

# Teachers' Voices towards HOTS Integration in Teaching Reading Comprehension

Nyimas Larasati Utami<sup>1</sup>, Rita Inderawati<sup>2\*</sup>, Eryansyah<sup>3</sup>

Universitas Sriwijaya, Indonesia.

Email: rita\_inderawati@fkip.unsri.ac.id<sup>2</sup>

Submitted: 12/06/2021

Revised: 15/07/2021

Accepted: 20/07/2021

E-ISSN : 2579-4574

P-ISSN : 2549-7359

**Abstract.** Higher order thinking skill (HOTS) is the demanded skill in 21st century that one needs to possess in order to be able to compete in the advanced era. The aim of this case study is to investigate the teachers' beliefs in HOTS integration in the teaching of reading comprehension as well as how the beliefs are applied in the practices of teaching reading by doing a qualitative study in a case-study design. A semi-structured interview and classroom observations were used to obtain the data. The results indicated that the teachers shared strong beliefs about the concept of HOTS and its components. The concept includes how they defined HOTS. In addition, the components revealed how they comprehend analyzing (C4), evaluating (C5), and creating (C6). Practically, the teachers' beliefs were not fully reflected, particularly in the question and assignment they assigned to students that indicated LOTS. This investigation suggests that more teachers' professional development is required to promote the success of HOTS incorporation into teaching reading comprehension, mainly during online learning due to pandemic.

**Keywords:** *Higher Order Thinking Skill, HOTS, Reading Comprehension, Teachers' Beliefs, integration*

<https://ojs.unm.ac.id/eralingua>



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/)

## INTRODUCTION

Knowingly, reading is an activity which one can barely refrain from as in sets of circumstances, one ought to read many forms of text such as books, newspaper and articles in order to obtain information. The involvement of reading in everyday life creates that the requirements of being excellent include the ability to read well. By reading, students do not only get the knowledge and information but also they can develop their personal attitude, social, and civic life by developing their autonomy and empathy through reading (Holden, 2004; Aliyeva, 2021). If their reading performance is poor, they are very likely to fail in the study, or at least they will have difficulty in making progress. On the other hand, if they have a good reading performance, they will have a better chance to succeed in their study at school.

However, according to International Student Assessment Program (PISA), the score for Indonesian students' reading literacy is below average (OECD, 2020). This means that Indonesian students' reading ability is still categorized low. In fact, it is recalled that PISA questions require higher order thinking skills (HOTS). Countries that have achieved outstanding results in the PISA practice based on HOTS and how to use it in dealing with practical challenges in life (Schleicher, 2018). Meanwhile, since the beginning of 2017, Indonesian curriculum has started to incorporate HOTS in the instruction. This is questionable that in the middle of HOTS incorporation in Indonesian curriculum, the PISA score of Indonesian students' reading literacy did not get any better. Even after employing multiple metacognitive strategies, pupils still struggle to solve PISA reading questions (Hartono et al., 2020). On the other hand, a study signified that PISA-based reading materials in the form of continuous text in the Indonesian setting were classified as having a possible influence on students (Selvina et al., 2018). Therefore, the education community must also plan to adapt to these adjustments, such as making students own HOTS and making sure its implementation at school is effective.

HOTS is the required skill one needs to possess in this 21st century (Brookhart, 2010). This era of challenges needs the relevance of HOTS to be involved in some aspects of living (Coffman, 2013; Yen & Halili, 2015; Widana, 2020; Ariska et al., 2020). In educational aspect, HOTS is considered the most relevant skill by teachers to be taught to students who are prepared to face the rapid development of technology and information (Yen & Halili, 2015). Preparing the students with HOTS earlier in their education aspect will benefit their future, especially in career aspect (Coffman, 2013). Without it, in a world that requires critical thinking and creativity in life, it is difficult for one to compete with others. HOTS is the highest level in the domain of cognitive processes. It helps students master the challenges of a lot of information with a short amount of processing time (Phillips, 2004). Seeing that, HOTS holds an important duty in students' reading achievement because this era, where students study more than reading, writing or computational knowledge and sensitivity, needs higher-order thinking skills such as basic literacy, basic numeracy, and cross-cultural skills (Forester, 2004).

In relation to reading, it is not the act of obtaining knowledge or new information alone. As Grabe (1991) states, reading is a dynamic mechanism involving diverse objectives and various system requiring distinct skills. Therefore, by the

application of HOTS, reading will not only be the activity in receiving the new information but also the point where the information can be applied in real-life situation. In line with this, Anderson (2006, as cited in [Nourdad et al., 2018](#)) comes up with the idea that the notion of reading comprehension has evolved from what has come to be called as a receptive process to what is currently called as an interactive process. This concept of reading comprehension skill makes clear between passive readers and active readers since the active ones will not only gain the information on the surface, but also interpret or predict by analyzing it according to the situation. This is supported by [Sanders \(2001\)](#) who revealed that in reading comprehension skills, the passive unskilled reader is separated from the active reader. This is very precise to HOTS. Consequently, those who apply HOTS in reading will comprehend the text better, especially for Indonesian students who are facing the curriculum with the policy of HOTS integrated in it.

Over the last two decades, educators have found that certain students do not have HOTS automatically and that all HOTS can be learned specifically and clearly at specific stages during the term ([Williams, 2015](#)). Incorporating HOTS to learners in the teaching is really essential for the improvement of students' learning. As what is stated by [Newman \(1990\)](#), he addressed higher-level learning in the sense of social sciences, indicating that it is essential for all learners.

In regards to this, Ministry of Education and Culture of Indonesia had revised the 2013 Curriculum (K-13) to integrate HOTS (Higher-Order Thinking Skill) as well in the teaching and learning process as in the revised curriculum 2017. This is why Indonesian students are supposed to have applied the HOTS already. The quality of application of HOTS rely upon the degree of students' independence and engagement ([Hillocks, 1986](#)). Teachers' lack of pedagogical expertise to develop their methods by incorporating HOTS into their lessons has also been discovered to be questionable.

Based on the obligation to apply HOTS in the revised version of 2013 curriculum in 2017, it is really necessary to investigate teachers' beliefs in viewing HOTS and their practices in the classroom, especially in reading class. In order to improve students' HOTS, teachers' questions on HOTS may play a key role in classroom teaching. For hundreds of years, teachers' questions in the classroom have been used as a way to test students' abilities, encourage understanding and improve students' higher-level thinking skills ([Tofade, Elsner, and Haines, 2013](#)). In accordance, [Fauziati \(2015\)](#) reported that teachers' beliefs affect their preparation, objectives, strategies, aids, their responsibilities, modes of engagement in the classroom, their pupils, their evaluation of students and the school in which they operate

Some investigations about HOTS and its issues following had been conducted. [Tyas et al. \(2018\)](#) revealed that EFL teacher's understanding of HOTS is very low. Most EFL teachers do not know much about the concept of HOTS ([Retnawati et al., 2018](#); [Tyas et al., 2019](#)). They are not sure yet to recognize HOTS's ability and potential to overcome difficult problems. As a result, most EFL teachers always misunderstood HOTS. [Rajendran \(2001\)](#) argued that teachers were confident in teaching content but were still not ready to include HOTS in their classroom based on short term courses on HOTS by the ministry. This corresponds with a study by [Malini and Sarjit \(2014\)](#)

who argued that the difference between the knowledge of pedagogical content and the implementation of HOTS in the language classroom was caused by the resilience and incompetence of teachers to develop the activities in integrating HOTS in the instruction. As a result, it is critical that HOTS needs to be implemented successfully in reading classroom. [Samelian \(2017\)](#) did classroom action research (CAR) to explore ways to improve fifth-grader reading comprehension by critical thought and higher-order questions and the results revealed that higher-order inquiry and critical thinking can enhance comprehension of critical thinking skills and enable students to engage in high-level learning to increase their reading co-operation.

The researchers then initially did a survey to some senior high schools in Palembang which strictly promotes HOTS in teaching and learning activities. It was then found that this senior high school has been integrating HOTS in daily basis. This school had conducted workshop and training about HOTS for their teachers and other teachers from other schools many times. From this experience, it was concluded that this school has supportively promoted the integration of HOTS in teaching and learning activities. Also, it was expected that the teachers from the school have such strong beliefs about HOTS and are able to integrate it in the practice of teaching reading comprehension.

Correspondingly, this research was conducted due to conflation found in the beliefs and practices held by the teachers. It is expected that by investigating teachers' beliefs and practices in integrating HOTS in teaching reading comprehension, it can be aligned with the most recent policy of Ministry of Education and Culture. This new policy applied in 2021 is establishing Minimum Competence Assessment or *Asesmen Kompetensi Minimum* (AKM) which will be the national assessment for the school to later improve the preparation for the students to the national examination. The AKM is the type of assessment which is based on HOTS especially in reading literacy and mathematics. Thus, the result of this study will help show the teachers' beliefs towards HOTS that they are integrating in their teaching.

A similar previous study was conducted by [Kusumastuti et al. \(2019\)](#) revealed that teachers' personal beliefs toward HOTS differ from how HOTS should be implemented in the classroom. The difference between the previous study and the study researcher conducted was that researcher did the study in senior high school, while the previous study was done in junior high school. Additionally, another similar study conducted by [Ansori et al. \(2019\)](#) to investigate the beliefs and practices of a teacher in intergrating HOTS in teaching reading in East Java. However, the similar study has not been found conducted in Palembang or South Sumatra. Thus, this study is the first study regarding the integration of HOTS in teaching reading comprehension in Palembang. This study also involved two participants, unlike the previous study which only investigate a teacher. Moreover, the previous studies were conducted before Covid-19 pandemic. Meanwhile, this study was done during the pandemic which required online learning. In addition to this, the most recent study conducted in senior high school revealed that although the participants were aware that implementing HOTS is inextricably linked to English courses and curriculum, the results of the study showed that teachers' knowledge of HOTS was still lacking ([Rachmawati et al., 2021](#)). However, the data of the recent study were collected

through interview and questionnaire and conducted to investigate the HOTS integration in EFL classroom in general. Therefore, the different situation and data collection had led researchers to conduct further research which was more specific to the teachers' beliefs and practices of HOTS integration in teaching reading comprehension due to the importance of reading as mentioned before by also including observation as one of the ways to collect the data and also conducted in Palembang. Seeing how in the previous study teachers' beliefs affected many layers of instruction, therefore, the researchers conducted this research which aimed to explore the teachers' beliefs in the integration of HOTS in the teaching of reading comprehension and how the beliefs are integrated in the practices.

## RESEARCH METHOD

Qualitative study was chosen because it met the objectives of the study which is to describe and interpret the EFL teachers' beliefs of HOTS and how they implement it. The researcher utilized a case study research design to investigate the research problems. This study took place in Palembang, the capital city of South Sumatra province, Indonesia, at one of state schools. The school implemented a workshop about Internal Quality Assurance System or *Sistem Penjaminan Mutu Internal* (SPMI), the textbook design and application of E-module, the development of lesson plan based on 4Cs of 21<sup>st</sup> century learning, and the development of HOTS (Higher Order Thinking Skills) instruction and assessment. This program aims to develop the ability of teachers in making or compiling questions that require higher-order thinking skills and also applying them in the classroom so as to improve the quality of students' thinking ability. Related to this study, the participants were two EFL teachers who have joined the program. The teachers had ever been involved in HOTS-based learning training since this study investigated how teachers' beliefs of HOTS are and their practices in teaching reading. Participant 1 would be referred as T1 and participant 2 would be referred as T2 in this article. The reason of choosing this number of participant was because in case studies, the researchers developed an in-depth examination of a case, which is often a program, event, activity, process, or one or more individuals, and is used in many domains, including evaluation ([Cresswell, 2012](#)). One participant is the minimum number, so the researchers chose two in order to be more focused on the investigation. These two teachers also had different working status such as T1 is a certified teacher, meanwhile T2 has not been certified yet.

A semi-structured interview and classroom observations were used to gather data. The interview data was audio-taped with the participants' consent through phone call and Zoom meeting application. Meanwhile, with the participants' agreement, teaching and learning activities were recorded via Zoom application since the activities happened during Covid-19 pandemic. During the observation phase, in addition, field notes were employed to record ongoing operations in a written format. The data were analyzed by following the sequence of steps from specific to general and involve multiple levels of analysis ([Creswell & Creswell, 2018](#)) which are; 1) organizing and preparing data for analysis; 2) Reading or viewing all data; 3) Starting coding all data; 4) Generating descriptions and topics; and 5) Representing



description and subject. The data, then, were validated in qualitative literature (Creswell & Creswell, 2018) by triangulation and member checking.

## RESULT AND DISCUSSION

The findings of this study are divided into some categories: teachers' beliefs about HOTS, the integration of HOTS in teaching reading comprehension, the challenges encountered in promoting HOTS, and the factors affecting the integration of HOTS. Each of categories and themes will be discussed as follow:

### TEACHERS' BELIEFS ABOUT HOTS

#### *Beliefs about the Concept of HOTS*

Based on the interview result, T1 and T2 had similar beliefs about what HOTS is. They mainly believed that HOTS is the way of thinking that requires students to analyze. Their beliefs towards the concept are consistent with applicable ideas and past research defining HOTS as sophisticated thinking processes involving the most basic mental activity in summarizing material, generating inferences, building representations, analyzing, and building links." (Anderson & Krathwohl, 2001; Bloom, 1956; Resnick, 1987). Therefore, T1 and T2 held strong beliefs about the concept of HOTS.

Teacher 1 (T1) believed that HOTS is the kind of learning which requires students to have critical thinking and good problem solving. In line with Nachiappan et al. (2018), the resource materials must be arranged so that they may materialize the application of knowledge, skills, and values that students gain to help them comprehend, reflect on, and solve problems, make decisions, innovate, and create in order to implement HOTS effectively. T1 also believed that students do not just remember or memorize the information from the text but they also comprehend the concept and at the end, they can think of solution to the problems by creating a product. To conclude, this belief of T1 explains that the integration of HOTS in learning can help students solve problems in the future by practicing analysis. The interview transcript below contains more exact statements.

"HOTS needs critical thinking, problem solving, our question is design to have analytical thinking like that, so it is a kind of analysis. In reading comprehension, the answer is not there actually (T1)."

Similarly, teacher 2 (T2) believed that HOTS is about giving students the questions that require them to analyze. This belief is relevant with what was written in the *Handbook of HOTS-Based Learning* by Ministry of Education and Culture (2018). However, HOTS is not only about the questions of analysis only which, according to Anderson and Krathwohl (2001), is the capacity to break down an issue or question into tiny components and discover the relationships between the segments. It is also about evaluation which is the ability to criticize based on standard, criteria, and validity of the knowledge or information and creation which is determined as the ability to produce new concepts or viewing things based on the prior knowledge (Anderson & Krathwol, 2001). Here is the statement in the interview.

“So, HOTS is Higher Order Thinking Skill. For HOTS itself, the senior high school students usually get the questions of analysis (T2).”

Seeing this result of interview, T1 and T2 had similar beliefs about HOTS. Both of them included analysis (C4) in their beliefs about HOTS. Seeing the relevancy with what was promoted by Ministry of Education and Culture, this shows that teachers shared strong beliefs about the concept of HOTS. This is in line with what was found by [Ansori et al. \(2019\)](#) that teacher held a strong belief about the concept of HOTS.

### ***Belief about the Components of HOTS***

The next interview question was about the components of HOTS in Bloom's Taxonomy. It was found that T1 believed that those components are analyzing, evaluating, and creating. T2 also responded that there are three components of HOTS according to the Bloom's taxonomy which were analysis, evaluation, and creation. Here is what she mentioned in the interview. This is the reflection of components of HOTS promoted by [Bloom \(1956\)](#) and revised by [Anderson and Krathwol \(2001\)](#) that the HOTS components are analyzing, evaluating and creating. This shows that the teachers shared strong beliefs about the components of HOTS.

The researcher then requested the teachers to define each component of the HOTS.

**Table 1.** Result of the interview of definitions of each HOTS components.

Participants	Analyzing	Evaluating	Creating
T1	Analyzing means trying to make inference from the given information.	Evaluating is the ability to criticize what has been done.	Creating is the result of analyzing.
T2	Analyzing is used to figure out the unstated events in the text.	Evaluating is used to respond to feedback.	Creating is used to produce something dealing with the lesson.

From the result of interview, teachers held strong beliefs about the three components of HOTS. They could mention and define three of them. Same result was revealed in the study done by [Ansori et al. \(2019\)](#) that teacher held a strong belief about the concept which includes the components of HOTS.

### ***Belief about the Components of HOTS by Ministry of Education and Culture***

The next theme is what teachers believed about the components of HOTS promoted by Ministry of Education and Culture. Ministry of Education and Culture promotes three components of HOTS which are transfer knowledge, critical creativity and problem solving. When first asked about these components, T1 and T2 were confused about the terminologies and believed that they were just the same as the components in Bloom's taxonomy. T1 believed that the components have the same framework as Bloom's taxonomy. His belief is stated below.

“They also refer to Bloom's taxonomy, it's just the same. The revised version. Even though, the terminology is different (T1).”

T2 agreed that the components have the same purposes even in different forms. This is her statement.

“To me, it’s just the same. They have the same objectives. Just in other words (T2).”

They were reminded that there are three components of HOTS promoted by the Ministry of Education and Culture in the Handbook of HOTS-Based Teaching and Learning. Those components are Transfer Knowledge, Critical and Creative Thinking and Problem Solving. The participants were also requested to define each component of HOTS promoted by the Ministry of Education and Culture. They both agreed that transfer knowledge is delivering knowledge which does not always start with teachers, but it can be done from student to student. Critical creativity, according to them, is the skill needed by the students to be innovative in problem solving which is the process when they end up creating something to deal with the issue.

### **Transfer Knowledge**

“Transfer knowledge is the form of delivering the information, it is usually done by teachers to students, but now teachers are not the only source of knowledge. Transferring knowledge can be done from teachers to students, students to students, or even students to teacher. As we know, students nowadays are much more knowledgeable in terms of technology that is currently a part of education, too. (T1)”

“Students are sharing their knowledge to others. That is also transfer knowledge. Like sometimes they present or say something in front of the class and others listen. (T2)”

### **Critical and Creative Thinking**

“Meanwhile critical creativity is the skill needed to compete in 21st century where students are demanded to be innovative. (T1)”

“Creating is used to produce something dealing with the lesson. In reading, we can see their creativity when we ask them to summarize or predict about what will happen in the text. (T2)”

### **Problem Solving**

“Problem solving also activates students’ critical thinking in search of easier ways to achieve their goals. (T1)”

“Problem solving is related to critical creativity. Like, we ask the students to think of a solution with their creativity. (T2)”

With this result, it shows that T1 and T2 were able to define the components promoted by Ministry of Education and Culture. Their definition of transfer knowledge is in line with what Brookhart (2010) states that transfer knowledge reflects teachers' recognition that their role is to educate students to enter the world prepared to do their own thinking in a variety of situations without relying on the teacher to provide them a task to complete. Based on the interview, T1 and T2 agreed that students could also have the role as the one to transfer the knowledge, not only



teachers. By obtaining the information by themselves, students are expected to analyze the information before they transfer it to others. As what [Anderson and Krathwol \(2001\)](#) states, “Transfer requires students not only to remember but also to make sense of and be able to use what they have learned.” Therefore, T1 and T2 held relevant beliefs with the expert ideas.

For the second components of HOTS promoted by Ministry of Education and Culture, critical thinking or creativity, it was found that teachers agreed with the idea of [Norris and Ennis \(1989\)](#); Barahal, (2008) as cited in [Brookhart, \(2010\)](#) that critical thinking is rational, reflective reasoning aimed at determining what to believe or do in which reasoning, questioning, and probing, as well as seeing and describing, comparing and connecting, identifying complexity, and examining different points of view are all part of this process.

Problem solving as the last component was believed by T1 and T2 as the way of their students in finding innovative ways to reach their goals or to solve problems they encounter. This is relevant with Nitko and Brookhart (2007) as cited in [Susanti et al. \(2020\)](#) that problem solving refers to students’ process of determining the best answer to a problem in order to achieve a specific goal. With this, students must utilize one or more higher-order cognitive processes because they cannot automatically recognize the correct path to the desired goal.

To sum up, T1 and T2 held strong beliefs about HOTS which includes the concept of HOTS, the component of HOTS, as well the ones promoted by the Ministry of Education and Culture. This is because the result of the interview of T1 and T2 showed the relevant ideas to the framework of HOTS, Bloom’s Taxonomy and Ministry of Education and Culture Handbook.

### **HOTS INTEGRATION IN TEACHING READING COMPREHENSION**

In practice, the teacher stimulated students with HOTS questions such as analyzing (C4), evaluating (C5), and creating (C6) by having beliefs about the concept of HOTS. To do that, teachers are required to comprehend the right concept about HOTS so that the instruction is effective. This is in line with what FitzPatrick and Schulz who revealed that students would have a better opportunity of achieving HOT if the instruction, learning and evaluation are clear.

In the observation, at the beginning of the class, T1 explained the learning objectives to the students. The learning objectives were to identify and analyze the purpose of communication, text structure and linguistic elements of the text in the form of a narrative (one of which is a directly and indirectly) appropriately, well, honestly, and politely in life daily. Meanwhile, with the cooperative learning model, students were able to find and narrate the contents of a narrative text in a collaborative way appropriately, kindly, honestly, and politely through a scientific approach with a discovery learning.

Observations highlighted the teacher's position as a facilitator, which includes building a classroom climate that encourages students to think, asking higher-level questions, and arranging activities that inspire students to think through debate and dialogues. The other position he played was that of an assessor. He gave feedback to students to gauge their knowledge.

T1 also used several teaching strategies to encourage HOTS in reading comprehension instruction. Integrating HOTS into teaching activities necessitates the use of particular strategies (Ariyana et al., 2018; King et al., 2011). In the meantime, it emphasized that teachers should be able to employ particular strategies in order to effectively improve students' HOT abilities. Strategies are believed to improve students' engagement in the classroom as well as the score (Prastya & Ashadi, 2020). Both teachers have some ideas about how to improve students' HOT skills through teaching strategies. Scaffolding, questioning, group discussion, and feedback are the four strategies. Closed and open-ended questions were asked to the students regarding their experiences with the issue as part of his scaffolding strategy. This is a good choice of strategy since providing feedback functioning as scaffolding was found as one of effective models in increasing students' HOTS (Conklin, 2012; Ariska et al., 2021). Later, he discussed the relevance of narrative text and learning objectives with the students. He frequently used the questioning method from the beginning to the end of the session because according to a study conducted by Anaktototy and Huawe (2020) asking questions based on the text's content might help students connect their prior knowledge to the reading text. From the beginning until the end of the activity, he often posed questions to evaluate students' comprehension and knowledge. He also asked them questions regarding the type of literature they thought was amusing at the start of the activity. Meanwhile, in the main activity, he asked questions to get feedback from other students on the topic. He encouraged students to voice their thoughts on the reading by asking the students questions in the post-activity.

The sequence of his teaching started when he showed a table of title, social function, and generic structure of *Malin Kundang* story. Teacher then explained each part mentioned. Students were asked to read *Malin Kundang* text on their own and after that, they are asked to analyze the text and classify each part in the text that belongs to the table based on the explanation from the teacher. Teacher called certain names to analyze the part and tell the class which one is the social function. In this section, T1 applied HOTS since he asked the students to categorize the parts of the content into each category. Seeing from Handbook of HOTS-Based Teaching and Learning from Ministry of Education and Culture written by Ariyana et al. (2018), this activity of categorizing uses “creating” (C6) which is considered as HOTS. Then, teacher called another name to specify which one is the orientation part from the text. After students told their answer, teacher discussed it together with other students whether they agreed or had something to add. Teacher would give feedback to every answer the students gave. Some students actively responded and others did not respond at all since this was done via Zoom meeting. Moreover, teacher never judged all answers as right or wrong. He just accepted every answer and gave feedback in response to it.

After the table was full of answers from different students, T1 started to ask about students' perspectives by asking such questions as “what do you think of *Malin Kundang*?”, “what good sides can be taken from *Malin*” and “is his wife good?” All these questions became the gate to group discussion since one response from one student can trigger another response from another student. The class turned out to

be more alive even though there were still some students who did not involve. This type of questions asking for students' opinion is to give judgment towards something, someone or some events. The activity of making judgment is included in the component of "evaluating" (C5) and "creating" (C6) as well for it requires students to assess something and at the end produce the judgment since evaluating means defending or justifying our opinions and beliefs, while creating refers to the act of generating new ideas ([Brookhart, 2010](#)).

At the end of the meeting, students were assigned to write about their own perspective towards the story individually in order to see their understanding and how they perceived the story. The meeting was only 30 minutes via Zoom meeting and continued to their group chat on WhatsApp to submit their perspective assigned by the teacher. Assigning the students to write their own perspective about the story activates their analyzing (C4) and evaluating (C5). This assignment requires the students to apply all the HOTS components since they need to explore the connections and relationships by breaking them into parts (C4), then defend and justify their own opinions and beliefs, and generate new ideas, in this case it is the perspectives students have towards the story. On the next meeting, each student was assigned to present about one narrative text and classify the part of the story into some classifications such as the title, social function, generic structures which consist of orientation (who, when, where), complication (minor complication, minor resolution, major complication, and major resolution), and coda (moral value of the story). In this meeting, the assignment given combined LOTS and HOTS since they students were asked to classify their chosen narrative story into some classification. For example, determining title and generic structure part asking about WH Questions could be found explicitly in the text. Thus, in this practice, teacher still applied LOTS.

The observation with T2 also took place at Zoom meeting. It started with the greeting from the teacher and continued with checking the students' attendance. Teacher told the students about the material which was about hortatory exposition text. Teacher asked the students to open their books on certain page where the material was. Teacher asked one student to read the first paragraph and one student for second paragraph and another student for the last paragraph. Teacher then asked one student to conclude what the text was about. After that, T2 asked several questions such as "*where exactly is the traffic?*" which can be known from the text, "*why the traffic happens in Indonesia?*" which required the students to think beyond the text, and "*how to solve this problem?*" which activates students' higher order thinking skill. Each question delivered by the teacher could be responded by the students voluntarily. However, that one question with "*where exactly is the traffic?*" showed that the answer could easily be found in the text. This also indicated LOTS question, specifically in "remembering" (C1) which requires student to memorize and mention ([Ariyana et al., 2018](#)).

Next, T2 concluded what it meant by hortatory exposition and showed PowerPoint slides about the definition, generic structures, and language features. Teacher asked whether students had questions. She continued her slides by showing examples of each generic structure of the text they discussed before. Then, teacher questioned the students whether the "recommendation" part was for suggestion or

conclusion. That was responded well by the students that recommendation was for the suggestion. It showed the understanding of the students.

At the end, teacher showed another hortatory exposition and assigned the students to analyze it, one student for one paragraph (total 5 paragraphs). She confirmed again if the explanation was clear and assigned the student with the exercise provided in the textbook. The Zoom meeting ended and continued to WhatsApp group just to submit the exercise. On the next meeting, teacher assigned the students to create hortatory exposition and discussed the generic structures about it. This activated students' analyzing (C4) skill since they classified and analyzed the text in order to synthesize it to each part of the generic structure.

Teachers' attitudes toward HOTS promotion strategies are reflected in classroom practice. From the beginning to the end of the exercises, they used the questioning method. It was reported that teachers did not have conflicting beliefs about using HOTS into teaching reading comprehension. These convictions provided a strong framework for classroom practice. It also supports theories that teachers' beliefs influence their classroom behavior ([Borg, 2003](#); [Farrell & Bennis, 2013](#); [Pajares, 1992](#)). However, in the classroom practice, LOTS questions were detected since the answer was explicitly stated in the text. Indeed, the practice does not always reflect the beliefs of the teachers. Prior research by [Aziz et al. \(2017\)](#) supported the finding of this study it was discovered that, while in Malaysia, ESL teachers were well aware of their need to incorporate HOTS into their lessons, they were not doing so, and teachers also stated that they could use some resources to help their students study HOTS more effectively in their classes. Even so, they did not know how to accomplish it. When applying HOTS, ESL teachers tended to use low-level questioning and low-level reasoning verbs in the classroom, according to the findings. According to [Phipps and Borg \(2009\)](#), the connection between teachers' beliefs and practices is not always clear. As a result, in the classroom, teachers' practices did not necessarily reflect their professed beliefs ([Borg, 2003](#)).

## CONCLUSION

The goal of this study was to look into teachers' beliefs and practices regarding the incorporation of HOTS in teaching reading comprehension. It was discovered that the teachers shared strong beliefs in the incorporation of HOTS in reading instruction. These beliefs include those about HOTS as a concept and the components of HOTS. However, in the practice, the teacher did not fully reflect what they believed. The practice of teaching and learning was done online since the covid-19 pandemic occurred.

This investigation suggests that more teachers' professional development is required to promote the success of HOTS incorporation into teaching reading comprehension, mainly during online learning due to pandemic. The government should give subject-specific training so that instructors understand how to incorporate HOTS into their classroom methods. Moreover during this pandemic, online teaching and learning should be given different treatment. The findings, however, cannot be applied universally. Further investigation into the broader background is possible. Furthermore, the researchers expect that more study on

HOTS in the ELT setting will be conducted, as the field is still in its early stages and requires more investigation, particularly in language skills other than reading.

## REFERENCES

- Aliyeva, M. S. (2021). Advantages and disadvantages of extensive reading. 8 th International Multidisciplinary Scientific Conference, 26-29. <https://conferencepublication.com/index.php/aoc/article/view/1253>
- Anaktototy, K., & Huwae, M. (2020). Assessing teachers' perception in the use of pre-reading activities in EFL Classroom. *Eralingua: Jurnal Pendidikan Bahasa Asing dan Sastra*, 4(2), 236-246. DOI <https://doi.org/10.26858/eralingua.v4i2.12532>
- Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. Longman.
- Ansori, M., Nurkamto, J., & Suparno. (2019). Teacher's beliefs and practices in the integration of higher order thinking skills in teaching reading. *ELS Journal on Interdisciplinary Studies on Humanities*, 2(4), 541-555. <http://journal.unhas.ac.id/index.php/jish>
- Ariska, R., Gustine, G. G., & Setyarini, S. (2021). Promoting students' higher-order thinking skill through teacher's feedback in an EFL classroom. *Advances in Social Science, Education and Humanities Research*, 546. <http://creativecommons.org/licenses/by-nc/4.0/>
- Ariyana, Y., Pudjiastuti, A., Bestary, R., & Zamroni. (2018). *Buku pegangan pembelajaran berorientasi pada keterampilan berpikir tingkat tinggi* (Sajidan & R. Mohandas, Eds.). Direktorat Jenderal Guru dan Tenaga Kependidikan. Kementerian Pendidikan dan Kebudayaan.
- Aziz, A. A., Ismail, F., Ibrahim, N. M., & Samat, N. A. (2017). Investigating the implementation of higher order thinking skills in Malaysian classrooms: Insights from L2 teaching practices. *Sains Humanika*, 9(4-2), 65-73.
- Bloom, B. S. (1956). *Taxonomy of education objectives: The classification of educational goals*. David McKay Company, Inc.
- Borg, S. (2011). The impact of in-service teacher education on language teachers' beliefs. *System*, 39(3), 370-380.
- Brookhart, S. (2010). *How to assess higher order thinking skills in your classroom*. ASCD.
- Coffman, D. M. (2013). *Thinking about thinking: An exploration of preservice teachers' views about higher order thinking skills* [Doctoral Dissertation, University of Kansas]. ProQuest LLC. <https://eric.ed.gov/?id=ED554405>
- Conklin, W. (2012). *Higher order thinking skills to develop 21st century learners*. Huntington Beach: Shell Education.
- Creswell & Creswell. (2018). *Research design: Qualitative, quantitative, and mixed method approaches* (5th Ed.). SAGE Publications, Inc.
- Creswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed). Pearson Education, Inc.
- Farrell, T. S. C., & Bennis, K. (2013). Reflecting on ESL teacher beliefs and classroom practices: A case study. *RELC Journal*, 44(2), 163-176.
- Fauziati, E. (2015). *Teaching English as a foreign language: Principle and practice*. Era Pustaka Utama.



- Forester, M. (2004). Thinking skills. *Research Development*, 11(1).  
<http://www.reesracher.acer.edu.au/cgi/videocontent.cgi>
- Grabe, W. (1991). Current development in second language reading research. *TESOL Quarterly*, 25(2), 375-406.
- Hartono, Knowles, R. T., Inderawati, R., & Putri, R. I. I. (2020, October 25-26). *Strategies in accomplishing mathematics, science, and reading PISA questions: A case study at Universitas Sriwijaya and Bengkulu University* [Paper presentation]. *Advances in Social Science, Education and Humanities Research*, volume 513, Atlantis Press, 4th Sriwijaya University Learning and Education International Conference, Palembang, Indonesia.
- Hillocks, G. Jr. (1986). *Research on written composition. Urban IL: ERIC clearing house on reading and communication skills*. University of Chicago: NCRE Publication.
- Holden, J. (2004). *Creative reading. Demos*
- King, F., Goodson, L., & Rohani, F. (2011). *Higher order thinking skills: Definition, teaching strategies, assessment in thinking*. Florida State University: Center for Advancement of Learning and Assessment.
- Kusumastuti, I., Fauziati, E., & Marmanto, S. (2019). Revealing teachers' beliefs of higher order thinking skills in teaching reading at junior high school. *English Language and Literature International Conference (ELLiC) Proceedings Vol. 3*.
- Malini, G., & Sarjit, K. (2014). ESL students' perceptions of the use of higher order thinking skills in English language writing. *Advances in Language and Literary Studies*, 5(5), 80-87.
- Ministry of Education and Culture. (2018). *Buku pegangan pembelajaran berorientasi pada keterampilan berpikir tingkat tinggi*. Direktorat Jendral Guru dan Tenaga Kependidikan Kementerian Pendidikan dan Kebudayaan.
- Nachiappan, S., Damahuri, A., Ganaprakasam, C., Suffian, S., & My. (2018). application of higher order thinking skills (hots) in teaching and learning through communication component and spiritual, attitudes and values component in preschool, 7, 24–32.
- Newman, F. M. (1990). Higher order thinking in teaching social studies: A rationale for the asseessment of classroom thoughtfulness. *Journal of Curriculum Studies*, 22(1), 41-56. <https://eric.ed.gov/?id=EJ403162>
- Norris, S. P., & Ennis, R. H. (1989). *Evaluating critical thinking: The practitioners' guide to teaching thinking series*. Critical Thinking Press and Software.
- Nourdad, N., Masoudi, S., & Rahimali, P. (2018). The effect of higher order thinking skill instruction on EFL reading ability. *International Journal of Applied Linguistics & English Literature*, 7(3), 231-237.  
<https://www.journals.aiac.org.au/index.php/IJALEL/article/view/4293>
- OECD. (2020). *Reading performance (PISA)*. <https://doi.org/10.1787/79913c69-enn>
- Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, 62(3), 307–332.  
<https://doi.org/10.3102/00346543062003307>
- Phillips, J.A. (2004). Keberkesanan pengajaran kemahiran berfikir: Perubahan kepada system persekolahan. [Paper presented at the Seminar Kebangsaan Pengajaran Kemahiran Berfikir]. Tinjauan Kejayaan Satu Dekad.

- Phipps, S., & Borg, S. (2009). Exploring tensions between teachers' grammar teaching beliefs and practices. *System*. <https://doi.org/10.1016/j.system.2009.03.002>
- Prastya, R. L., & Ashadi. (2020). Teachers' strategies in improving students' reading interest. *Eralingua: Jurnal Pendidikan Bahasa Asing dan Sastra*, 4(2), 224-235. DOI <https://doi.org/10.26858/eralingua.v4i2.13195>
- Rachmawati, D. L., Purwati, O., Anam, S., & Setiawan, S. (2021). Between perception and practice: The emergency of encouraging EFL teachers to implant HOTS in their classrooms. *TESOL International Journal*, 16(4.4), 40-58. [https://www.researchgate.net/profile/Reynold-Padagas/publication/351828268\\_Blended\\_Learning\\_in\\_a\\_Research\\_Writing\\_Class\\_Perceptions\\_and\\_Experiences\\_from\\_ESL\\_Secondary\\_Learners/links/60ac585845851522bc152b91/Blended-Learning-in-a-Research-Writing-Class-Perceptions-and-Experiences-from-ESL-Secondary-Learners.pdf#page=40](https://www.researchgate.net/profile/Reynold-Padagas/publication/351828268_Blended_Learning_in_a_Research_Writing_Class_Perceptions_and_Experiences_from_ESL_Secondary_Learners/links/60ac585845851522bc152b91/Blended-Learning-in-a-Research-Writing-Class-Perceptions-and-Experiences-from-ESL-Secondary-Learners.pdf#page=40)
- Rajendran, N. (2001). The teaching of higher-order thinking skills in Malaysia. *Journal of Southeast Asian Education*, 2(1), 42-65.
- Resnick, L. B. (1987). Education and learning to think. In *Education and Learning to Think*. <https://doi.org/10.17226/1032>
- Retnawati, H., Djidu, H., Kartianom, Apino, E., & Anaifa, R. D. (2018). Teachers' knowledge about higher order thinking skill and its strategies. *Problems of Education in the 21st Century*, 76(2), Continuous. <http://oaji.net/articles/2017/457-1524597598.pdf>
- Samelian, L. A. (2017). *How higher order questioning and critical thinking affects reading comprehension*. Hamline University. [http://digitalcommons.hamline.edu/hse\\_all](http://digitalcommons.hamline.edu/hse_all)
- Sanders, M. (2001). *Understanding dyslexia and reading process: A guide for educators and parents*. Allyn and Bacon.
- Schleicher, A. (2018). *World class: How to build a 21st-century school system*. Strong Performers and Successful Reformers in Education, OECD Publishing. <http://dx.doi.org/10.1787/4789264300002-en>
- Selvina, D., Inderawati, R., & Vianty, M. (2018). *Developing PISA-based reading materials in Indonesian context in the form of continuous text*. [Master's thesis, Sriwijaya University]. Sriwijaya University Institutional Repository. <http://repository.unsri.ac.id/id/eprint/274>
- Susanti, A., Retnaningdyah, P., Ayu, A. N. P., & Trisusana, A. (2020). Improving EFL students' higher order thinking skills through collaborative strategic reading in Indonesia. *International Journal of Asian Education*, 01(2), 43-52. <https://doi.org/10.46966/ijae.v1i2.37>
- Tofade, T., Elsner, J., & Haines, S. T. (2013). Best practice strategies for effective use of questions as a teaching tool. *American Journal of Pharmaceutical Education*, 77(7), 155.
- Tyas, M. A., Nurkamto, J., Marmanto, S., & Laksani, H. (2019). Developing higher order thinking skill (HOTS)-based questions: Indonesian EFL teachers' challenges. *Proceeding of the 2nd International Conference on Future of Education*, 2(1), 52-63. <https://doi.org/10.17501/26307413.2019.2106>

- Widana, I. W. (2020). The effect of digital literacy on the ability of teachers to develop HOTS-based assessment. *Journal of Physics: Conference Series*, 1503, 1-9. DOI: 10.1088/1742-6596/1503/1/012045
- Williams, R. (2015). *Higher-Order Thinking Skills: Challenging All Students to Achieve*. New York: Skyhorse Publishing.
- Yen, T. S., & Halili, S. H. (2015). Effective teaching of higher-order thinking (HOT) in education. *The Online Journal of Distance Education and E-Learning*, 3(2), 41-47. [www.tojdel.net](http://www.tojdel.net).