



# Investigating Students' High-Order Thinking Skills in Storytelling at Elementary Level: A Case Study

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## Abstract

*The purpose of this qualitative case study is to investigate Higher Order Thinking Skills (HOTS) in speaking activities, especially in storytelling for primary school children. Data collection methods included (1) interviews to investigate the extent of HOTS understanding, implementation, tactics, students' reactions, and the impact of storytelling activities, (2) observations, and (3) documentation. An English Club teacher and the students at the elementary level served as the research's data source. Data were validated using source and technique triangulation. The interactive analysis of the Miles and Huberman model was utilized for data analysis, comprising processes of data reduction, data presentation, and drawing conclusions. The results showed that the teacher grasped the HOTS feature and used it in narrative exercises. The strategies included asking questions, allowing youngsters to work on projects, and solving difficulties. Students' reactions toward the storytelling activities varied because their focus levels are different. HOTS components in storytelling activities such as analyzing, evaluating, and creating have a significant impact on the ability to think critically, and creatively, communicate, work together, solve issues, and boost self-confidence. Due to these diverse abilities, HOTSs help children understand the storyline better and encourage them to take risks.*

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## INTRODUCTION

High Order Thinking Skills, commonly abbreviated as HOTS, is a concept introduced by Benjamin S. Bloom and colleagues in a book entitled 'Taxonomy of Educational Objectives: The Classification of Educational Goals, published in 1956. The concept of HOTS is not something newly created but only recently implemented. The main purpose of HOTS is how to improve students' thinking skills at a higher level, especially those related to the ability to think critically in



receiving various types of information, think creatively in solving a problem using the knowledge they have, argue well, be able to construct explanations and make decisions in complex situations (Azar et al., 2019). Even though the taxonomy has been revised by Anderson and other scholars, the term 'Bloom Taxonomy' is still acknowledged.

HOTS are cognitive operations that are much needed in thought processes that consist of short-term memory. If it is associated with Bloom's taxonomy, higher-order thinking includes analysis, synthesis, and evaluation. In addition, these skills are much more needed today than in previous times (Ahmad & Parimaladevi, 2019), especially to prepare graduates for the 21<sup>st</sup> century's challenges. The regulation of the Minister of Education and Culture of the Republic of Indonesia also explained in No. 54 of 2013 that "*Standar kompetensi lulusan adalah kualifikasi kemampuan lulusan yang mencakup sikap, pengetahuan, dan keterampilan*". Also, in Permendikbud No. 22 of 2016 concerning the standard of primary and secondary education, it was stated that the assessment of knowledge aspects is divided into 5 levels, namely remembering, understanding, applying, analyzing, and evaluating. This strengthens the urgency to apply HOTS in the learning process, even at the elementary level.

From the discussion above, it can be concluded that HOTS (High Order Thinking Skill) is a high-level thinking skill that must exist in students which not only requires intellectual abilities in terms of memory but also the ability to evaluate, create, analyze, and think critically about students' understanding of a subject and more emphasis lies on critical thinking on a problem-solving. So here higher-order thinking skills do not only test the skills of memorizing a subject matter but rather on its application.

HOTS in learning does not act as a method of learning but it means learning that is able to encourage the students to think more sophisticatedly but gradually from the easiest to the most difficult, they are the ability to understand, analyze, evaluate, create, and identify a lesson or questions in learning (Sesmiyanti, 2021). It requires more elaborative learning to utilize information and ideas by changing their meaning and implications. It happens when learning combines facts and ideas and then synthesizes, generalizes, explains, gives hypotheses//, or concludes (Yuliati & Lestari, 2018). Therefore, in learning, students must be able to understand, interpret, analyze, and interpret the information they received. HOTS also teaches students to think critically in evaluating information, making conclusions, and generalizing. In the revised Bloom's Taxonomy, HOTS is a cognitive ability at the level of application, analysis, evaluation, and innovation.

HOTS is a characteristic of 21st-century society, which is characterized by the young generation who are creative, flexible, able to think critically, can make the right decisions, and are skilled at solving problems (Wijayanto & Norton, 2018). In this way, schools are expected to be able to create graduate students who have the skills needed in the 21st century, one of which is by creating HOTS-based learning. Through HOTS, students are expected to learn things they do not know and then successfully apply them to new situations. These abilities are certainly very much needed for the younger generation to face the industry 4.0 era, which has uncertain work dynamics (Schwab, 2016). An environment with various types of problems and various human origins requires us to adapt accordingly and the ability to think at a higher level is very supportive. It means that without HOTS, the younger generation in Indonesia will not have the power of initiative, critical



thinking, creativity, and courage to express opinions in public, all of which are very useful to cope with the new challenges.

The same situation also applies to students. If they can apply HOTS at their level of thinking, they must have the ability to analyze the situation, think of some feasible solutions, and show the confidence and initiative to speak up their mind. Therefore, teachers should develop students' HOTS through activities in school. One of them is in learning English, especially in speaking activities. It is the teacher's task in the classroom to design lessons that can encourage students' speaking abilities. One of the things that become the main basis to encourage students' speaking skills in English is when students can think at higher levels so that they can practice properly (Ilmiyah, 2020).

Storytelling is one of the examples of speaking activities that is commonly conducted at the elementary school level. The storytelling can include fairy tales which are stories that do not really happen, and many things often do not make sense (Setyarini, 2018). Storytelling is usually delivered and read by educators or done by parents at bedtime to accompany their children. When children are listening to fairy tales, their imaginations will develop because they will imagine the characters, places, and events that exist in the fairy tale. This activity not only provides pleasure and supports language development but also allows the transfer of knowledge and produces problem-solving, questioning, and communication skills. In the modern era, storytelling may also involve non-fiction stories such as science, as suggested by Suzuki, Feliu´-Mo´jer, Hasson, Yehuda, and Zarate (2018), arguing that skillful storytelling aids the students comprehend the essence of complex concepts and ideas in meaningful, and it is all often done in personal ways. Storytelling nowadays also comes in a digital format, instead of a printed book, to support a more digitalized way of life so that storytelling applications and websites are mushrooming.

A previous study by Yen and Halili (2015) about the effective teaching of HOT in education, in general, elaborates on the effectiveness of teaching HOT and its challenge. The result stated that teaching HOT becomes effective when teachers decrease the traditional way of English teaching and train them continuously to think out of the box and develop it. Meanwhile, the challenges come from time, students, also from the teacher. HOTS is such a process where students need to interact, discuss, and give opinions to each other so it became time-consuming. The students are more likely to do something in an easy way because they are not motivated to think. Even the teacher is not sure how to teach HOT and assess them.

Concerning the speaking activities in the class, some research regarding the relationship between HOTS and speaking activities, especially storytelling, has been conducted quite often. One of them was '*Thinking Critically while Storytelling*' by Setyarini et al. in 2018. This study used Classroom Action Research to improve students' HOTS through storytelling. From the first cycle, students were still in LOTS where they were just remembered when the teacher asked questions about a story. They also lacked linguistic knowledge, English proficiency, and even cultural background. The researcher only had 3-4 weeks for the research, but the time was ineffective, so the result did not point to the goals. The next study was conducted by Pillay, Singh, Harun, & Singh in 2018 about the implementation of HOT skills for teaching and learning. The result shows that the development of HOT skills is essential in teaching and learning because it does help students to think critically and creatively.



Referring to the fact that storytelling can improve critical thinking through questions, responding, increasing vocabulary, and imagining, the researchers then had the interest to find more detailed effects of storytelling on elementary students' higher-order thinking skills. Therefore, this study invited children to think at a higher level and see how far they could think using HOTS aspects in the form of analysis, evaluation, create in speaking activities especially storytelling in an English Club at the elementary level.

## METHOD

This research method is a qualitative method with a case study approach model. A case study is a suitable model for this research because it focuses on exploring a "bounded system" on a particular case or in some cases in detail with in-depth data mining. Various sources of information rich in context were carried out for data mining (Creswell, 2015). The teacher and students in an English Club at an elementary level became the research participants selected using a purposive technique with the help of a key person. Through the purposive technique, the researcher selects research participants and research locations with the aim of studying or understanding the main problem to be studied. Research participants and research locations selected with this technique are adjusted to the research objectives (Herdiansyah, 2012). The data were collected by using interviews with the teacher, observation of the teacher and the students, and documents. The collected data focused on those related to HOTS investigation in the storytelling activities. The aspects that are being studied are analyzed, evaluate, and create. The English club has regularly implemented storytelling activities that had been adapted to the learning theme. However, due to the pandemic situation at the moment the data were taken, the learning process was carried out online without any offline meetings in the class.

The data analysis technique that will be carried out in this study uses Creswell. Stake (in Creswell, 2015) says there are four forms of data analysis and their interpretation in case study research, namely: (1) Category collection, the researcher looks for a collection of data examples and hopes to get meaning that is relevant to the issues that will arise; (2) Direct interpretation, the case study researcher looks at one example and draws meaning from it without looking for many examples. It is a process of pulling data apart and putting it back together to make it more meaningful; (3) Researchers form patterns and look for equivalence between two or more categories. This equivalence can be carried out through a 2x2 table showing the relationship between the two categories; (4) In the end, the researcher develops naturalistic generalizations through data analysis, these generalizations are drawn through people who can learn from a case, whether their own case or apply it to a case.

## FINDINGS AND DISCUSSION

Since the implementation of HOTS in the storytelling activities among the members of an English club became the highlights, the teacher needs to know what HOTS is, the effects, and reactions of students, then how to develop it through several aspects and require the integration of HOTS strategies that are useful for improving thinking skills to the maximum extent possible. The



interview with the teacher revealed that she understood what HOTS is. She perceived HOTS in education as the ability to think at a higher level to improve students' skills. Higher skills are needed for the teacher who supervises the students. Higher-order thinking skills can improve many skills, which stimulate students to analyze problems, find effective solutions, and make decisions. For example, students can conclude for themselves that they have learned from fairy tales and solve problems (problem-solving). This is in line with the results of the research by Irvani, Warliani & Fauziyyah (2020). The abilities used by the students in solving some problems, making decisions, planning, and analyzing are necessary, but the most important thing is how the process has been passed to make the results more effective. (Musliha, Sudana & Wirza, 2021). Students who can solve their own problems show that their cognitive abilities in thinking and creativity can develop well. For that, it is very important to train them to be able to solve their own problems without any help from others. However, sometimes the teacher was not aware of whether or not the stories or the activities have already loaded with HOTS.

Observation revealed that storytelling activities in the English club were implemented once a month to maintain the participants' interest and avoid boredom. The implementation of storytelling activities in the English club can foster students' curiosity because it can improve problem-solving abilities. It also can train their confidence because if they are confident then they can socialize easily, can add a lot of vocabulary, and can have better comprehension. Students can also have good speech communication skills and reading skills. In addition, it can stimulate students' power of thinking to be freer to imagine and can instill moral attitudes and values about the good and the bad in a certain story. These advantages show that storytelling activities are very important to be used as the basis for educating characters through habituation. Even though sometimes the teacher was not aware that the stories and the activities carried out were filled with HOTS, after the researcher conducted interviews and observations, the teacher became more aware of the implementation of HOTS in the upcoming activities. This is in line with the results of the research by Husain (2015). The aspects of language skills studied were listening, speaking, reading, and writing skills, considering that those four skills are very important as a means of communication. This proves that storytelling offers support for the student's language development, especially if done at the elementary school level. Zuhriyah (2017) also stated a similar conclusion, saying that storytelling can make a difference and increase students' understanding of storytelling skills to develop critical thinking skills and language skills in early childhood.

Observation also showed that the teacher is very influential in changing students' mindsets and encouraging them in applying higher-order thinking skills. Therefore, the teacher needs to know the best way to integrate the HOTS strategy into class activities, either when he himself becomes the storyteller or when the students are invited to tell stories through drama activities or role-playing in which each student is given his or her own role. Sometimes the teacher created follow-up activities such as social experiments or projects. Making handicrafts with various media is one of the projects after storytelling activities that help increase creativity and develop HOTS. Yet, every teacher might have his or her point of view on the implementation of HOTS-integrated activities in the learning process, but this is natural. Thus, teachers need to get themselves well-trained with the expected skills.



The response or reaction of students when participating in storytelling activities containing HOTS varied: some students showed interest while others did not. Every student has a different level of concentration, level of interest, and thinking power. The teacher could not force all of them to respond because only some had the courage to respond well even though the teacher had tried to use various attractive media. Similar results also appeared in a study by Narwianta, Bharati & Rukmini (2019) showing that increasing students' HOTS abilities in retelling what they have read and increasing students' critical thinking patterns were achievable using storytelling. Yet, the specific effect might be different among different students.

After they participated in HOTS-integrated storytelling activities, the students showed an increase in new vocabulary mastery, especially in their speaking skills, responded to events in the fairy tale based on strong reasoning power, developed good characters, and developed creativity since the teacher invited them to freely imagine the context during storytelling and after storytelling. The results above are similar to the research by Yaswinda, Bakhtiar, Maulana, & Irsakinah (2021), revealing that the students were trained to apply knowledge based on the development and movement of the environment using strong reasoning power. This high reasoning power forms a character for students with the hope that they have emotional intelligence and knowledge. Regardless of the abilities that they use to solve problems, make decisions, plan, and analyze, the most important thing is how the process has been passed and the results offer a more effective solution.

A deeper investigation of the observation and documentation showed that the storytelling activities implemented by the teacher at the elementary level English club have applied the fairy tales that are aligned with the indicators in the *analysis*, *evaluation*, and *creation* aspects. Analysis aspect was implemented in such activities as asking questions during storytelling, emphasizing the cultivation of moral values, explaining conclusions, and inviting children to select good and bad characters. By doing so, it can train students to consider morals from an early age, and stimulate thinking power, so students can better understand what a person's good and bad characteristics are like. Through storytelling, there will be a transformation of values through the behavior and personality traits of the characters in the story. According to the results of the study by Shafeei, et.al in 2017, giving open questions such as "why, why if, how, how, and if you" can stimulate and increase students' HOTS which in turn improves their speaking skills.

After that, there is an evaluation aspect by inviting students to find interesting things in fairy tales, inviting them to assess fairy tale characters, directing if the fairy tale contains antagonist characters, asking them to respond, and giving a brief description of the fairy tale content. By doing so, they can raise enthusiasm, think critically to participate in storytelling activities, and distinguish the characteristics of each character in fairy tales. It also provided direction in the form of advice so they can avoid copying bad things and train their self-confidence to boost their interaction skills.

Furthermore, the creation aspect is done by inviting students to make media or goods as material for storytelling. The teacher provided stimulation during storytelling to increase students' imagination, provided new vocabulary when telling the stories, combined their preferences for characters or stories into works of art, and invited them to understand the different types of emotional intelligence. It can increase students' creativity through work, and their imagination by visualizing something that has never been felt, train their language by adding vocabulary mastery, and provide an understanding of sympathy, happiness, sadness, and fear by taking them to feel what

is experienced by the fairy tale character. As stated by Pebriana (2017) when investigating language skills, listening and speaking skills in particular, storytelling helps develop the student's language mastery. This is also in line with research by Juanda (2018), saying that storytelling can increase the power of imagination, and emotional, intellectual, social sense, ethical, and religious senses. Sulaiman (2020) added that this high reasoning power shapes a character for students with the hope that they have emotional intelligence and knowledge.

## CONCLUSION

Overall, the teacher has understood the HOTS aspect and has implemented it in storytelling activities. The strategy applied is by asking questions, inviting students to work, and solving problems. Some students reacted positively when participating in storytelling activities while some others stayed passive because they had different levels of concentration. Storytelling activities containing HOTS aspects in the form of *analysis*, *evaluation*, and *creation* in storytelling activities greatly affect the ability to think critically, and creatively, communicate, work together, solve problems, and self-confidence.

From these various abilities, in storytelling activities containing HOTS, students found it easier to understand the storyline, challenge themselves to ask questions and respond, invite them to distinguish characters, increase imagination, and train their language through additional vocabulary. From these three aspects, storytelling activities provide benefits for the cultivation of moral values. Last but not least, students can train emotional values in the form of feelings of happiness, sadness, fear, and sympathy which will influence their psychological state and education to the next level.

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