



---

# THE BEST PRACTICE OF INTEGRATING HOTS (HIGH ORDER THINKING SKILL) IN ENGLISH FOR PHARMACY CLASS AT QAMARUL HUDA BADARUDDIN UNIVERSITY

by

Hasbullah<sup>1</sup>, Baiq Hardia Martanti<sup>2</sup>, Sulistiyahadi<sup>3</sup>, Fauziyatun Ni'mah<sup>4</sup>, Lalu Muhamad Busroni<sup>5</sup>

<sup>1,5</sup>Universitas Qamarul Huda Badaruddin Bagu

<sup>2</sup>Institut Agama Islam Qamarul Huda

<sup>3</sup>STKIP Mhammadiyah Manokwari

<sup>4</sup>Universitas Qamaruddin Gresik

Email: <sup>1</sup>[hasb89509@gmail.com](mailto:hasb89509@gmail.com), <sup>2</sup>[hadia.martanti@gmail.com](mailto:hadia.martanti@gmail.com), <sup>3</sup>[ulistiyahadi@gmail.com](mailto:ulistiyahadi@gmail.com), <sup>4</sup>[ziya@uqgresik.ac.id](mailto:ziya@uqgresik.ac.id),  
<sup>5</sup>[roniunihba@gmail.com](mailto:roniunihba@gmail.com)

---

## Article Info

### Article history:

Received Juni 06, 2022

Revised Juni 26, 2022

Accepted Juli 28, 2022

### Keywords:

High Order Thinking

EFL

Speaking, Reading, Writing,

And Listening

---

## ABSTRACT

*Integrating HOTS (high order thinking skill) in EFL classes is one of the interesting and important issues in the context of teaching English in order to improve the students' creativity and make them create their own innovation in the process of learning English in the class. Based on Bloom's revised taxonomy that the educators (teacher or lecturer) are not only encouraged to teach four skills in language teaching (speaking, reading, writing, and listening) the writer just focuses on Integrating HOTS (high order thinking skill) in English for pharmacy class. As we know that there are four skills of English (listening, reading, speaking, and writing.) which should be mastered by students in the process of learning English, whereas the lecturer are required to be able to integrated high order thinking skill (HOTS) in English for pharmacy class. Integrating HOTS in English for pharmacy class through video focus on the four skills of English (listening, reading, speaking, and writing skill). Through video, the lecturer can measure students' ability in listening, reading, speaking, and writing skill.*

*This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.*



---

## Corresponding Author:

Hasbullah,

Universitas Qamarul Huda Badaruddin Bagu

Email: [hasb89509@gmail.com](mailto:hasb89509@gmail.com)

---

## 1. INTRODUCTION

Integrating HOTS (high order thinking skill) in EFL classes is one of the interesting and important issues in the context of teaching English in order to improve the students' creativity and make them create their own innovation in the process of learning English in the class. Based on Bloom's revised taxonomy that the educators (teacher or lecturer) are not only encouraged to teach four skills in language teaching (speaking, reading, writing, and listening) but also the educators are encouraged to teach their students about low order thinking skill (LOTS) and high order thinking skill (HOTS), LOTS include remembering, understanding, and applying whereas HOTS include analyzing, evaluating and creating (Mishra and Kotecha 2016).

There are six goals of Bloom's taxonomy learning objectives which were issued in 1956: knowledge, comprehension, application, analysis, synthesis, and evaluation. Actually in the process of teaching, the activities in HOTS (high order thinking skill) refers to student centered learning, it is not teacher or lecturer centered learning. In this case, students are encouraged to be able to use their critical thinking skills to find some solutions to their problems in all learning aspects especially in learning English (Bloom, 1956).

According to Li and Walsh, the lecturer or teacher who integrated HOTS (high order thinking skill) in their class will create students will do better in education particularly in the process of learning, the students will be able to solve problems they face than those who are not integrated HOTS in their class, the students will not be able to

.....  
solve problem they face in learning process (Li and Walsh 2011; Wilson and Narasuman 2020). HOTS . represents more sophisticated and context-rich thinking processes that include critical, logical, reflective, metacognitive, and creative thinking (Siti, 2015). That is why the implementation of HOTS is very important thing in educational program, especially in teaching-learning process. The students' who have higher-level thinking capability in the learning process will impact the efficiency of learning itself.

In this section, the writer just focuses on Integrating HOTS (high order thinking skill) in English for pharmacy class. As we know that there are four skills of English (listening, reading, speaking, and writing.) which should be mastered by students in the process of learning English, whereas the lecturer are required to be able to integrated high order thinking skill (HOTS) in English for pharmacy class. Pharmacy is the science and technique of preparing as well as dispensing drugs and medicines. Pharmacy is the health profession that links the health sciences with the chemical sciences. Pharmacy has traditionally been portrayed as a profession responsible for formulating and dispensing medicines (Gregory, 2013). Therefore, the purpose of this study is to find the effect of Integrating HOTS in English through video for pharmacy class at Qamarul Huda Badaruddin University.

## 2. LITERATURE REVIEW

There some theories of high order thinking skill, such Singh et al (2018) stated that high order thinking skill (HOTS) reflect students thinking ability. Singh and friends added that if it is present and incorporated in pedagogical components then there is an expected success in the worlds' education system. The critics always aver that students be made to transit to a deep conceptuality of ideas from the portrayal of rote memories of ideas.

Another expert also stated about HOTS, according to Brookhart (2010) high order thinking skill (HOTS) can be placed in three groups; the ones that relate it to transfer, those who relate it to critical thinking and lastly those who associate its manifestation in ability of learners to solve problems. In transferring, Brookhart (2010) argued that students get the concept they utilize in the solving of problems, and this is where higher order thinking is portrayed most. Mostly higher order thinking opens the chances for students to apply class concepts to outside life (Brookhart, 2010). In this case learners transfer learned concepts to real life rather than remembering what was done in class without having to apply it. Brookhart (2010) pointed out that critical thinking involves being reasonable and reflective at the same time and this gives an opportunity for learners to decide on what to do and believe as well. Adding to that, Singh et al (2018) stated that learners can reason, question, investigate, observe, describe, compare, connect check how complex and explore all available viewpoints by practicing HOTS. He further argued that these concepts enable a learner to become critical and analytical at the same time. Through the support of arguments from Yee et al. (2013) research, it is noted that all learners who can use higher order thinking skills can always find new ways of solving daily challenges as well as making acceptable decisions.

Thomas, A. and Thorne stated that HOTS can be learned, can be taught to students and can be improved skills and character of students, HOTS means the capacity to go beyond the information given, to adopt a critical stance, to evaluate, to have metacognitive awareness and problems solving capacities (Thomas, A. dan Thorne, 2019). HOTS consists of problem-solving, making decisions, critical thinking, and creative thinking (Sajidan & Afandi, 2018).

The transformation of education has changed. Recently teaching of Higher Order Thinking Skills (HOTS) becomes attested due to its important role in education. Students having HOTS claimed will be more successful than those having Lower Order Thinking Skills (LOTS). 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 correlate with the students' work readiness (Hasan & Pardjono, 2019). The teaching of HOTS is a kind of student-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).

The opinion of Sari (2020) about HOTS (high order thinking skill), the analysis is referred to the capacity of students to deconstruct and classify information systems into their respective classes and to define associations between the information components of the classification. These cognitive skills can be demonstrated using collect, plan, evaluate and create the following verbs. In addition, cognitive skills evaluating allows learners to justify the validity and accuracy of a piece of knowledge. Most HOTS activities are referred to adult learners to develop their reading and writing skills (Afshar & Rahimi, 2016 as cited in Setyarini et al., 2018) and, in addition in terms of its use, HOTS can also improve students' speaking ability when expressing their point of view or thought. According to Sari (2020), Higher-Order Thinking Skills (HOTS) relates to the capability to connect knowledge, skills and concepts to thinking, interpretation, Problem-solving, decision-making, innovation and creativity to produce something new. Hence, HOTS are very significant for students in terms of build their critical thinking and it will prepare them to be ready in facing the real world in the future.



Actually Bloom's taxonomy consists of six stages that are commonly known as hierarchical. This implies that the higher-level skills are more cognitively challenging, first of all. Secondly, they also suggest that the ability to master a higher skill in the taxonomy means the ability to master all other levels below that level or that the abilities have already been mastered at the lower level. In the revised taxonomy, the levels of information, comprehension, implementation (remembering, understanding and applying) are also referred to as the lower order skills with the lowest knowledge. The higher order skills are known to be analysis, synthesis and evaluation with evaluation holding the highest position in the taxonomy. Bloom's taxonomy Indicated the ability to train students with thinking process dimensions that include three main things: Analyzing (C4) as a form of activity to compare, examine, criticize, test a problem and the facts are made into a systematic concept, then evaluating (C5) is an activity in managing decisions and conclusions based on standards established through assessment criteria, assignments based on learning objectives to be achieved while creating (C6) is a cognitive process that involves the ability to realize new concepts or products, emphasizing creative thinking in synthesizing information into a more comprehensive form and the complex includes planning, formulating and creating (Anderson et al., 2001).

**Anderson's and Bloom's taxonomies**

Anderson et al. (2001)	Bloom (1956)
Remembering	Knowledge
Understanding	Comprehension
Applying	Application
Analyzing	Analysis
Evaluating	Synthesis
Creating	Evaluation

Sources from Samad, A.A. (2004). Essentials of language testing for Malaysian teachers.

The two apparent differences between the taxonomy of Bloom and the revised taxonomy or Anderson's taxonomy proposed by Andersen et al. are that, according to bloom taxonomy, low order thinking skill (LOTS) include knowledge, comprehension, and application, and high order thinking skill (HOTS) include analysis, synthesis and evaluation whereas revised taxonomy, low order thinking skill (LOTS) include remembering, understanding, and applying, and high order thinking skill (HOTS) include analyzing, evaluating and creating.

**3. RESULTS AND ANALYSIS**

Based on bloom's taxonomy HOTS (Higher Order Thinking Skills), may be defined as the stage in between the top three stages, they are Analyzing (C4), then evaluating (C5) is an activity in managing decisions and conclusions, the last is creating (C6) (Anderson et al., 2001).

Integrating HOTS in English for pharmacy class through video focus on the four skills of English (listening, reading, speaking, and writing skill). Through video, the lecturer can measure students' ability in listening, reading, speaking, and writing skill. The video is about "corona virus" the link is <https://youtu.be/aEmCDDvVfkc> it provides the history and basic knowledge about corona virus. There are some steps in Integrating HOTS in English for pharmacy class through video; the video is shown in three segments

1. In the first segments, The lecturer asked the students to watch the video together, it just watch the video without any instruction
2. After the first video segment, the lecturer divided students into some groups, in every group consists of three to four students.
3. In the second video segment, The lecturer gave the students a kind of worksheet with some questions such:
  - 1) Where the corona virus was first discovered?
  - 2) How to understand the diagnosis of corona virus?

- 3) What are the symptoms of corona virus?
- 4) How to analyze the symptoms of corona virus?
- 5) How to treat the patients of corona virus?
- 6) Please find the risks factors of corona virus?
- 7) How is the transmission from the coronavirus?

Every student should discuss with their group about those kinds of questions above based on the video.

4. In the third video segment, the lecturer asked the student to evaluate their own work in their group, whether their answer in the worksheet correct or not.
5. After watching the third video segment, the lecturer asked the student to create their own conversation entitled corona virus, they can tell everything about corona virus, whether about the symptoms, the diagnosis, transmission, treatment and etc.
6. After creating conversation, the lecturer asked the students to practice their own conversation in pairs in front of the class.

Through video can make it easier for students to improve the four skills of English (listening, reading, speaking, and writing skill), the video is presented in an interesting way, with colorful colors complemented by unique images and writing. It will make students more excited in learning and stimulate them to participate actively and think critically in the process of learning English.

The video is shown in three segments that correspond to the three reports, firstly the lecturer asked the students to watch and listen the video carefully, the second listening section star, during the second listening section the students are required to practice their listening comprehension task that involves note taking with the aid of worksheet, such as list in point form a. what is the diagnosis of corona virus, b. what is the symptoms of corona virus, c. what is the risk factors of corona virus, and other questions. The lecturer asked the students to watch and listen carefully to the video, then the lecturer asked the students to recheck their task in the second session, whether their answer is correct or not based on the video. As the final closing activity to the video session and in order to make the process of learning more active, interesting, and meaningful, the lecturer asked the students to create their own conversation by the title “**corona virus**”, what they think about corona virus and everything related to corona. After creating the conversation the students are required to practice in front of the class in pairs.

The activities above cannot be carried out just in one meeting; therefore these will be conducted in two meetings. The lecturer can divide that in the first meeting there will be giving the three segments of video and creating the conversation, whereas in the second meeting will be the conversation practice. It can be concluded that giving video segment is beneficial to be applied in the process of learning English in order to build students’ HOTS (Higher Order Thinking Skills) and their four English skills (listening, reading, speaking, and writing skill). Therefore, giving video segment can be one of the best solutions to be used in enhancing students’ Higher Order Thinking Skills (HOTS) and their four English skills (listening, reading, speaking, and writing skill) in the process of learning English.

Bloom’s and Anderson’s taxonomies and representative video segment questions in integrating HOTS in English for pharmacy class

Anderson et al. (2001)	Bloom (1956)	The Example of Questions related to video segment
Remembering	Knowledge	Where the corona virus was first discovered?
Understanding	Comprehension	What are the symptoms of corona virus?
Applying	Application	How to treat corona patients?
Analyzing	Analysis	What to do to people affected by the virus?



Evaluating	Synthesis	Please check your own work, whether it is correct or not!
Creating	Evaluation	Please make a conversation in pairs entitled corona virus!

### CONCLUSION

Based on the best practice of integrating HOTS in English for pharmacy class, the students are able to enhance their Higher Order Thinking Skills (HOTS) and their four English skills (listening, reading, speaking, and writing skill) in the process of learning English. Giving video segment can increase students' enthusiasm in learning because the video is presented in an interesting way, with colorful colors complemented by unique images and writing. It will make students more excited in learning and stimulate them to participate actively and think critically in the process of learning English.

### REFERENCES

- [1] Anderson dan Krathwohl. 2001. A Taxonomy for Learning, Teaching, and Assessing (A Revision of Bloom's Taxonomy of Educational Objectives). Abridge Edition. Penerbit David McKay Company. New York
- [2] Barak, M., & D. Y. J. (2009). Enhancing Higher Order Thinking Skill Among Inservice Science Via Embedded Assessment. *J Sci Teacher Educ*, 20, 459–474.
- [3] Bloom, Benjamin S., M. D. Engelhart, E. J. Furst, W. H. Hill, and David R. Krathwohl. 1956. *Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook 1 Cognitive Domain*. London: David McKay Company, Inc.
- [4] Brookhart, S. (2010). *How to Assess Higher Order Thinking Skills in Your Classroom*, ASCD. Retrieved from <http://www.ascd.org/Publications/Books/Overview/How-to-Assess-Higher-Order-Thinking-Skills-in-your-classroom.aspx>
- [5] 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.
- [6] 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>.
- [7] Li, Li and Steve Walsh. 2011. "Seeing Is Believing": Looking at EFL Teachers' Beliefs through Classroom Interaction." *Classroom Discourse* 2(1):39–57.
- [8] Mishra, Richa and Ketan Kotecha. 2016. "Are We There Yet! Inclusion of Higher Order Thinking Skills (HOTs) in Assessment." *Journal of Engineering Education Transformations* 0(0):2–5.
- [9] Samad, A. A. (2004). *Essentials of language testing for Malaysian teachers*
- [10] Sari, N. I. THE USE OF HIGHER ORDER THINKING SKILL (HOTS) TO IMPROVE STUDENTS' SPEAKING ABILITY
- [11] Singh, R. K. A., Charanjit K. S. S., Tunku, M. T. M., Nor, A., Mostafa & Tarsem, S. M. S. (2018). A Review of Research on the Use of Higher Order Thinking Skills to Teach Writing. *International Journal of English Linguistics*; Vol. 8, No. 1; ISSN 1923-869X E-ISSN 1923- 8703.
- [12] Siti N. M. (2015). Teachers' perception on the integration of HOTS in language teaching. *International Journal of Technical Research and Applications*, 22(22), 42–44.
- [13] Gregory, J.H., 2013. *Evolution of pharmacy*. In: Remington: *The Science, Practice of Pharmacy (Vol. I: The Science and Practice of Pharmacy)*. 22nd ed. Pharmaceutical Press, United States of America, pp. 11–24
- [14] Source of the video segment: access from <https://youtu.be/aEmCDDvVfkc>

THIS PAGE HAS INTENTIONALLY BEEN LEFT BLANK