hidayat, 2020; Miri et al., 2007). Therefore, studying teachers' perceptions of their efforts to implement HOTS across the curriculum is required.

Studying teacher perceptions is essential for three reasons. First, stimuli from the environment, experience, and knowledge influence perceptions (Blitar, 2011). Perceptions that are built determine teachers' practices in carrying out the learning process are a manifestation of their beliefs, which ultimately affect student learning (Brickhouse, 1990; Zohar & Schwartzer, 2005). Therefore, the study of teacher perceptions in this area contributes to understanding the learning process occurring in all learning, including PAI learning. Second, teacher perceptions have significant implications for teacher professional development. Their prior knowledge influences what they will learn and how they apply that knowledge in their practice (Kopcha, 2012; Richter et al., 2021). Understanding these perceptions is vital to developing training designs that can improve teacher competence related to the application of HOTS. Third, by studying teachers' knowledge of issues related to teaching higher-order thinking, teachers' prior knowledge and the effects of professional development programs in this field can be assessed for reflection by policymakers.

Studies related to teachers' perceptions of improving students' thinking skills have attracted researchers in various countries. For example, Ayçiçek (2021) explored the opinions of 28 prospective music art teachers about critical thinking education courses. The findings reveal that critical thinking courses significantly contribute to teacher candidates in improving their critical thinking skills and contribute to their affective domain in increasing their awareness in the music field. In addition, critical thinking education courses allow them to obtain new perspectives, develop evaluations based on different points of view, and become critical thinkers. Cáceres et al. (2020) explored the learning practices of Spanish-speaking teachers in Latin America who integrate critical thinking into their teaching practice. The results revealed that teachers try to enhance students' critical thinking skills by integrating them into their subjects rather than teaching separately. However, in its implementation, critical thinking was very dependent on the subject. Yeung (2015) examined the perceptions of Chinese teachers in Hong Kong about effective HOTS teaching in which Confucius' thinking still strongly influences the conception of Chinese teachers' teaching. Through in-depth interviews with 12 Chinese teachers, the teachers recommended nine teaching tips, reflecting the blending values of Western and traditional Chinese education. The findings revealed that teachers' conception of effective HOTS teaching contains Chinese values, based on the influence of Confucian. One main recommendation of her research was that awareness of the cultural values of the context is essential for implementing any teaching methods.

This current study explores teachers' perceptions of the demands of K13 in implementing HOTS through PAI learning in primary schools. The selection of PAI subjects in Indonesia as the focus of this study is motivated by the ambivalence between the demands of K13 and practice in the field, which tends to emphasize the development of lower-level cognitive skills, namely more emphasis on memorization aspects. Thus, PAI learning orientation tends to lead students to memorization. This study of the application of HOTS from the teachers' perspective helps close the gap between theory and practice.

Literature Review

HOTS as a Thinking Skill

Higher-Order Thinking Skills (HOTS) are students' abilities to think at a higher level (Ichsan et al., 2019). The concept of HOTS has been crucial in the education field for decades. For example, Bloom's taxonomy (1956) covered Knowledge, Understanding, Application, Analysis, Synthesis, and Evaluation (Bloom, 1956; Krathwohl et al., 1984). Later, Anderson and Krathwohl (2001) revised Bloom's taxonomy to remember (C1), understand (C2), apply (C3), analyze (C4), evaluate (C5), and create (C6).

This revised Bloom's taxonomy concept is a frame of reference related to the level of thinking skills in learning. In the Lower-Order Thinking Skill (LOTS) category, the learning objectives are still at the level of development of C1, C2, and C3, while learning that develops C4 to C6 is included in the HOTS category. Students who have high-level thinking skills will have the ability and skills to analyze (C3), evaluate (C4), and create innovations (C6) in solving problems encountered (Ali & Singh, 2020; Ismail et al., 2021), including issues in the context of religion (Kasim & Abdurajak, 2018; Moning & Yeng, 2015). Resnick (1987) explained that higher-order thinking has common characteristics like being non-algorithmic and complex, generating multiple solutions, requiring the application of multiple criteria, self-regulation, and often involving uncertainty.

The Urgency of HOTS

Thinking skills at the HOTS level are essential for students because HOTS is one of the skills required for students in the 21st century (Conklin, 2011). Technological developments in the Industrial Revolution 4.0 and Society 5.0 have exposed humans to extraordinary information explosions, and students face an incredible amount of knowledge and data (Qasrawi & Beniabdelrahman, 2020). A 21st-century education that requires students to have HOTS has become the goal of education worldwide (Yeung, 2015). By formulating learning practices, teachers do not have to remain oriented to efforts to equip students with the ability to remember and regurgitate data and facts (Budimansyah et al., 2019). The development of the learning process is aimed at developing analytical, evaluation, and creative abilities (King et al., 2013; Miri et al., 2007) as a higher-order cognitive domain (Anderson & Krathwohl, 2001).

Approaches in HOTS and Teacher Perception

In developing students' thinking skills, Ennis (2015) mentions that three approaches can be used in learning practices: the process approach, the content' approach, and the infusion approach. The process approach focuses on direct teaching of thinking skills to students without following the directions of the applicable curriculum. In other words, students are directed to implement the cognitive abilities they have learned in learning activities in other disciplines (Barak & Shakhman, 2008). Nisbet and Davies (1990 as cited in Pogrow, 1996) stated that HOTS is a learning program that uses a process approach. Meanwhile, the content' approach relies on the perception of cognitive skills in particular disciplines, such as mathematics and science, having a particularly related context (Ashton, 1988). In this approach, teachers must increase knowledge in these disciplines to facilitate students in applying cognitive abilities and recognize how to make contextual links to other disciplines (Chambers, 1988). The third approach, the infusion approach, aims to combine thinking skills based on the curriculum. For example, Swartz and Perkins (2016) divided the infusion of the development of critical and creative thinking skills into science lesson chapters, as follows: skillfully engaging in complex

thinking tasks, skills in clarifying ideas, skills in generating ideas, skills in assessing the reasonableness of ideas, and designing and teaching infusion lessons.

Teachers' perceptions of teaching strongly influence the approaches mentioned above in practice, and learning is also about the knowledge and intelligence of the teacher. Perceptions are defined as an individual's ability to think and understand information or the universe using the senses (Anderson & Stillman, 2013; Ward et al., 2010). Perceptions are depicted as an experience-based process of information or a process of recognizing, organizing, and interpreting information (Eggen & Kauchak, 2001). The teachers' views of teaching and learning and their beliefs about knowledge and intelligence are widely acknowledged to impact their teaching methods (Brickhouse, 1990) directly.

Method

Research Design

This study is qualitative and phenomenological. Phenomenology examines and describes participants' life experiences regarding a particular phenomenon (Hujar & Matthews, 2021; Merriam & Tisdell, 2015; Samardzija & Peterson, 2015), including their self-concept or view of life (Creswell, 1998). In line with the objective and the research disciplines of Islamic Education, this study seeks to explore primary school PAI teachers' perspectives and experiences implementing the HOTS program as a product of the K13 policy in PAI learning. The phenomenological design in the context of this study seeks to view the application of the HOTS program in PAI learning based on the perspectives of the subject (teacher) to be studied (Bogdan & Taylor, 1993, p. 44). The study focuses on the implementation of HOTS in Islamic Education at the elementary school level. In this case, it can be used as foundation for developing Islamic Education learning process at the secondary or higher education levels. The finding of this study can also be implemented to develop higher education curriculum to prepare for the future Islamic Education teachers.

Participants

PAI teachers in primary schools in West Java province participated in this study. The purposive sampling technique was conducted by distributing questionnaires with short answers via Google Forms, an easy and safe web-based platform to collect data and information from the participants (Kapade, 2017). The distribution of questionnaires to teachers involved the assistance of research partners who had access to PAI teachers in primary schools. The questionnaires were distributed in several WhatsApp groups from the PAI teacher forum. Before collecting information from teachers, the purpose of this study was explained in writing, as was the extent of involvement of teachers in this study. Prospective participants were guaranteed. Last, an approval form regarding the teacher's willingness was provided (Hett & Hett, 2013; Shamim & Qureshi, 2013). A total of 58 PAI teachers expressed their willingness to be participants in this study. Table 1 descriptively shows the demographic characteristics of the participants.

Table 1
Participant Demographics

	Frequency	%
Gender		
Male	26	44.83
Female	32	55.17
Teaching Experience		
1-5 Years	13	22.41
6-10 Years	7	12.07
11-15 Years	20	34.48
20 Years >	18	31.03
Educational Background		
Bachelor	53	91.38
Master	4	6.90
Doctorate	1	1.72

Data Collection

Data collection was carried out in two stages. In the first stage, data collection was conducted by distributing questionnaires containing ten questions with open-ended answers. The questions focused on three aspects: insight, attitude, and implementation of HOTS in PAI learning from planning, implementation, to evaluation. A total of 58 teachers who participated were given a Google Form link to fill in the ten questions. The link was provided to the WhatsApp group of 58 teachers. The data collected in this first stage were gathered from August 17 to August 26, 2021.

The data collection in the second stage was carried out via a semi-structured interview, using an interview guide to keep participants on topic while permitting more expansive answers (Bryman, 2016; Kavenuke, 2021; Muthanna, 2019). In this second stage, 10 teachers were interviewed, an acceptable size for phenomenological studies (Starks & Trinidad, 2007). Before collecting the data, the teachers were explained how the interview would be conducted via the Zoom application and that the interview would be recorded. Afterward, they were asked to sign an informed consent form indicating their willingness to participate and provide a schedule that would allow interviews to be conducted. Each teacher spent 1-1.5 hours for interviews. The interview collection process was carried out from 1 to September 5, 2021.

Data Analysis

After collecting data through the previous two stages, categorization and code generation were carried out independently. Data coding employed the content analysis approach. Content analysis allows researchers to carry out "subjective interpretation of the content of text data through a systematic classification process of coding and identifying themes or patterns" (Elo & Kyngäs, 2008; Erlingsson & Brysiewicz, 2017). The process was carried out inductively by pulling codes, categories, and themes directly from the data by the researchers (Kondracki et al., 2002). NVivo 12 PLUS was used to assist coding and categorization. Data from the first stage and interviews were included in Nodes and Cases to be categorized into data with certain codes. The thematic maps showed the organization of the concepts on various levels and potential interactions between concepts, which were then developed (Aliyyah et al., 2020). Figure 1 presents the results of the analysis of PAI teachers' perceptions regarding the HOTS implementation.

Figure 1

Thematic Inductive Concept of PAI Teachers' Perception Related to HOTS
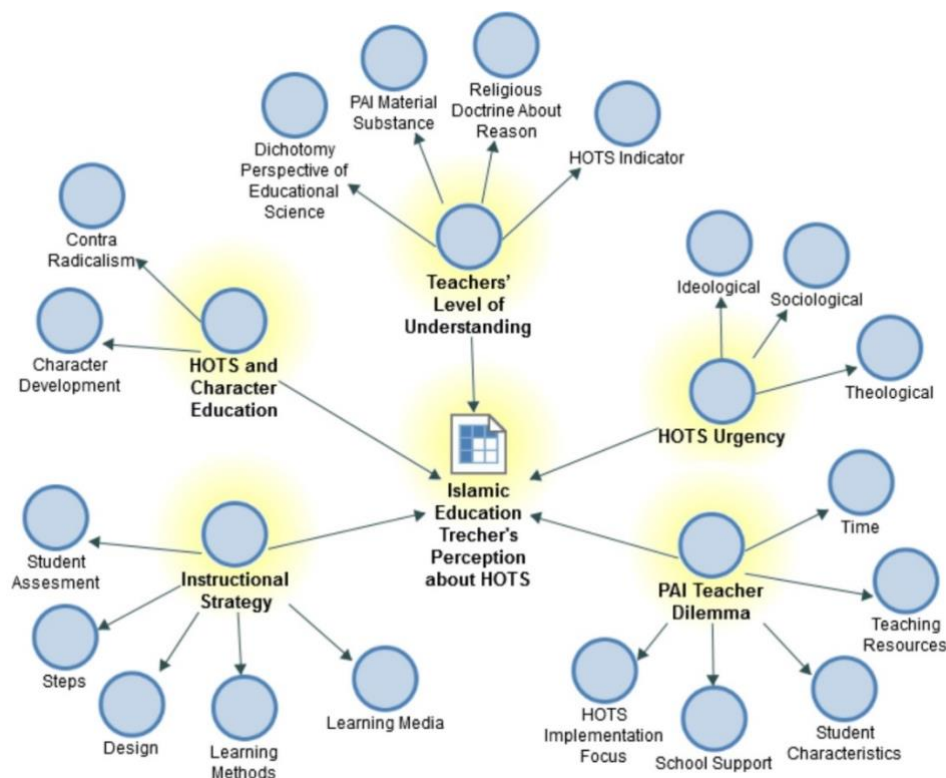
Trustworthiness

In contrast to quantitative research recognizing the terms internal and external validity and reliability and objectivity, these terms in qualitative research are replaced by the term trustworthiness in qualitative research according to Peterson (2019), Trustworthiness consisted of credibility, dependability, confirmability, and transferability, which Lincoln and Guba (1985) originally conceptualized. The credibility and dependability of the data were reflected in the data collection instruments referring to the relevant literature. In addition, the instrument design involved several experts, such as experts in the field of Islamic education, experts in Islamic education learning models, and experts in the curriculum. Regarding the credibility of the interview data, the teachers were asked to clarify by using member checks for each participating teacher to ensure that the transcription accurately represented their desired words (Lincoln et al., 1985), especially about the HOTS program through PAI. The results of the interview transcripts to the teachers were sent via email and WhatsApp personally, not in the group. Triangulation between researchers involved four researchers at all stages of the study through regular conferences or focus group discussions on increasing research defenses (Patton, 2014). In addition, triangulation helps researchers reduce bias because it facilitates cross-checking the integrity of participants' responses (Anney, 2014). Furthermore, the research team's involvement in investigating the same issue brings different points of view in the investigation, which supports the integrity of the findings.

Ethical Considerations

This study was by the institutional review board of name of the university. The association of lecturers and character educators of Indonesia also approved this study to be

conducted. All participants were given information about the objectives, procedures, and possible benefits and risks of the study. Furthermore, they were given time to consider their participation and take part in the study voluntarily. The methods were carried out following relevant guidelines and regulations.

Findings

According to the methodology, the findings of this study are divided into five main concepts. These concepts represent the knowledge, attitudes, and practical capabilities of the Islamic Education teachers in developing students' thinking skills. It also includes the challenges they have to face during the implementation of HOTS in Islamic Education. These concepts are presented as follow:

PAI Teachers' Understanding about HOTS

Three conceptions embody teachers' understanding of HOTS, including; religious conceptions of reason, conceptions of the dichotomy of Western science versus Islam, and conceptions related to the characteristics of PAI material. These concepts form the basis for all thinking and communication: hypotheses, measurement, data collection, and the realization of new concepts to express an idea (Nasution, 2005) in this case related to HOTS in PAI learning. In addition to forming teacher understanding, these three conceptions have implications for teachers' understanding of the formulation of HOTS indicators in PAI and the implementation of HOTS in the PAI learning process. Figure 2 shows these findings.

Figure 2
Concept Map of PAI Teachers' Understanding of HOTS
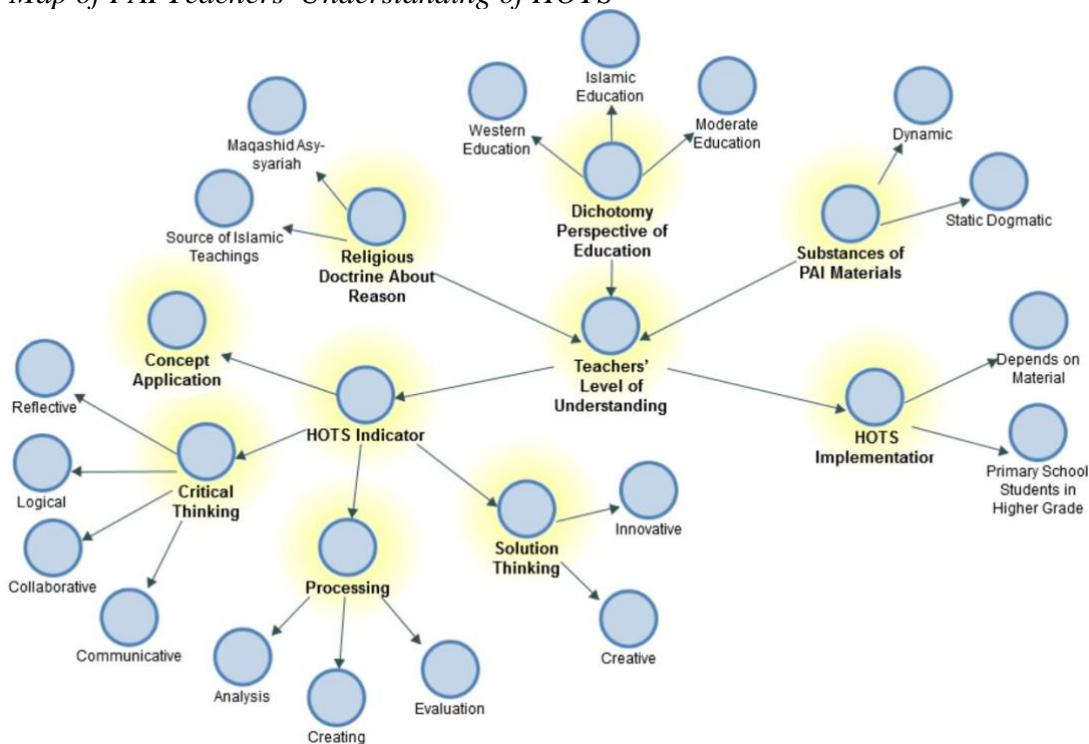
HOTS is a gradation of student thinking at a high level in taxonomy that reflects a person's level of thinking skills (Qasrawi & Beniabdelrahman, 2020; Razak et al., 2020). Thinking skills are closely related to the work of reason, and Islamic doctrine encourages its

adherents to continually develop their minds as a gift from God (Supriyadi et al., 2019). Developing thinking skills in the teacher's perspective is implied as the embodiment of Muslim obligations to offer submission to God. These obligations are contained in the sources of Islamic teachings, both the Qur'an and Hadith, and in line with the purpose of the revelation of Islamic teachings (*maqashid Sharia*) in which one objective is to preserve the nature of the human mind (Al-Syatibi, 1975; Asyur & Al-Thahir, 2001). Even though PAI teachers considered HOTS a product of Western education that will be implemented in Islamic education, all teachers tended to accept the HOTS program to enhance the quality of PAI learning. These skills were accepted in the teachers' perceptions because the spirit of HOTS aligns with Islamic values in developing the potential of reason. Teachers expressed several opinions: "One of the maqashid Sharia in Islam is to maintain reason because the basis for its realization is in the learning process" (Teacher 14). Teacher 9 added that "The HOTS program is an effort to enhance students' thinking skills. This is in accordance with religious orders and can be applied in Islamic education even though HOTS is a product of Western education."

> *Ideally, the learning theories used in teaching Islamic religious materials always refer to the theory of Islamic education. HOTS is a product of Western educational thought; however, conceptually, the objectives of HOTS are in line with the messages of Islamic teachings in developing the potential of the reason so that HOTS can be actualized in PAI learning with some adjustments.* (Teacher 7)

However, the teachers' acceptance of the HOTS concept in PAI learning was incomplete because it was closely linked to the teachers' comprehension of the concept of PAI material itself. From the teachers' perspectives, the characteristics of PAI subject matter were static-dogmatic, which could not be changed, such as material related to the main points of faith. These materials tend to be taken for granted. Some materials were dynamic and subject to change, such as *fiqh* or Islamic law in a social context, not in a ritual context. In the understanding of PAI teachers, for material related to the main points of faith, HOTS could not be implemented even at the creative level (C6, because the material for faith in Islam was like the truth of the Holy Book. The necessity of imitating the Prophet's (PBUH) characteristics and confirming the messages brought by the Prophet (PBUH) was a matter that must be accepted entirely. As for the dynamic material, HOTS allowed it to be implemented. In addition, the application of HOTS in teachers' understanding could only be implemented in primary school levels in the upper grades, namely Grade 4, 5, and 6, because students in these classes had begun to develop their thoughts on abstract things. Teacher 17 stated that, "PAI material is difficult to change because it is more of a dogma that must be followed. Thus, it is difficult to create a problem, even have to create something." Teacher 43 mentioned that, "It is necessary to choose the right PAI material because not all PAI materials can be in the form of HOTS."

> *The application of HOTS can only be implemented in the upper class because the thinking skills in the lower class, namely Grades 1-3, are still concrete, while in the upper class, namely Grades 4-6, the ability of students has begun to understand abstract things.* (Teacher 7)

The implications above formed teachers' understanding regarding the formulation of HOTS indicators in PAI. In the teachers' perception, HOTS-oriented PAI learning was intended to provide students with skills in four aspects: the ability to apply concepts; skills in thinking processes including the ability to analyze, evaluate and create; skills in critical thinking characterized by the ability to think logically, reflectively, collaboratively and

communicatively; the ability to think solutions that generate innovation and creation. In the HOTS indicators, the teachers reveal the ability to apply the concept as a HOTS category. In Bloom's taxonomy, the ability to apply concepts (C3) was included in the LOTS level (Anderson & Krathwohl, 2001). The reason teachers gave was that the PAI material was more focused on applying value concepts in daily practice. However, according to the teachers, the application of the concept needed a requirement, namely a permanent and sustainable application as a form of commitment to religious teachings. Teachers expressed the following opinions: "For PAI subjects, the HOTS indicator is how the teacher gives students the ability to apply concepts, think critically, be communicative and how religion is a solution in their lives" (Teacher 15).

> *Although the objectives of PAI learning are HOTS-oriented, it does not mean that C1-C2 and C3, which are categorized as LOTS, are not important. This stage must still be passed, especially in PAI learning; the most important thing is how students practice values in accordance with their religious teachings. The practice of values must continue to be implemented and become a habit*. (Teacher 11)

The Necessity of HOTS-Oriented PAI Learning

The teachers saw the importance of the HOTS-oriented PAI learning process. This perspective was based on four main motivations: theological, ideological, sociological, and juridical motivations.

Figure 3
HOTS Urgency
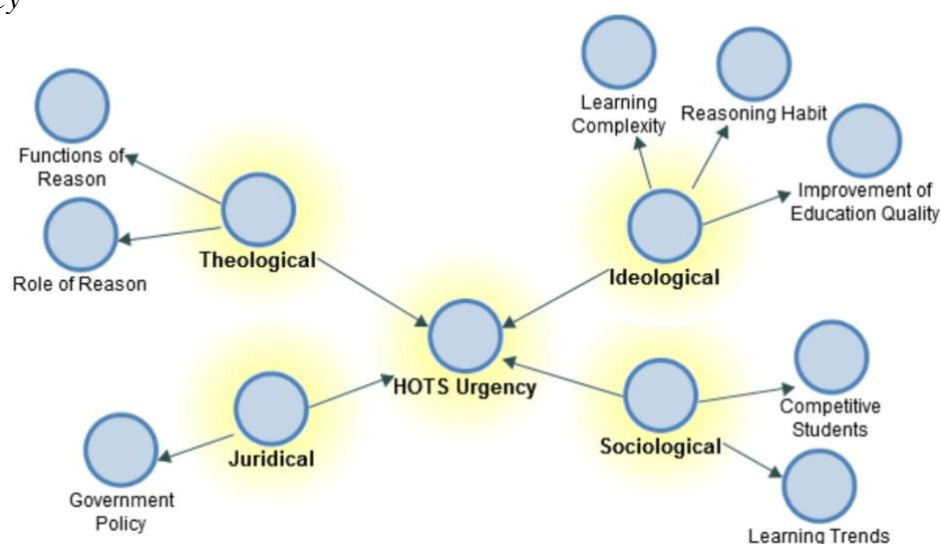
Theologically, teachers see the importance of HOTS-oriented PAI learning due to the encouragement in improving the role and function of reason in strengthening diversity. Ideologically, teachers believe that HOTS-oriented PAI learning will be able to enhance the quality of a nation's education. One parameter of a good nation is the creation of superior human resources through education (Wijaya et al., 2016). In addition, the complexity of learning in the 21st century requires that everyone has a systematic, logical, and critical way of thinking and reasoning, and it can only be obtained through the windows of quality education.

In addition to adapting to learning trends in the 21st century, teachers perceive that HOTS-oriented PAI learning is intended to make students more competitive and that HOTS-

oriented PAI learning is vital because of a teacher's position as a policy implementer. Thus, in this case, the teacher is required to carry out HOTS-oriented PAI learning. The teachers expressed the following opinions: "To improve the quality of education, HOTS-oriented learning is a must for a teacher to carry out because the current learning trend demands it" (Teacher 33).

> *The application of HOTS in PAI learning is very important to hone thinking skills. In addition to being part of a religious command to develop the potential of reason, it also prepares students to be ready to face the challenges of the times.* (Teacher 11)

Teachers' Dilemma in HOTS-Oriented PAI Learning

At the level of implementation, teachers are faced with several dilemmas in HOTS-oriented PAI learning practices. These dilemmas are related to teaching resources, school support, time, and student characteristics.

Figure 4
Teachers' Dilemma
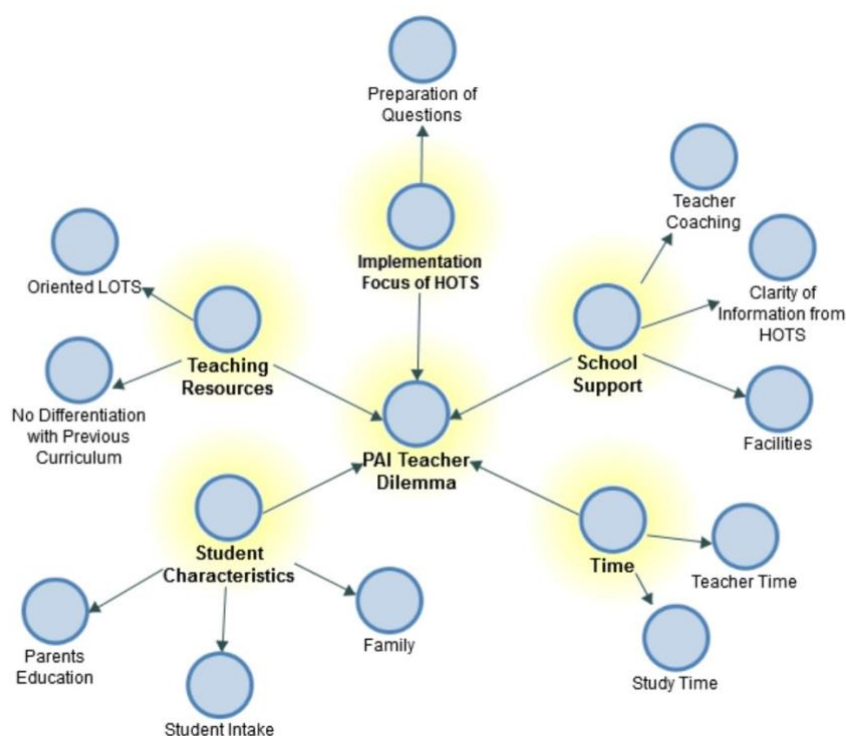
The Indonesian Ministry of Education provides books as teaching materials and guides for teachers in implementing PAI learning regarding PAI teaching resources. In the teachers' perception, the books distributed by the Ministry of Education tended to be LOTS-oriented and paradoxical to curriculum policies that demand HOTS-oriented learning. In teachers' perceptions, the teacher's handbook tended to be LOTS-oriented because many operational verbs used in the teacher's handbook use verbs, such as remember, recognize, and mention. This represents a cognitive gradation in the LOTS level. In addition, the teacher's handbook did not show differentiation from books in the previous curriculum in teachers' perceptions. This condition creates a dilemma for teachers because they must refer to the LOTS-oriented learning

guidebook; on the other hand, they were also required to implement the HOTS-oriented learning policy.

Regarding the characteristics of students, the gap between the learning environment that teachers provided to the students and the learning environment that parents provided to their children at home became a dilemma for the teachers. Although teacher treatment was HOTS-oriented, students were accustomed to receiving LOTS-oriented family education. This fact was related to the different educational levels of parents, so that students' abilities also varied.

Furthermore, the lack of support from schools in implementing the HOTS-oriented learning process was a problem among teachers. For example, the lack of guidance carried out by schools made teachers obtain very minimal information related to HOTS. In addition, the lack of facilities and teaching-and-learning materials supporting teachers hindered the process. Improving thinking skills in the learning process requires a stimulus in the form of teaching materials and learning media (Istiyono et al., 2020; Sumarwati et al., 2020). The time allocation for Islamic education is two hours of lessons per week, and a teacher's time is often occupied with administrative tasks, impacting teacher performance in conducting HOTS-oriented learning. These factors impacted HOTS in learning at the level of formulating models for question practice even though HOTS was a model of question practice and related to learning models (Sadieda et al., 2018; Zohar & Schwartzer, 2005). Teachers said the following: "Teachers are sometimes in a dilemma. While they have to carry out HOTS-oriented learning, the sources of learning guidelines tend to contain LOTS-oriented learning" (Teacher 12). Teacher 28 highlighted that, "The limitations of facilities and infrastructure in developing learning media and teaching materials make the implementation of HOTS only on question practice in PAI." Teacher 21 added that, "For the success of teachers in implementing HOTS learning, school support is needed, such as capacity improvement and capability for teachers related to HOTS learning, but unfortunately, so far, these efforts have been minimal."

> *HOTS is not an instant process; it requires sufficient time to carry out the oriented learning process. However, a number of administrative tasks and the allocation of PAI learning time, which is only allocated two hours per week, make us confused.* (Teacher 23)
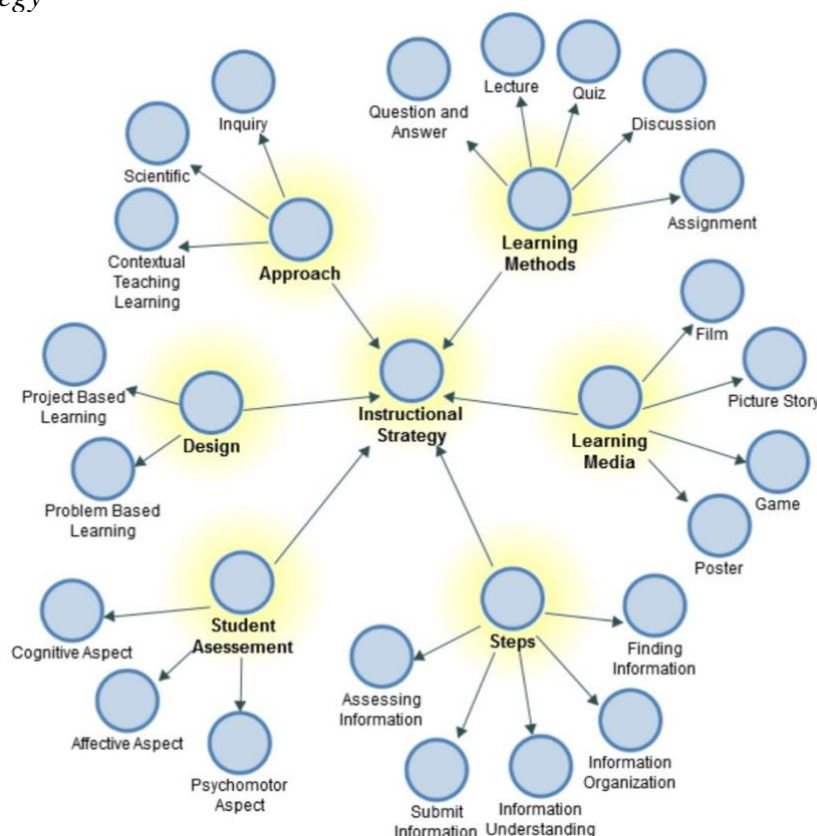
Teachers' Strategy in HOTS-Oriented PAI Learning

An instructional strategy is a set of instructional components employed in instructional activities to achieve instructional objectives (Dijkstra et al., 2013). The learning strategies in this study are divided into six aspects: design, approach, method, media, steps, and student assessment. Figure 5 presents these.

The learning design that teachers used in carrying out the HOTS-oriented PAI learning process consists of two models: the project-based learning model and the problem-based learning model. The approach taken in teaching PAI was HOTS-oriented, and teachers employed three approaches: inquiry, scientific, and contextual teaching and learning. In terms of learning methods, teachers employed the question-and-answer method, lectures, quizzes, discussions, and assignments. Furthermore, teachers used various learning media like short films, picture stories, posters, and games to provide a stimulus in the HOTS-oriented PAI learning process. From the media used, the teachers directed the students to find information, organize information, comprehend information, and then convey the information obtained in front of the classroom and provide responses and assessments of the information. The other students responded to what was presented by their friend by responding to it. As for assessing learning outcomes, teachers used three aspects of assessment: cognitive, affective, and psychomotor. Teacher 13 stated that, "To provide a stimulus in HOTS-oriented PAI learning, I

apply learning media such as posters, games, picture stories, or if there is an InFocus, I present short films." Teacher 17 added that, "Life in the 21st century, in addition to having thinking skills, also needs to have literacy skills. To achieve these two things, students are directed to find information, process, organize information, convey and evaluate the information."

**Figure 5**
Instructional Strategy

In teachers' perception, the aforementioned learning strategies were still not fulfilling the teachers' expectations in teaching HOTS-oriented PAI. In addition to being faced with time limitations, learning methods and media that can stimulate students' thinking skills still need to be developed. This is important because a teacher must be creative and innovative in designing learning methods; hence, the learning objectives can be achieved (Aliyyah et al., 2020). Of course, this process requires support from the school. In addition, the success of HOTS-oriented PAI learning is not only imposed on teachers and schools. Parental support is also needed in providing space and opportunities for children to gain HOTS competence in the educational process in the family. For example, Teacher 18 and Teacher 22 expressed opinions related to this: "Teachers still need to develop learning methods and media that stimulate students' thinking skills. School support and teacher motivation to change is a necessity for such development" (Teacher 18); and "The toughest challenge for teachers in teaching HOTS is the different characteristics of each student; parental support is needed in the education frame in the family" (Teacher 22).

HOTS Learning Contribution to Students' Religious Attitudes

HOTS-oriented PAI learning in teachers' perception contributes to students' religious attitudes. In this study, the contribution could be seen in two aspects: the students' character development and mitigation of religious radicalism, a problem in various countries (Elmir,

2009; Sirry, 2020). Figure 6 shows the contribution of HOTS learning in primary schools in the teachers' perceptions.

Figure 6
Contribution of HOTS-Oriented PAI Learning
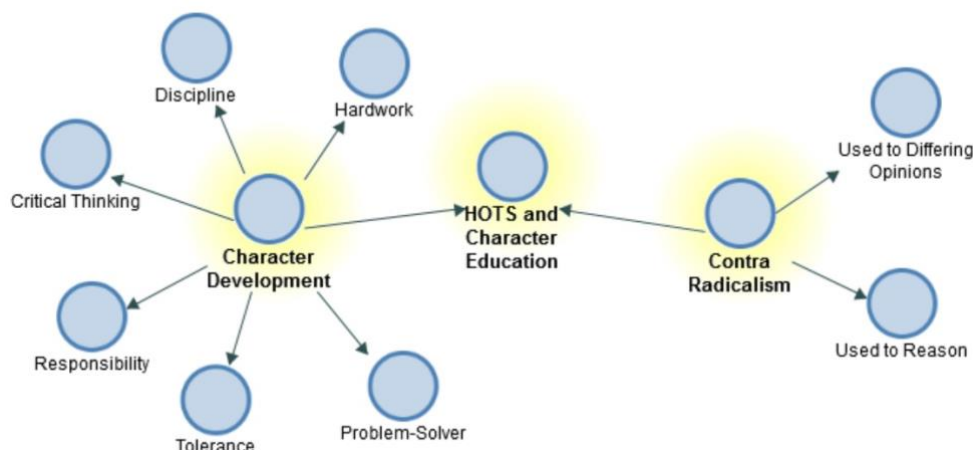
In the teachers' perception, in addition to equipping students with high-level thinking skills, HOTS also contributes to character development, both moral character and character performance, such as hard work, discipline, responsibility, criticalness, tolerance, and the ability to produce solutions to problems. Additionally, HOTS learning also contributes to mitigation efforts as early as possible from radical religious ideologies. Children recognize differences of opinion and the formation of a culture of reasoning in students, which is not only textual reasoning but also contextual. One reason for many radical ideas is that students are unaccustomed to contextual reasoning and tend to use textual *an-sich* (Rohman & Nurhasanah, 2019). Several teachers noted that preventing religious ideology with radical ideology must be carried out as early as possible (Arif, 2017). Teacher 31 said: "In addition to growing thinking skills, HOTS-oriented PAI learning is very effective in growing students' character, both moral character, and character performance." Teacher 36 commented that, "In addition to equipping thinking skills, HOTS-based PAI learning also affects character development such as tolerant responsibility, discipline, discipline, and the ability to produce solutions." Finally, Teacher 29 stated that, "PAI learning by developing HOTS familiarizes students with reasoning and differing opinions; this is very effective as a form of prevention against radical religious beliefs as early as possible."

Discussion

The findings above indicated the level of understanding and acceptance of teachers in developing HOTS-based PAI learning. Although a dichotomy remained between Islam education and Western education in the teachers' way of thinking, their attitude was generally moderate and positive enough to accept the HOTS concept. Teachers' compliancy with the implementation of HOTS is in line with (Rashed, 2015)who investigated Arab and Western educators concerning the necessity of curriculum reform in the Islamic world. The study found that the Arab academics' standpoint on curriculum reform of the twenty-first century Islamic education is quite similar with the Western scholars.

Apart from the fact that the spirit of HOTS aligned with the values of Islamic teachings in developing the potential of reason, it also affected the students' character development, both in character performance and moral character (Davidson et al., 2008). This was following the

philosophy of the purpose of Islamic education, which is to generate good, faithful individuals and people who submitted to Allah following the purpose of human creation based on the sources of Islamic teachings: Qur'an and the Hadith (Alavi, 2008; Supriyadi et al., 2020; Supriyadi & Julia, 2019). This aspect is in line with the findings of Ismail et al. (2021) who investigated the relationship between HOTS and *qalb* (the center of human emotions) as found in verse 46 of Surah al-Hajj. The study highlights four things. First, HOTS conforms to the value aspect, often known as affective value. Second, *qalb* is consisted of two aspects: physical and spiritual, which aligns with the HOTS' cognitive and value aspects. Third, there are various scientific evidences showing the link between physical, emotional, and spiritual with the cognitive factor. Fourth, a fresh endeavor has been launched to support HOTS by including value or emotional aspects into the system's implementation procedures.

Therefore, teachers view HOTS in the context of Islamic education as the ability to apply knowledge, skills, and values in reasoning and reflection. Students with HOTS will have the ability and skills to analyze, evaluate, and create innovations in solving the current problems encountered (Ali & Singh, 2020; Ismail et al., 2021; Rozi et al., 2021). The success of this objective of Islamic education depends on implementing a curriculum that focuses on understanding, mastering, and applying knowledge well integrated into thinking skills, which in this case, a higher-order thinking skill. Islamic education activities that foster critical thinking skills ensure that the learning process is not restricted to memorization of religious concepts that must be adopted as they are. More than that, it teaches students to apply the religious ideas in the context of a dynamic life, allowing them to come up with a variety of solutions. Therefore, students will be able to practice religious teachings as it should have been implemented in a life that is constantly progressing in a framework of Islamic goodness (Supriyadi et al., 2019).

Besides curriculum design, teachers have a significant role as curriculum implementers. The quality of a teacher is an essential factor in learning. One cause of failure in teaching is the lack of professionalism, teaching instantaneously, unwillingness to challenge students and indifference to student changes. Teachers must elaborately integrate cognitive and emotional abilities individually and collectively in professional learning. This is a form of the desire to improve and change based on the capacity and willingness drawn from convictions and beliefs and the perusal and enactment of appropriate alternatives for improvement or change (Avalos, 2011). Therefore, teachers must constantly reflect on themselves and strive to enhance their teaching ways to create changes in the learning process.

A teacher's ability to develop learning implies that teachers must also have literacy skills, which can be developed by exploring studies that can improve their abilities, for example, how teacher learning is researched and proposed models of teacher professional learning (Castle, 2006; James & McCormick, 2009; Nisbet & Shucksmith, 1986; Novak & Gowin, 1984; Olson & Craig, 2001). Developing or implementing theory can help study how teachers learn and change to the discussion of teacher change (Clarke & Hollingsworth, 2002; Korthagen, 2004, 2010; Penlington, 2008). This can be realized if various parties, especially policymakers, support the development of increased teacher competence. This study shows that teachers hope to receive support in the form of capacity improvement and capability to properly implement HOTS, such as support for facilities and infrastructure and various forms of training.

PAI learning practices carried out by teachers require the creation of an ideal learning atmosphere according to the needs of students. Changes in the educational paradigm require 21st-century solutions, necessitating a significant escalation in the learning process, namely, evolving the PAI learning paradigm from LOTS to HOTS. Various barriers to infrastructure and challenges that teachers faced did not reduce the motivation of teachers to carry out HOTS-oriented PAI learning. This also shows the growing awareness of teachers about the importance of learning reform to improve the quality of education. These transformations explicitly ask teachers to improve their teaching strategies by shifting the emphasis from traditional textbook-

based and rote learning into exploration and inquiry-based learning situated in real-world phenomena (Miri et al., 2007). This indicates that teachers also direct PAI learning to analyze problems and concepts, evaluate field realities and formulate problem-solving for social problems. This effort is also expected to prevent the thoughts of textualism-fanaticism that can infect students' learning as early as possible (Ardiansyah, 2019).

Conclusion

This study concludes that the 2013 curriculum policy that prioritized the development of Higher-Order Thinking Skills (HOTS) and aspects of the character (social and spiritual attitudes) received positive responses from teachers and became a necessity for PAI learning in the 21st century. Seen from the teacher's perception, the policy aligns with the teachers' beliefs regarding the purpose of Islamic education in developing the potential of reason and forming the students' character. However, it is necessary to strengthen a comprehensive understanding of the HOTS concept for PAI teachers because a gap remains between the HOTS concept from policymakers and PAI teachers' understanding of HOTS. At the level of implementation, teachers have not implemented HOTS-oriented PAI learning in its entirety. The findings of this study explain that the implementation of HOTS-oriented learning in practice is still at the level of providing the models of question practice to students, while in learning models or those concerning the HOTS learning process, it has not become a concern for teachers. The level of understanding related to HOTS and the substance of PAI learning materials among teachers implementing HOTS is limited to certain materials and can only be applied to certain grades. Therefore, policymakers should stress the importance of increasing teacher competence in mastering the HOTS concept comprehensively in planning, implementation, and evaluation. Support from various parties in optimizing HOTS-oriented PAI learning is a necessity for teachers.

This study is a call for policymakers to establish a formulation or model that can improve teacher pedagogic competence in implementing HOTS in Islamic education learning process to foster teacher professionalism. Because learning is a dynamic process involving varying levels of cognitive activity, teachers' pedagogic competency is one of the defining factor that determine the level of students' cognitive during the learning process. We believe that HOTS would have broader implications if the following suggestions are carried out:

- Implemented in other religious education at any level of education;
- Detailed models of HOTS implementation are developed in line with the needs of curriculum co certain level of students for a specific subject; and
- Teachers' competency is the heart of HOTS, therefore ensuring the teachers' readiness and ability should be the most concern before getting them ready for HOTS-based teaching.

Limitations

This study has several limitations. In terms of the subject, it only involved primary school teachers in the province of West Java and explored PAI teachers' perceptions in primary schools regarding the implementation of HOTS in Islamic education subjects. Therefore, future research could have a broader focus on the implementation of HOTS at higher education levels involving teachers from various provinces or across countries to realize research collaboration as a form of academic diplomacy.

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