ADOPTING HOTS FOR LANGUAGE LEARNING: A CASE OF ARABIC

¹Miftahul Ulum, ²Mokhammad Miftakhul Huda

ABSTRACT--Learning Arabic in Excellent Senior High School of Darul Ulum Step 2 has used the 2013 Curriculum but in practice the teacher has not taught much with the HOTS method, especially Arabic subjects. Therefore, it is deemed necessary to teach Arabic with the HOTS approach, it is expected that students will not only answer at the C-1 (knowing), C-2 (understanding), and C-3 (applying) levels related to Arabic subject themes, but students are also required to develop at the level of C-4 (synthesis / analysis), C-5 (evaluation), and C-6 (creative). Achievements in this study are to explain the HOTS (High Order Thinking Skills) system and its relation to Arabic Literacy in senior high school and measure the implications of the innovations in the development of HOTS (High Order Thinking Skills) towards the development of innovative learning. In this study, researchers used several approaches that were appropriate for their research. The approach is a descriptive approach, analytical approach, and critical approach. The results achieved in this study were the Innovation of the development of Arabic learning based on HOTS (High Order Thinking Skills) developed in this study covering several stages, namely Basic Competency Analysis (KD), Indicator Analysis, Analysis of student characteristics, Formulating learning objectives, Analysis material, Developing strategies and learning activities, developing learning tools, Developing assessments, and linking them to HOTS principles, and Revising all aspects and steps of learning development. The results of the development of Arabic learning innovations in Excellent Senior High School Of Darul Ulum Step 2 by using the HOTS model developed in this research are learning device products that include lesson plans, teaching materials, and learning assessments designed on the basis of HOTS (High Order Thinking Skills).

Keywords-- 2013 Curriculum, High Order Thinking Skills, Excellent Senior High School Of Darul Ulum Step 2

I. **INTRODUCTION**

Along with the implementation of the 2013 curriculum, it is hoped that there will be a new paradigm in the implementation of learning in every school throughout Indonesia. Learning that was initially teacher centered turned into student centered, therefore, all teachers are expected to be more creative and innovative in presenting subject matter. To test students' thinking skills, the questions used to assess student learning outcomes, especially Arabic questions, are well designed so that students are able to answer questions through thinking processes that are appropriate to operational verbs in Bloom's taxonomy.

Arabic is a science that is related to many sciences, therefore the presentation of Arabic material in learning is often associated with everyday life with the aim that students are able to find concepts and develop their Arabic skills based on experience or knowledge that students have.

Received: 02 Jan 2020 | Revised: 12 Feb 2020 | Accepted: 17 Mar 2020

¹ STAI Syaichona Moh. Cholil Bangkalan, Indonesia, miftahul_ulum2001@yahoo.com

² IAIN Kediri, Indonesia, hoeda_twin@iainkediri.ac.id

Students are said to be able to solve a problem if they are able to examine a problem and be able to use their knowledge in new situations. This ability is usually known as High Order Thingking Skills. High Order Thingking Skills is the ability to connect, manipulate, and change the knowledge and experience that is owned critically and creatively in determining decisions to solve problems in new situations.

Based on the description above, it will be examined in this study about High Order Thinking Skills in relation to Arabic literacy skills.

In practice, the application of HOTS learning is not an easy thing to do by the teacher. Besides the teacher must really master the material and learning strategies, the teacher is also faced with challenges with the environment and student intake. Sometimes teachers feel that they are doing their best to make learning activities interesting, but students' responses are still cool, and relatively passive. Learning activities still dwell on sitting, listening, taking notes, and memorizing.

HOTS assessment instruments are questions that require higher order thinking skills. To make the quality of students better than before, questions based on high-level thinking must indeed be developed by the teacher well and applied in the classroom. Higher-order thinking skills are divided into four groups; problem solving, making decisions, thinking critically, and thinking creatively.

Now, many people research about HOTS-based problems. Teachers are expected to be able to arrange HOTS questions, so students not only answer at the C-1 level (knowing), C-2 (understanding), and C-3 (applying), but can also answer at the C-4 level (synthesis / analysis), C-5 (evaluation), and C-6 (creative). To realize this, the K-13 developer workshop was also presented with material about making HOTS questions. The aim is to improve the quality of the questions, and to familiarize students with being able to work on problems of an international standard.

HOT (High Order Thinking Skills) is a process of thinking of students in a higher cognitive level that is developed from various concepts and methods of cognitive and learning taxonomies such as the method of problem solving, bloom taxonomy, and the taxonomy of learning, teaching, and assessment.

According to King, high order thinking skills consist of critical, logical, reflective, metacognitive, and creative thinking. Meanwhile, according to Newman and Wehlage, high order thinking makes students able to distinguish ideas or ideas clearly, argue well, be able to solve problems, be able to construct explanations, be able to hypothesize and be able to understand something complex becomes clear.

According to Vui, high order thinking skills will occur when someone can connect new information with previous information stored in his memory and relate it and be able to develop that information to achieve a goal. The researcher believes that writing HOTS-based questions is a good thing, but this should start with HOTS learning as well, because it will feel weird when learning is normal, but the teacher gives HOTS questions during the exam. Thus, HOTS assessment must begin with HOTS learning.

Learning Arabic in Excellent Senior High School of Darul Ulum Step 2 has used the 2013 Curriculum but in practice the teacher has not taught much with the HOTS method, especially Arabic subjects. Therefore, it is deemed necessary to teach Arabic with the HOTS approach, it is expected that students will not only answer at the C-1 (knowing), C-2 (understanding), and C-3 (applying) levels related to Arabic subject themes, but students are also required to develop at the level of C-4 (synthesis / analysis), C-5 (evaluation), and C-6 (creative).

A. Arabic learning based on HOTS (High Order Thinking Skills)

Learning Arabic at the Excellent Senior High School of Darul Ulum Step 2 as a second language learning is essentially someone able to use a language other than the mother tongue, able to understand the language formula when listening (*istima'*), and can apply it in speaking (*takallum*), reading (*qira'ah*) and writing (*kitabah*). Learning Arabic in essence is the development of social communication skills using Arabic.

ccording to Thomas and Thorne (in Nugroho, 2018: 16) HOTS is a way of thinking that is higher than memorizing facts or applying rules, formulas and procedures. HOTS requires us to do things based on facts. Making linkages between facts, categorizing them, manipulating them, placing them in new contexts or ways and being able to apply them to find new solutions related to learning Arabic that are very interesting for students.

The ability to lower order thinking uses only limited abilities in routine and mechanical matters. For example memorizing and repeating information provided previously. Meanwhile, HOTS (higher order thinking) thinking ability stimulates students to interpret, analyze or even be able to manipulate previous information, so that the information conveyed is not monotonous, with HOTS based teaching models students are interested in learning and mastering Arabic. The ability of HOTS (higher order thinking) is used when someone receives new information and stores it in their memory to be used or rearranged for problem solving based on the situation faced in learning.

HOTS (Higher Order Thinking Skill) is a thinking skill that not only requires remembering skills, but requires other higher skills. Indicators for measuring the Higher Order Thinking Skill are; analyzing / C4, evaluating / C5, creating / C6.

Brookhart (2010) describes the types of HOTS based on learning objectives in class, which consists of three categories: 1) HOTS as a transfer, 2) HOTS as critical thinking, and 3) HOTS as a problem solving.

So, HOTS includes the skills of analyzing, evaluating, creating, critical thinking and problem solving. Thus, HOTS provides the impact of learning for students and teachers;

- a. learning will be more effective with HOT / higher order thinking,
- b. improve the intellectual abilities of teachers in developing HOT / higher order thinking,
- c. in this new evaluation, the teacher must always prepare questions that will not be answered simply by students.

B. HOTS in Bloom's Taxonomy

In the KBBI dictionary, thinking comes from the word "thought" which means reason, memory, imagination. While "thinking" means using memory to weigh and decide something. Thinking according to Kowiyah, is a psychiatric process that connects events with facts, ideas or other events. In accordance with this opinion, Valentine 1965 (in Kuswana 2011) revealed that "thinking in psychological studies is to examine the process for an activity that contains about, how, which is connected with ideas directed to several expected goals".

Students are expected to be able to process information and make the right and fast decisions in this era. Students need to develop ways of thinking and reasoning logically based on scientific facts. Benjamin Samuel Bloom is a psychologist in education who conducts research and development on thinking skills in the learning process and classifies the conceptual framework of thinking called Taxonomy Bloom. "Educational taxonomy is a framework of thinking used to clarify what we expect or interest students to find out the results of instruction".

The dimension of thinking in Bloom's Taxonomy as perfected by Anderson & Krathwohl (2001), consists of abilities: C1 - knowing, C2 - understanding, C3 - applying, C4 - analyzing, C5 - evaluating, and C6 - creating.

The HOTS concept is explained in the discussion of cognitive domains, namely domains that involve knowledge and intellectual skills. Bloom describes the level of cognitive processes from the simplest to the complex level, known as the level of cognitive skills. Level categorization is arranged into 6 levels; (1) knowledge / C - 1; (2) comprehension / C - 2, (3) application / C - 3; (4) analysis / C - 4; (5) synthesis / C - 5; and (6) evaluation / C - 6.



Figure 2. 1: Bloom's Taxonomy, Cognitive Domains

The cognitive domain includes the ability of students to repeat or convey concepts that have been learned in the learning process. This process relates to the ability to think, competence in developing knowledge, recognition, understanding, conceptualization, determination and reasoning. The purpose of learning in the cognitive domain according to Bloom is all learning activities into 6 levels from lowest to highest level.

C. Learning Innovation.

In learning Arabic, the teacher must constantly develop learning innovations that can improve students' thinking skills to a higher level of understanding and interest of students towards Arabic lessons, so that problems related to the HOTS model in Arabic subjects can be solved.

In general, teachers in Senior High School still lack innovation in developing Arabic learning, especially HOTS-based learning, so students often encounter difficulties when facing problems that require higher-level thinking, such as in Arabic competitions. This problem also occurs in Excellent Senior High School of Darul Ulum Step 2.

This research activity is expected to provide the following benefits:

- 1. The teachers have insight into innovative Arabic learning based on HOTS.
- 2. The competence and professionalism of Arabic teachers increases in relation to innovative learning.
- 3. Arabic language teachers are able to explore and develop the potential of their students to improve Arabic learning achievement, through innovative Arabic learning based on HOTS.

Effective learning strategies will help students towards higher-level thinking skills (HOT). Learning steps that can improve students' way of thinking as explained by Given (in Ali, 2011: 23):

- 1. Students write the learning achievements to be achieved that day (Emotional Learning),
- 2. Do a Brain Gym while learning (Physical Learning),
- 3. directing the use of concepts in everyday life (Emotional Learning),

International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 08, 2020

ISSN: 1475-7192

4. discuss a problem.

The development of the HOTS model in Arabic requires a variety of criteria both questions and subject matter

content. There are several ways that can be used as a guide by teachers in writing questions that require students

to think at a higher level. The questions to be asked are measured by behavior in accordance with Bloom's cognitive

domain at the level of analysis, evaluation and creation, each question is given a basic question (stimulus). The

HOTS question should minimize the ability to recall information, but rather measure the ability. The question

development technique is based on the principle of higher order thinking skills including:

1. Creativity Thinking and Innovation

2. Critical Thinking and Problem Solving

3. Communication

4. Collaboration

II. RESEARCH METHODOLOGY

To facilitate the researchers in this study, the researchers used several approaches that were appropriate for

their research. The approaches are descriptive approaches, analytical approaches, and critical approaches.

Descriptive approach, describing learning Arabic in The Excellent Senior High School of Darul Ulum Step 2.

The analytical approach, analyzing improving the quality of curriculum and learning Arabic in the Excellent Senior

High School of Darul Ulum Step 2 towards the development of effective language learning. Meanwhile, the critical

approach consists of intensifying curriculum development and learning Arabic in the Excellent Senior High School

of Darul Ulum Step 2.

This research is descriptive quantitative research. This research is a research that aims to explain the phenomena

that exist by using numbers to describe the characteristics of individuals or groups (Syamsudin & Damiyanti: 2011).

This study assesses the nature of the conditions that appear. The purpose of this study is limited to describe the

characteristics of things as they are. This research also involved the participants. Participants are people who are

interviewed, observed, asked to provide data, opinions, thoughts, perceptions. Information collected through in-

depth interviews with informants (head masters and teachers). The process of observation and in-depth interviews

is very important in data collection. From this observation it is expected to be able to explore innovative curriculum

management and learning in Arabic at the Excellent Senior High School of Darul Ulum Step 2.

Data collection techniques using observation, interviews, and documentation. Based on this concept, the three

data collection techniques above were used in this study; 1) interviewee, 2) observation, 3) documentation.

III. DISCUSSION

One of the changes to the 2013 curriculum in schools is the strengthening of the learning process. Through the

strengthening of the learning process it is hoped that it can improve the quality of learning more effectively,

efficiently, fun, and meaningfully. So as to improve the achievement of learning outcomes and make students think

critically (not just convey factual). In fact there are still many teachers who do not understand about HOTS (High

Order Thinking Skills). This is evident in the formulation of indicators, objectives, and learning and assessment

activities.

Teachers must be able to develop and convert from Lower Order Thinking Skills (LOTS) to Higher Order Thinking Skills HOTS (High Order Thinking Skills) and this must have been initiated since designing the Learning Implementation Plan (RPP).

Learning to design a Learning Implementation Plan (RPP) is an attempt by someone to achieve a goal, the effort is to steer someone from a state that cannot be able to, and from not knowing to knowing that is influenced by internal and external factors.

The next stage after completing the learning implementation of lesson plans (RPP) is to apply in learning activities. Learning is a system or process of learning students that are designed, implemented, and evaluated systematically so that students can achieve the expected learning goals. Learning has several components, including learning objectives, learning materials, learning strategies and methods, learning media, and evaluation of learning. So learning is processing something to produce the desired output.

The research data was obtained through interviews, observations, documentation, and tests. Interviews were conducted with teachers and class XI AGT 1 students totaling 21 students to get an overview of students' understanding before and after the implementation of the HOTS (High Order Thinking Skills) learning model. In addition to interviews researchers also conducted observations.

This observation is to observe the activities of students and teachers when applying the HOTS (High Order Thinking Skills) Learning model. While the documentation, is the data of students in class XI AGT 1 at Excellent Senior High School of Darul Ulum Step 2 as well as Arabic evaluation value data related to the title of the Month of Ramadan. Finally, the researcher evaluates at the end of the study.

From the results of interviews conducted by researchers of Arabic language teachers in class XI AGT 1 Excellent Senior High School of Darul Ulum Step 2 and supported by student value documents provided by the teacher to the researcher. Interviews are also conducted with students.

This interview was conducted on Wednesday, June 12, 2019 at 09.30 WIB. This interview was conducted to determine the condition of students' understanding of the learning model used and the results of the evaluation at the end of Arabic learning.

The interview results show that learning that is often used by teachers in teaching Arabic in class is a direct learning method. Teachers more often convey learning by lecturing in front of students, reading material, and giving assignments. So that learning is centered on the teacher, the teacher is more active than the students. This causes many students to be sleepy, daydream themselves, often get permission to go to the bathroom, disturb their friends, and are less enthusiastic about participating in class learning.

In addition, students tend to be passive and do not dare to express their opinions or ask questions when it is difficult to understand Arabic. These difficulties cause the low ability of students to understand Arabic material. This can be seen from the results of students' exams.

The development of HOTS (High Order Thinking Skills) towards the development of innovative learning

Based on the background of the study, it can be identified the problem of learning Arabic in the Excellent Senior High School of Darul Ulum Step 2 so that it can be formulated an innovative Arabic learning problem based on HOTS (High Order Thinking Skills) in the Excellent Senior High School of Darul Ulum Step 2.

The solution offered to solve the problem is through FGD (Focus Group Discussion) to strengthen the insight of innovative Arabic learning, followed by workshops to develop a plan and learning media, and at the end of the activity held the practice of implementing innovative Arabic learning based on HOTS (High Order Thinking Skills.

The approach and method used in completing this activity is Focused Discussion / FGD. Focused Discussion (FGD) was held to strengthen the insights of innovative Arabic learning and the preparation of learning plans, where at this stage the research team presented something as the focus of the discussion material. Then there will be discussion and question and answer session, where participants will discuss HOTS (High Order Thinking Skills) learning theories and innovative learning plans based on HOTS (High Order Thinking Skills) and are equipped with effective learning media.

IV. RESEARCH ACTIVITIES

The study began on Saturday, June 1, 2019 until Monday, September 30, 2019 at the Madrasah Aliyah Unggulan Darul Ulum which was attended by 9 Arabic teachers and 2 researchers.

In this study, researchers developed Arabic questions based on HOTS. The Arabic questions can be classified into four parts, namely: Listening (*Istima'*), Writing (*Kitabah*), Reading (*Qiro'ah*) and Speaking (*Kalam*).

FGD activities continued with discussion and question and answer. Enthusiastic participants gave responses about HOTS (High Order Thinking Skills) followed by questions and answers about developing HOTS (High Order Thinking Skills) questions.

The next phase of the activity is focused on innovative learning planning based on HOTS (High Order Thinking Skills). This activity also begins with the presentation of material on the preparation of learning plans (RPP).

Learning planning material based on HOTS (High Order Thinking Skills) is also an interesting topic. This can be seen from the participants' enthusiasm during the question and answer session, including asking about operational words on the indicators that lead to HOTS (High Order Thinking Skills).

Research Evaluation Results (Pretest and Posttest)

Table 4.4: List of Pretest and Posttest Values

No	Nama	Kelas	L/P	Pre tes	postes
1	Adam Aulia Akbar Dikdowibowo	XI AGT 1	L	82	88
2	Ahmad Ulil Azmi Maulidy	XI AGT 1	L	66	79
3	Akhmad Syaifuddin	XI AGT 1	L	60	79
4	Alfian Amru Atmam	XI AGT 1	L	73	82
5	Bayu Purnomo Bagaskoro	XI AGT 1	L	80	85
6	Ciesa Nodi Fedriano	XI AGT 1	L	67	79
7	Habib Muhammad Abduh	XI AGT 1	L	74	80
8	Hasan Nasiruddin	XI AGT 1	L	65	80
9	Ismail Hasan	XI AGT 1	L	58	79
10	M Ageng Satrio	XI AGT 1	L	58	82
11	M Sholahuddin	XI AGT 1	L	70	80
12	M Ainul Rofik	XI AGT 1	L	71	84
13	Mas'ud Rizal Gabriel	XI AGT 1	L	75	87
14	Mohammad Imam Mukhlisin	XI AGT 1	L	65	82
15	Muhammad Emil Shobibar Rizqi	XI AGT 1	L	66	84
16	Muhammad Isam Akbar Syach	XI AGT 1	L	73	88
17	Muhammad Shofi Fadlullah	XI AGT 1	L	68	80
18	Najwa Fuadi Muhammad	XI AGT 1	L	75	83
19	Reza Nur Shofiyul Azmi	XI AGT 1	L	74	81
20	Sayid Alif Maulana Al Gadri	XI AGT 1	L	57	79
21	Taufiqur Ramadhani	XI AGT 1	L	69	80

The analysis output is divided into three tables. The first table contains descriptive statistics, the second table contains correlations between pre-test and post-test, and the third table contains statistical analysis with SPSS 21.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	68,86	21	6,966	1,520
	Postest	81,95	21	3,008	,656

Descriptive Statistics: Tabel Paired Samples Statistics

The Paired Samples Statistics table shows some descriptive values of each variable in the paired sample.

- a. Pre-test has an average value (mean) of 68.86 out of 21 students used as research samples. The data distribution (Std. Deviation) obtained was 6,966 with a standard error of 1,520.
- b. Post test has an average value (mean) of 81.95 out of 21 students used as research samples. Data distribution (Std. Deviation) obtained 3,008 with a standard error of 0.656.

Because the average value of learning outcomes in the Pre Test 68.86 <Post Test 81.95, then that means descriptively there are differences in the average learning outcomes between the Pre Test and the Post Test results. Furthermore, to prove whether the differences are real or not, it is necessary to interpret the results of the paired sample t test contained in the "Paired Samples Test" output table..

This shows the final test on the data is higher than the pre test. However, the range of post test data distribution also becomes wider and with higher standard errors.

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pretest & Postest	21	,651	,001

Descriptive Statistics: Tabel Paired Samples Correlations

Paired Samples Test

		Paired Differences							
				Std. Error	95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Pretest - Postest	-13,095	5,504	1,201	-15,600	-10,590	-10,904	20	,000

Descriptive Statistics: Tabel Paired Samples Correlations

This third output is the most important output, because in this third part we will find the answers to the questions in the case above, namely the influence of the use of the HOT method on learning outcomes in Arabic subjects in class XI AGT 1 students in academic 2019.

Before discussing the interpretation of the numbers contained in the "Paired Samples Test" output table above, it is first necessary to know the research hypothesis formulation and decision making guidelines in paired sample t test

Paired Samples Test table is the main table of output that shows the results of tests conducted by researchers. This can be seen from the significance value (2-tailed) in the table.

Research Hypothesis Formulation:

- a. H0 = There is no average difference between Pre Test and Post Test learning outcomes, which means that there is no influence on the use of HOT model learning strategies in improving learning outcomes for Arabic subjects in class XI AGT 1 academic year 2019/2020.
- b. Ha = There is an average difference between the Pre Test and Post Test learning outcomes, which means that there is an influence on the use of the HOT learning model in improving learning outcomes for Arabic subjects in class XI AGT 1 academic year 2019/2020..

According to Singgih Santoso, the guidelines for decision making in the paired sample t-test based on the significance value (Sig.) Of the SPSS output are as follows::

- a. If the Sig. (2 tailed) <0.05, then H0 is rejected and Ha is accepted.
- b. Opposite of point a, if the value of Sig. (2tailed)> 0.05, then H0 is accepted and Ha is rejected.

Based on the "Paired Samples Test" output table above, we know the Sig. (2tailed) is 0.000 <0.05, then H0 is rejected and Ha is accepted. So it can be concluded that there is an average difference between Pre Test and Post Test which means that there is an influence on the use of HOT model learning strategies in improving learning outcomes for Arabic subjects in class XI AGT 1 academic year 2019/2010.

From the output table "Paired Samples Test" above also contains information about the value of "Mean Paired Differences" of 13,095. This value shows the difference between the average Pre Test learning outcomes with the Post Test average learning outcomes or 68.86 81.95 = 13,095 and the difference between 15,600 to 10,590 (95% Confidence Interval of the Difference Lower and Upper).

The significance value (2-tailed) from this case sample is 0,000 (p <0.05). So the results of the pre-test and post-test have significant changes (meaning). Based on descriptive statistics the post test value is higher. It can be concluded that learning by using HOT can increase the creativity of students in answering questions.

V. CLOSING

From the observations during the course of this research activity, it can be concluded that this activity is very beneficial for the Excellent Senior High School Of Darul Ulum Step 2, namely in terms of:

1. The innovation development of Arabic learning based on HOTS (High Order Thinking Skills) developed in this study includes several stages, namely Basic Competency Analysis (KD), Indicator Analysis, Analysis of student characteristics, Formulating learning objectives, Material analysis, Developing strategies, and activities

learning, developing learning tools, Developing assessments, Linking the principles of HOTS (High Order Thinking Skills), and Revising all aspects and steps of learning development.

2. The results of the development of Arabic learning innovations in MA Darul Featured 'Ulum by using the HOT Prototype model developed in this study in the form of learning device products that include lesson plans, teaching materials, and assessment of learning based on HOTS (High Order Thinking Skills).

VI. REFERENCES

- 1. Ainin, Moh., M.Tohir, Imam Asrori, Evaluasi Dalam Pembelajaran Bahasa Arab, (Malang: Misykat, 2006).
- 2. Anderson, L.W dan Krathwohl, D.R. 2010. Kerangka Landasan untuk Pembelajaran, Pengajaran dan Asesmen (Revisi Taksonomi Pendidikan Bloom). Yogyakarta: Pustaka Pelajar.
- Angelo, Thomas A. & Cross, Patricia (1995). Classroom Assessment Techniques: A Handbook for College Teachers, 2nd edition.
- Ariandari, Weindy Pramita. 2015. Mengintegrasikan Higher Order Thinking dalam Pembelajaran Creative Problem Solving. Makalah disajikan dalam Seminar Nasional Matematika dan Pendidikan Matematika UNY.
- 5. Arikunto, Suharsimi, Prosedur Penelitian Suatu Pendekatan Praktek, Jakarta: Rineka Cipta, 2007.
- 6. Asrori, Imam, Strategi Belajar Bahasa Arab Teori & Praktek, 2011, Malang: Misykat.
- 7. Brookhart, S. M., How to Assess Higher Order Thinking Skills in Your Classroom. Alexandria: ASCD, 2010.
- 8. Costa, A.L. and Presseisen, B.Z., 1985. Glossary of Thinking Skill, in A.L. Costa (ed). Developing Minds: A Resource Book for Teaching Thinking, Alexandria: ASCD.
- 9. Eggen, Paul Don Kouchak, Strategi dan Model Pembelajaran. Jakarta: PT Indeks, 2012.
- Gronlund dan Lin. (1995). Measurement and assessment in teaching. 7th edition. New Jersey: Englewood Cliffs.
- 11. Hosnan, M., Pendekatan Saintifik dan Konstektual dalam Pembelajaran Abad 21, (Bogor: Ghalia, 2014).
- 12. Kemdikbud, Modul Pelatihan Guru: Implementasi Kurikulum 2013 Mata Pelajaran Sosiologi SMA/ SMK Tahun 2014/ 2015. Jakarta: P4-BPSDM-PKPMP, Jakarta: 2014.
- 13. Kowiyah. (2012). Keterampilan Berpikir Kritis. Jurnal Guruan Dasar Dosen PGSD UHAMKA.
- 14. Krathwohl. D.R, (2002), A Revision of Blom's Taxonomy: An Overview. Journa: collefe of Educarion, The Ohio State University.
- 15. Krulik, Stephen & Rudnick, Jesse A. (1995). The New Sourcebook for Teaching Reasoning and Problem Solving in Elementary School. Needham Heights: Allyn & Bacon.
- Kurniati, Dian, Kemampuan Berpikir Tingkat Tinggi Siswa SMP Di Kabupaten Jember Dalam Menyelesaikan Soal Berstandar PISA. Penelitian dan Evaluasi Pendidikan 20(2), 2016.
- 17. Kuswana, W. S. (2011). Taksonomi Berpikir. Bandung: Rosdakarya.
- 18. Moleong, Lexy J., Metodologi Penelitian Kualitatif.
- 19. Mulyana, Deddy, Ilmu Komunikasi Suatu Pengantar, Bandung: PT Remaja Rosdakarya, 2004.
- 20. Nasution dan Thomas, Buku Penuntun Membuat Thesis, Skripsi, Disertasi, Makalah, Bandung: Penerbit Jemmars, 1988.

- 21. Nugroho, R Arifin. 2018. HOTS (Kemampuan Berpikir Tingkat Tinggi: Konsep, Pembelajaran, Penilaian, dan Soal-Soal). Jakarta: PT Gramedia Widiasarana Indonesia.
- 22. Peraturan Menteri pendidikan dan Kebudayaan Republik indonesia No 66 Tahun 2013 tenteng
- 23. Rusman, Manajemen Kurikulum, Jakarta: PT. Raja Grafindo Persada, 2010.
- 24. Santoso, Singgih, Statistik Multivariat Edisi Revisi. Jakarta: PT Elex Media Komputindo, 2014.
- 25. Saputra, Hatta, Pengembangan Mutu Pendidikan Menuju Era Global: Penguatan Mutu Pembelajaran dengan Penerapan HOTS (High Order Thinking Skills). Bandung: SMILE's Publishing, 2016.
- 26. Sukardi, Evaluasi Pendidikan Prinsip dan Operasionalnya, (Yogyakarta: Bumi Aksara, 2008).
- 27. Syaodih Sukamadinata, Nana, Metode Penelitian Pendidikan, Bandung: PT. Remaja Rosdakarya.
- 28. Wardany, Kusuma, dkk. 2015. Penyusunan Instrumen Tes Higher Order Thinking Skill Pada Materi Ekosistem SMA Kelas X. Makalah disajikan dalam Seminar Nasional XII Pendidikan Biologi FKIP UNS.
- 29. Widana, I Wayan, 2017. Modul Penyusunan Soal Higher Order Thingking Skill (HOTS). Jakarta: Direktorat Pembinaan SMA Direktorat Jenderal Pendidikan Dasar dan Menengah Departemen Pendidikan dan Kebudayaan.
- 30. Widodo, T & Kadarwati, S. 2013. High Order Thinking Berbasis Pemecahan Masalah Untuk Meningkatkan Hasil Belajar Berorientasi Pembentukan Karakter Siswa. Cakrawala Pendidikan 32(1).