

# Higher Order Thinking Skill's Instruction Delivered by EFL Teacher During an Online Learning

Nazelya Puspita Kencana, nazelya.19035@mhs.unesa.ac.id, UNESA, Indonesia

Oikurema Purwati, pungki\_unesa@yahoo.co.id, UNESA, Indonesia

Ahmad Munir, ahmadmunir@unesa.ac.id, UNESA, Indonesia

**Abstract.** HOTS promote the idea of assessing students' critical thinking, creative thinking, and problem solving. Many teachers claimed to implement HOTS in the classroom, but turned out they tended to have LOTS in their teaching and learning process. Since the teaching and learning process has shifted from in person meeting to the virtual one due to COVID-19, there was an adjustment to conduct the learning process. Hence, the present study aimed to figure out teacher's strategies to deliver HOTS' instruction, students' HOTS, and the construction of HOTS' instruction during online learning. This study employed qualitative research and two English teachers were involved. The data was gathered through classroom observation. The findings revealed that direct instruction and questioning strategies were efficient and effective to activate students' HOTS through asking the students' point of views about online and offline learning systems and having the students' work in group to discuss a certain topic. Further, analyzing and evaluating procedural knowledge and metacognitive knowledge were the most abilities exposed by the instructions. In this case, the students activated their critical thinking, creative thinking during online learning. Then, the instructions delivered by the teachers during the class promoted students' creative thinking and critical thinking because they encouraged students' creativity, motivated their self-confidence to participate in the class, had the students be communicative, and exposed students' understanding and knowledge. The instructions were clear enough and reflected imperative and interrogative sentences, so that the students easily understood what they needed to do during the learning process. However, one teacher could not promote HOTS pretty well because he encouraged the students to talk about direct and indirect speech, which was the area about understanding conceptual knowledge.

**Keywords:** Higher Order Thinking Skills, Teacher's Instruction, Online Learning, Teaching Strategies, Students' HOTS

## 1. INTRODUCTION

Implementing HOTS in teaching and learning process is a mandatory, teachers are encouraged to promote it during the class to create a new knowledge and broaden the students' capabilities (Indriyana & Kuswando, 2019). HOTS leads the ability to implement knowledge, skill, and values in reasoning, reflection, problem solving, decision making, and creating new things (Yuliati & Lestari, 2018). According to Heong et.al (2011), teachers should develop students' HOTS to think broadly and discover a new

challenge. In order to apply HOTS, teachers should involve students in teaching and learning process which promotes activities beyond comprehension (Djami & Kuswandono, 2020). The activities should promote analysis, evaluation, and creation.

Students who have HOTS claimed will be more successful than those who have Lower Order Thinking Skill (LOTS) (Purnama & Nurdianingsih, 2019). The students having a high level of HOTS are hoped to be a success in the next study program (Tanujaya, Mumu, & Margono, 2017). HOTS is also claimed to be in line with the students' work readiness (Hasan & Pardjono, 2019). Teaching of HOTS is a kind of student-centered instead of teacher-centered learning activity. Some practices that can be applied in teaching HOTS are constructivist learning, brainstorming, inquiry teaching, problem-based learning, and thinking map (Chun & Yen, 2019).

In Higher Order Thinking Skill (HOTS), students are expected to have the abilities of problem solving, creative thinking, critical thinking, and judgmental thinking (Brookhart, 2010). In educational context, HOTS will lead the students to practice those kinds of abilities. Further, it has been a global issue and one of the skills needed in 21<sup>st</sup> century in education all over the world (Sopiani, Said, & Ratnawati, 2019). HOTS becomes necessary and important skills that enable students to face their real life after school.

Since the government sets educational expectation that teacher has to activate students' HOTS, so that whatever the approaches are, HOTS are included during the teaching and learning process. However, in the reality at school, most of the teachers face many troubles in implementing HOTS. They commonly lead the students to have the ability of LOTS instead of HOTS during the teaching process. The teachers do not understand curriculum well the so that they have difficulty in applying it, especially HOTS, during the teaching process. Their lack of understanding occurs due to lack of teacher training given by the government, their competence and motivation to develop students' HOTS. As a result, the teachers are not qualified enough and the students cannot catch up the whole thing of HOTS itself.

Further, one of the essential things to activate students' HOTS is that teacher's instruction during the learning process. Teacher's instruction refers to the way the teachers promote instruction and strategies to develop HOTS in the classroom. Instruction means one sentence or more put before, in the middle, or after the task, used to inform the students what they need to do deal with the materials. In learning process, instruction is prominent part spoken by teachers to lead the class and conduct the teaching and learning process.

Rosenshine (2009) states that there are some lists of instructional principles in the learning process. The lists are the class should begin the lesson with a short review of previous learning, present new material in small steps and followed by students practice after each step, ask a large number of questions and check the responses of all students, provide models, guide students practice, check their understanding, obtain a high success rate, provide scaffolds for difficult tasks, require and monitor independent practice, and engage students in weekly and monthly review.

While (T'am & Thnull, 2017) explain there are four teacher's instructions to facilitate HOTS; Direct instruction or teacher-centered presentation of information, Questioning strategies, Small group discussions, and Classroom environment. Teachers are expected

to have a short time presentation to activate students' prior knowledge, then they can elaborate activities to promote HOTS in small group discussion. The questions that lead to creative thinking such as 'What do you think will happen next?', 'How can we ...?' and 'describe the different ways you could ...!' can be given to the students. At the end, teachers have to provide a supportive learning atmosphere to stimulate students' HOTS.

In fact, most of the teachers do not do those kinds of lists in their classrooms. They rarely have a review session before moving on the current materials. They just ask the students' condition and ask the topic of previous material in the first session without any additional review or practice. Teachers tend to think if the student do not have any questions for them, it means that they totally understand the materials, however, not all of the students feel so. It also happens due to teachers' laziness. They are lazy enough to prepare the review test, quiz, models, or even weekly and monthly review. As a result, the students' capabilities are not good enough since the teachers are less preparation and competences.

Delivering instruction which can facilitate HOTS must have been done by all teachers in any learning activities either in offline learning or in online learning. Due to the pandemic of COVID-19, teaching and learning process is moved to an online learning which makes it more difficult than offline learning. During an online learning, the teaching process is conducted through digital platforms like Zoom, Google Meeting, Edmodo, Schoology, and so on. The difficulty which appears during online learning is teacher's ability in conducting an effective teaching process. It makes the students get difficulty to understand the material well even develop their HOTS. The teachers usually only give tasks to the students without giving a clear explanation related to the material. They are also rarely having a virtual class with the students. As a result, the learning process becomes ineffective and the students do not learn as well.

Based on the condition above, it can be imagined how the teachers teach during this pandemic situation. Then, it comes up with the question how they implement HOTS during the learning process if they scarcely have a virtual meeting like a normal class with their students. Therefore, this study wants to figure out teacher's online learning, especially the one which facilitates students' higher order thinking skills (HOTS). The researcher focuses to the teacher who conducts virtual learning in Secondary School to observe how the teacher deliver HOTS' instruction through digital platform.

## **2. METHOD**

This study used qualitative research. Qualitative research is concerned about qualitative phenomenon and aims at discovering someone's attitude and behaviour in doing something in depth interview and investigation (Kothari, 2004). As the purpose of this study focuses on determining EFL teachers' instructional strategies to promote HOTS and its impact on students' abilities during online learning. Therefore, it takes into account to analyse this study using descriptive qualitative by doing an observation during the learning process.

To collect the data, the researcher did classroom observation. The observation was directly done to the particular setting. The observation was done through online platform which is Google Meet. The researcher did not involve during the learning process, so the

researcher became non-participant observer. The data of the study was taken from the observation and recording of the discussion.

Two EFL teachers participated in this study. They taught different materials on their classroom. The observer observed the class four times. In the first meeting, T1 had the students to determine their preferences between online and offline learning. While in the second meeting, T1 divided the students into some groups and got the students to find out one thesis and share their arguments into the class. While the second teacher discussed about News Item which emphasized on Reported Speech. T2 invited the students to differentiate direct and indirect sentences. Then, T2 explained the formula of reported speech and gave some examples to the students to be practiced. In the second meeting, T2 divided the students into some groups and had them present about how many tenses used in reported speech.

### 3. RESULTS

Classroom observation was implemented to figure out the strategies. According to the theory of Tam & Thnull (2017), there are four strategies of teaching instruction to activate HOTS which are *Direct Instruction or teacher-centered presentation of information, Questioning strategies, Small group discussion, and Classroom environment*. Those four strategies are used to analyze this first research question. It was found out that EFL teachers promote HOTS' instruction through three ways; direct instruction, questioning strategies, and small group discussion. The findings were elaborated as below:

#### a. Direct Instruction/The Direct-Thinking Ability

Direct instruction refers to instructional strategies which are structured, organized, sequenced, and led by teachers. It also means presentation of academic lesson to students by teachers. In the other hand, teachers are "directing" the instructional process or instruction is being "directed" at students.

According to the observation, some activities led by teachers belonged to direct instruction because teachers directly instructed the instruction for students. Both of EFL teachers conducted this strategy on their teaching process. T1 delivered instruction through direct instruction during the first meeting of Analytical Exposition text. It occurred at the end of the class when T1 asked a student to summary the classroom discussion about online and offline learning. Before asking a student to summary the discussion, T1 invited the students to discuss their preferences related to online and offline learning. Some students shared their ideas and T1 gave feedback for each student. At the end of the discussion, T1 asked a student to summary the discussion. Here was the instruction:

"Hello Gita, please give the conclusion of the first three of your friends of supporting offline learning is better than online!"

In this case, T1 got Gita to summarize the discussion during the class. There were three students shared their point of views about online and offline learning systems. T1 had Gita conclude her peers' opinion which supporting offline learning than online learning. T1 also used the word "please" which showed directing student to do

something.

In addition, an instruction above developed students' comprehension and understanding whether she/he paid attention to the class well or not. Looking at Bloom Taxonomy, it focused on the ability of analyzing, especially concluding. Concluding/summarizing is asking someone to sum up something/discussion which was talked. Besides, it also facilitated student' critical thinking to elaborate their own sentences based on their friends' responses. Thus, the instruction above promoted students HOTS.

Further, the same strategy was implemented by T1 on the second meeting of Analytical Exposition text. In this meeting, students had to present their idea about certain topic and share their point of view related to it. At this moment, students took "The Disadvantages of Motorcycle for Students" as their thesis. At first, T1 greeted the class and told them that they were going to present their thesis to the class. Presentation was intended to practice their understanding related to analytical exposition text in the form of oral presentation. Besides, it aimed to activate students' logical and critical thinking about current issue in their surroundings.

Before starting presentation, T1 delivered an instruction as reminder of students' task. The instruction was stated as below:

"Together with your group, I already ask you to find one thesis and prove your statement by mentioning the supporting ideas. You may talk about democracy, politic, education, hot news/issues you want to discuss!"

According to an instruction above, T1 already divided students into some groups. Their task was to find out one thesis in any topic and prove their argument by mentioning supporting ideas. At this moment, T1 gave a chance for students to practice how to deliver argument, especially on analytical exposition text. It was students' time to expand their capabilities in delivering idea, making judgment based on certain criteria, giving examples, and proving logical reasons to support their arguments about certain topic.

T1 activated students thinking ability, especially evaluating. When they evaluated something, criticizing would develop. A good critic would not only judge a thing, but also provide clear proof theoretically or practically.

Implicitly, students practiced to think critically as well as speak confidently. Hence, students improved their speaking abilities and their logical thinking. It could be assumed that the instruction above facilitated students' HOTS.

In order to make the class lively, T1 had the other students who listened to presentation to be active participants. Then, T1 delivered an instruction like below:

"So now, I invite Dinda's group please to have the first performance this meeting. Well, this time is yours and the rest of the students who are joining the meeting, try to make notes, maybe you have a question, comment, or anything you have with this group. I like you to do it. Someone who wants to give a question/opinion will get special additional score from me."

The students were required to pay attention to the presentation, instead of being

passive recipients, T1 wanted them to be active audiences. It meant that students had to take part during the presentation. T1 had students to take notes of important points, ask question, or give a comment to presenters. Intentionally, T1 promoted students HOTS, especially on their ability to give opinion. In giving opinion, students developed their speaking skill and logical thinking to comment on their friends. It also practiced their critical thinking to review what was discussed during the class. Thus, both presenters and audiences had roles during the classroom activities. Each student could practice how to deliver an idea orally. Thus, the instruction also promoted students HOTS.

The following instruction which performed direct instruction also occurred on T2 classroom. It referred to T2 class in the first meeting to discuss reported speech. After greeting, T2 told the class that they were in the second meeting of discussing news item. Then, T2 told that they would talk about reported speech at that day. As a prior knowledge, T2 asked the students about the differences between direct sentence and indirect sentence. The instruction was said as below:

“Today is the second meeting of the Unit and we are going to talk about News Item. We will focus on grammar which is Direct Speech and Indirect Speech. Imagine if there is an accident and the police officer/reporter interrogates the victim. Then, the victim gives an information to the police officer, so that what sentence would be used either a direct or indirect sentence?”

Based on the instruction above, T2 invited the students to imagine the accident situation, so that students had an overview how the information constructed and spoken. T2 asked the differences between direct and indirect sentences explicitly by mentioning a story and check the students’ prior knowledge about those two kinds of sentences. It was a good shot as pre-activity for the students. Yet, it did not activate students HOTS because the instruction given above showed the ability of understanding conceptual knowledge. While understanding referred to LOTS instead of HOTS. In sum, students’ HOTS were not promoted in this time.

After asking about direct and indirect sentences, T2 told them that they were going to discuss about direct and indirect speech. T2 explained the formula of reported speech to the class. The material could be seen as below:

- The way to change the Direct speech into Indirect speech*
1. Omit the punctuations we have in The direct speech
    - “ Quotation
    - . Period
    - , Coma
    - ? Question mark
    - ! Exclamation mark
    - ; Semi colon
    - : Colon
  2. Add the conjunctions :
    - a. That (+/-) Statement
    - b. If / Whether (?) Yes / No Question
    - c. Question Words (?) Wh – Questions
    - d. Not To (-) prohibition
    - e. To (+) Imperative
  3. Adjust the personal pronouns
    - “ S “ in the Direct Speech Change into “ O “ in the Indirect speech

T2 explained the ways to change direct speech into indirect speech as the materials above. T2 started the explanation about punctuation. T2 told the students to omit punctuation that were in direct speech. Then, T2 discussed about adding conjunction in indirect speech. T2 also gave clear examples of what conjunction should be used in any kinds of sentences. Then, T2 explained about adjusting personal pronouns in indirect speech. Having it done, T2 gave some examples and invited the students to identify the changes. T2 also had students to change direct speech into indirect speech and tell the step by step for its changes.

After students understood the formula of reported speech. Then, T2 gave a news item text on the screen as their following practice. The news item text was below:



**THE DAILY NEWS**  
THE WORLD'S FAVORITE NEWSPAPER

**Rock thrown at car changes 17-year-old's life**

The general public of Halifax is shocked by a story recently reported on twitter about an accident victim whose life has dramatically changed – all because of a rock carelessly thrown into traffic.

17-year-old Leeza Morrison's life changed in an instant when she was driving home from volunteering and a rock was thrown at her windshield. The teen was rushed to the hospital in critical condition, in a coma. She has since woke up, but will remain in the hospital.

Leeza is currently learning how to adjust to changes as a result of the accident. It seems the coma was not the worst of her worries and she must learn to manage the pain she is in and regain control over her body. She has suffered multiple bone breaks and dislocations.

The teen had started her rehabilitation process, but it will be a long and painful journey. Leeza will need to learn to walk and complete simple tasks all over again. It is an understatement to say she deserves justice for the pain and suffering she and her family have had to go through. From the public's reaction, they seem to agree.



But justice may be a long time coming. A recent news release states the young man who threw the rock has been sentenced to a group home and complete community service.

"It's an outrage!" mother of the victim, Diane Morrison, states, "He gets nothing!"

How does Leeza, the accident victim herself, feel about the situation? In an interview earlier today, she told reporters: "My friends have even stopped visiting. It's changed my life, and no one cares."

Students were asked to read the text and find out direct speech on the text. The instructions were stated here:

“As the last one, let me give you the example of News Item. Read the following text on the screen and decide which one is direct speech!”

According to the instructions above, the students had another practice to check their understanding. They were asked to read the text given and choose direct speech. Those activities represented the ability of understanding since the students had to check their understanding after the teacher explained the material. Further, looking into the instruction above, direct instruction or teacher-centered presentation of information was the strategy which teacher used during teaching and learning process. It happened so because the teacher delivered the material as well as gave the examples as their basic knowledge before the students did more exercises. Unfortunately, those instruction did not activate students' higher order thinking skill since the abilities developed were understanding.

Another instruction which was delivered through direct instruction was on the second meeting of Reported Speech discussion. T2 divided the students into some groups and

had them discuss how many tenses used in reported speech. In the second meeting, students had to present their group discussion into the class. Before starting the presentation, T2 asked students preparedness for the presentation. The, T2 delivered this instruction to start its presentation:

“I already gave time for you to discuss how many tenses used in reported speech and all of you have submitted your works in Google Classroom. So, I assume that you have done with it. Now, it’s time for you to present what you have been discussing along with your groups. Then, let’s start the presentation.”

Based on the instruction above, students already completed the task and it was submitted in google classroom. At this moment, it was their time to present their result and explain how many tenses used in reported speech. Students exposed the ability of applying procedural knowledge. They had to use and implement the procedures which they learnt in the previous meeting to do another practice and solve problems. In this process, students were given a familiar task and they needed to explain by themselves tenses which were used in reported speech with the following examples. As a result, students did executing because they implemented procedure to similar situation as before. If it’s linked to Bloom Taxonomy, this activity referred the ability of LOTS, so that it did not facilitate students HOTS.

a. Questioning Strategies/Question-Answer Relationship (QAR)

Questioning-answer relationship is one of EFL teachers’ strategy to deliver instruction. Teachers could ask some questions related to the material discussed to activate students’ thinking ability. In this study, QAR occurred to T1 and T2. In T1, the strategy appeared when T1 asked about online and offline learning systems. In the first meeting after greeting, T1 directly invited the students to discuss hot issue which was closed to the students’ real life. Here was the instruction given:

“Now, I want to invite you to discuss about hot issue. As you know that we are doing teaching and learning process by online, right? Then, which one do you prefer having the lesson through online learning to offline learning? Please give the reason!”

In this case, T1 had the students share their thoughts about two learning systems which were online and offline learning. Students needed to differentiate the positive and negative impacts, so that they could find the best learning systems which fit to themselves. Then, integrating hot issue which was closed to students’ real life gave a contextualization for them. In addition, T1 had the other students speak up and share their ideas about the question above. T1 delivered the instructions as below:

“Do you have other reasons beside Allodia’s reason? Beside Allodia’s reason, she likes to study in the classroom because of clear explanation given by the teachers. How about your reasons?”

“Do you have any other reasons beside the teacher giving clear explanation, meeting your friends, or wearing your uniform? Is there any other different

reason?”

“Which one do you like my dear Deva, studying in online system or offline system? Do you have any idea which one do you like? Or maybe you want to support your friends, which one do you support? Please try to state or see this case from different sight.”

There were 3 instructions which required the students to mention another point of view which was not similar as their peers. T1 had the students to be creative in finding the reasons. After the first student stated the reason, T1 had Allodia to find reasons based on her situation. T1 did the same thing to the others students. At this moment, T1 encouraged students to be critical in responding the same question and find out different reasons.

Another instruction came from T2 when T2 discussed about reported speech in the first meeting. As students were given a news item text, they were asked to change direct speech on the text into indirect speech. The instruction was below:

“Can we change it into reported speech? How will it be?”

T2 checked students understanding by changing direct speech on the text into indirect speech. During the process, students implemented the ability of explaining. Explaining occurred when a student could construct and use a cause-and-effect model of system. In this case, they needed to explain how to change direct speech into indirect speech by mentioning step by step based on the formula explained by the teacher. Students developed their ability of understanding and it covered LOTS. This activity belonged to LOTS because it discussed about conceptual aspect.

The same activities went to the second meeting of reported speech. T2 had the students present their group discussion about how many tenses used in reported speech. After greeting as usual, T2 asked students' preparation about their presentation. T2 reminded them that they already completed their tasks which meant that they finished with the works. Hence, T2 started the presentation and invited one group to present their discussion. The presentation went along until it finished. As soon as it done, T2 gave feedback for the students by confirming their slides. T2 rechecked their examples and explanation. Then, T2 delivered instruction as below:

“Everyone please look at the PPT and pay attention to the first example **He said “I need my phone now” → He said that he need his phone then.** Based on the time, it is correct that now is changed into then. How about the others nak? Could you find the mistake?”

“Please pay attention to the third example everyone. **My teacher said to me, “Don’t throw the rubbish in this room.”** It is positive imperative or negative imperative?”

Looking at those two instructions, the teacher had the students think of two examples given by the presenters which seemed to be incorrect. They were asked to find out the mistake and correct them. Not only did the presenters were asked to clarify, but also the

audiences were required to pay attention and analyze the sentences. When they could correct the sentences, they developed the ability of understanding procedural knowledge. In understanding, the students improved their ability of explaining because they had to tell the step by step to make the correct sentences. The step by step which students delivered focused on the formula of reported speech, thus it could be assumed it referred to procedural knowledge. Then, direct instruction or teacher-centered presentation was implemented, especially when T2 asked students about those two sentences and let them correct it. It was called as students' practice time.

#### **4. CONCLUSION**

This study points out to expose how teachers promote higher order thinking skills' instructions during online learning, how the instructions constructed to facilitate students' higher order thinking skills, and what students' higher order thinking skills promoted by the instruction. Two teachers participated in this study and the data was taken through classroom observation which highlighted on teachers and students' utterances. Then, the result found that only T1 could promote HOTS' instruction during the class and T2 could not since T2 focused on grammatical aspects. According to the finding, direct instruction and questioning strategies were the most strategies exposed by T1. They were efficient and effective to activate students' HOTS. In direct instruction, teachers could directly ask the students to think about some issues which were familiar with them to be discussed. They also could discuss it with their partners/peers to share their thought and ideas. Specifically, direct instruction referred the direct-thinking ability. While questioning strategies worked best to stimulate students' critical thinking to comment on issue which was related to their situation. Questioning-answer relationship was implemented by teachers to promote HOTS.

In addition, the instructions delivered by the teachers during the class promoted students' creative thinking and critical thinking because they encourage students' creativity, motivate their self-confidence to participate in the class, had the students be communicative, and expose students' understanding and knowledge. Therefore, they could promote students' HOTS. The instructions were clear enough and reflected imperative and interrogative sentences, so that the students easily understood what they needed to do during the learning process. However, one teacher could not promote HOTS pretty well because he encouraged the students to talk about direct and indirect speech, which was the area about understanding conceptual knowledge.

#### **REFERENCES**

- Barak Rosenshine, "The Empirical Support for Direct Instruction," in *Constructivist Instruction: Success or Failure?* (New York: Routledge, 2009), 201–220.
- Brookhart, S. M. (2010). *How to Assess Higher-order thinking skills in your classroom*. United States of America: ASCD Publication.
- Chun, T. C., & Yen, M. (2019). The teaching of Higher Order Thinking Skills (HOTS) in Malaysian schools: Policy and practices. *Malaysian Online Journal of Educational*

- Management (MOJEM)*, 7 (3), 1–18.
- Djami, C. B., & Kuswando, P. (2020). Teachers' Strategies to Implement Higher-Order Thinking Skills in English Instruction. *METATHESIS: JOURNAL OF ENGLISH LANGUAGE LITERATURE AND TEACHING*, 25-40.
- Hasan, A., & Pardjono. (2019). The correlation of higher order thinking skills and work readiness of vocational high school students. *Jurnal Pendidikan Teknologi dan Kejuruan*, 25 (1), 52–61. doi: <https://doi.org/10.21831/jptk.v25i1.19118>.
- Heong, Y. M., Othman, W. B., Yunus, J. Bin, Kiong, T. T., Hassan, R. Bin, Mohaffyza, M., & Mohamad, B. (2011). The Level of Marzano Higher Order Thinking Skills among Technical Education Students. *International Journal of Social Science and Humanity*, 1(2), 121–125.
- Indriyana, B. S & Kuswando, P. (2019). Developing Students' Higher Order Thinking Skills (HOTS) in Reading: English Teachers' Strategies in Selected Junior High Schools. *Journal of English Teaching*. 5 (3), 204-2016.
- Kothari, C. (2004). *Research Methodology; Research and Techniques (second revised edition)*. New Delhi: New Age International Publisher.
- Purnama, Y.I & Nurdianingsih, F. (2019). The Impact of Higher Order Thinking Skills (Hots) Instructions in Teaching Efl Speaking Skill from The Perspective of Students' Motivation. *Lingua Cultura*, 13 (4), 313-319. doi:10.21512/lc.v13i4.6105
- Sopiani, P. S., Said, I., & Ratnawati. (2019). Investigating Students' Higher Order Thinking Skills (HOTS) in Writing Skill (A Case Study at the Eleventh Grade of a Senior High School in Banjar). *Journal of English Education and Teaching (JEET)*, 328-342.
- Tanujaya, B., Mumu, J., & Margono, G. (2017). The relationship between higher order thinking skills and academic performance of student in Mathematics instruction. *International Education Studies*, 10 (11), 78-85. <https://doi.org/10.5539/ies.v10n11p78>.
- Tam, N. T., & Thnull, N. (2017). *Influence of Explicit Higher-Order Thinking Skills Instruction on Students' Learning of Linguistics*. Thinking Skills and Creativity.
- Yuliati, S. R., & Lestari, I. (2018). Higher-Order Thinking Skills (HOTS) Analysis of Students in Solving HOTS Question in Higher Education. *PERSPEKTIF Ilmu Pendidikan*, 181-188.