

EXO OLO - Task Learning Model: An Introduction To Hots-Oriented Learning Model Based On Lesson Study

Nofrion, Syafri Anwar, Azwar Ananda
Padang State University
Email: dion_geografi@yahoo.com

Abstract

This article was written to explain the role of EXO OLO Task Learning Model in developing Higher Order Thinking Skills (HOTS) for learners. The learning model which is developed with the "ADDIE" development model has four pillars: effective learning activities (individual activities, paired activities, and group activities), multilevel questions and tasks, collaboration and sustained development of teacher competence. Learning steps in this model are strengthening of concepts, the EXO Task work, the EXO Task discussions, the OLO task work, in-depth discussions and learning reflections. In relation to the implementation of the 2013 curriculum that adopts the development of higher order thinking skills (HOTS) learning oriented, the model of EXO OLO Task can be applied by the teacher in learning, both in learning Geography and other subjects. The result of the learning model implementation shows that the EXO OLO Task can improve students' learning activities (individual, pairs and groups), foster collaboration in learning, and improve students' learning outcomes significantly.

Keywords: *EXO OLO Task Learning Model, Higher Order Thinking Skill/ HOTS, Lesson Study*

1. Introduction

Geography Education is a part of Geography. It is specifically chosen with a specific purpose which is given to students after their psychological development (*Geography for Life: National Geography Standard*, 2012). Geography Education consists of three basic pillars i.e., 1) subject matter, 2) Geography basic skills and 3) perspective to act geographically (Parjito, 2015).

The ideal of learning geography is the one that is able to form and develop four aspects in the students themselves, 1) knowledge, 2) skills, 3) attitude and 4) geographical perspective. For that reason, a learning model that can accommodate the formation of these four aspects is necessary to be design. It is specifically explained in *Geography for Life: National Geography Standard Second Edition* (2012) that the purpose of learning Geography is "to equip students with the knowledge, skills, and perspective to" do "geography". It means that learning geography aims to equip students with the knowledge, skills, and perspectives to act upon the geography values.

However, the conditions in the real life have not as expected. In a series of learning Geography observations in Senior High School conducted in 2015-2017, the authors found several facts, that is to say, 1) learning activities are still dominant in basic learning activities (observing, questioning and collecting information), 2) teachers still dominate the learning (teacher dominated learning), 3) many task/problem that is given by teacher is still "low and middle order thinking skills" oriented as well as group activity has not focused on a distinct common goal (Nofrion, 2017). It will be difficult for teachers to achieve learning objectives if this condition is left that way.

If it is related to the implementation of Curriculum 2013, Geography learning should be conducted in accordance with the 14 principles of learning which contained in Permendikbud number 22 of 2016 about Standard of Learning Process in High School. It is explained in the rules that learning should be held interactively, inspirative, fun, challenging and motivate students to develop their potential, creativity and independence. In addition, the learning practice based on the Curriculum 2013 is also integrated with the development of 21st century skills like literacy, knowledge, skills, attitudes and mastery of technology based on character values. In the 21st Century Skills Implementation Curriculum 2013 guidebook in Senior High School (2017) explained that Learning should develop higher-level thinking skills (HOTS) and accommodate students to develop the 4K aspects (*critical thinking and problem solving, communication, collaboration, and creativity*).

Therefore, the author designed a model of learning on geography subjects named "EXO OLO TASK". This learning model is developed on the basis of cognitive and constructive learning theory and adopts the principles of active and collaborative learning. The development of this learning model is also much colored by Lesson Study-based learning practice in Japan. However, there is no learning model specifically designed for Lesson Study-based learning in Japan. This is what underlies the author to design this model of learning so that it can be particularly applied by Geography teachers and all teachers in general. The development of this learning model

is important because it is a component of the implementation of education in addition to standard and assessment, curriculum, professional development and learning environment (Heflebower & Marzano, 2012).

EXO OLO TASK learning model focuses on developing teacher competence and learning quality. On one hand, the teacher must prepare the questions and tasks with two levels in learning such as "EXO level (according to curriculum)" and "OLO level (above curriculum demands/ HOTS)". On the other hand, these questions or tasks designed by the teacher will be the trigger for the growth of student learning activities both basic learning activities and advanced learning activities. Not only that, the assignment of "OLO Task / HOTS" category will drive the interaction and dialogue between students both with close friend (paired activity) as well as in group (group activity). By implementing this learning model in learning will make it easier for teachers to monitor the development of higher-order thinking skills as described in the School's Assessment Guidebook (2017).

According to Nofrion (2017), EXO OLO Task learning model is characterized by four main pillars i.e.:

- 1) Effective learning activities
- 2) Multilevel questions or task
- 3) Dialogue, interaction and collaboration
- 4) Continuous development of teacher's competence

Based on the Report of Geography Teaching Seminar 1972 (Suharyono & Amin, 2013) in Semarang, it is formulated the objectives of teaching geography in schools that include knowledge aspects, attitude and skills. The details are as follows;

- 1) Put the awareness of the One Almighty God
- 2) Develop a way of thinking to be able to see and understand the relation and interaction of physical and social phenomena in a spatial context
- 3) Inculcating the community awareness
- 4) Inculcating the ethical and aesthetic feelings
- 5) Growing the recognition and love to the homeland and inculcating love and respect for fellow human beings.
- 6) Giving the ability to cultivate the nature around as well as inculcating the awareness of the necessity of work and strive to be able to enjoy or utilize the surrounding natural wealth
- 7) Developing skills to observe, note, interpret, analyze, classify and evaluate the phenomenon as well as physiological and social processes within the environment.
- 8) Fostering the skill of making descriptions and mapping.
- 9) Developing the skills of making descriptions and region comparisons
- 10) Fostering ecological awareness
- 11) Fostering awareness and the importance stability of the region and population potential
- 12) Inculcating the understanding of the environment potential and the business possibilities that exist within the environment as well as develop broad views and rational goal in choosing and creating vocation.

Then, based on Permendikbud number 20 of 2016 about Standard Competence of Primary and Secondary School Graduation, it is explained that the standard competence of graduation is the criteria of graduation competence qualification which includes attitude, knowledge and skill. The Senior High School (SMA) or MA graduates in all subjects including Geography must have a dimension of Attitude, Knowledge and Skills. The dimensions of knowledge include factual, conceptual, procedural and metacognitive.

If it seen from the dimensions and aspects of learning Geography objective both in the formulation of 1972 and the SKL 2016, it turns out that it is almost the same as the formulation of geography education objectives

according to Geography for Life: National Geography Standard Second edition 2012 which states that the goal of geography education is to equip students with knowledge, skills and geographical perspectives. This is achieved through three pillars of Geography education that is, 1) materials, 2) basic geography skills and 3) geographical perspective (Parjito, 2015).

Lesson study is an effort to improve the quality of education and learning that has been applied by educators in Japan since the 19th century. Lesson study has become a culture and cannot be separated from the Japanese education world. The principles of lesson study are planning (Plan), implementation and observation (Do), evaluation and reflection (See) on the learning process conducted by some teachers collaboratively in order to improve the quality of learning (Arani, Keisuke & Lasegaard; Dudley, 2011 ; Kusumarasyati, 2016). Lesson study cannot be separated with collaborative learning. It is an aspect in the changing of educational patterns in the 21st century model school and the core of school reformation. Sato (2012) said it with the term "silent revolution" or "classroom peaceful revolution". In collaborative, learning is the students' right and the teacher is under obligation to fulfill the learning rights of students. Collaborative learning promotes dialogue and interaction that is the only determinant of learning quality (Sato, 2012; Nofrion, 2017).

2. Research Method

The development of the EXO OLO Task learning model is done through an R&D research in the field of education that focuses on the process of exploring the consumer needs and developing products to meet the needs of these consumers. One form of educational development product is the learning model. The development model used is a procedural development model. It is a descriptive development model that shows the steps to be followed to produce a product, in this case is a learning model. The development of model in this research uses ADDIE pattern which consists of development stages starting from *Analysis, Design, Development, Implementation and Evaluation*. This development model provides a dynamic and flexible development guide framework for developing an effective product (model), starting from analysis activity of content or model/product to be developed, designing products/models, developing models/products, implementing and evaluating. The "ADDIE" model is a model that is considered appropriate because it has a complex and simple stage so that is easy to implement but still systematic and applicative. The experts also agree that the "ADDIE Model" is appropriate for the development of learning models and the results are better because all the processes are identical to the development of the learning design and all the processes are revised and developed procedurally.

The development process of EXO OLO TASK learning model follows the following path:

- 1) Analysis stage. Analysis stage consists of needs analysis, contextual analysis, and theory analysis.
- 2) Design stage. This stage includes making a design or model, designing related parties involvement in modeling and discussion with experts and socialization. The making of this learning design begins with designing the syntax of 'EXO-OLO TASK learning model'.
- 3) Development stage which includes collecting input from the candidate user/stakeholder of the model towards model 1 through FGD, improving model 1 based on input from them so it becomes model 2, 3) train the teachers, 4) doing limited trials.
- 4) Implementation stage is to apply model 2 to the sample, collecting and analyzing the results of the application, and make improvements to the model 2.
- 5) Evaluation stage is requesting input from research sample, teacher and principal, doing FGD 2 to improve model 1 to become Final Model, and compiling Model Book, Teacher Book and Student Book.

Data, data sources, techniques and data collection tools used in the development of "EXO OLO TASK learning model" research is;

Table 1. Data, Data Sources and Data Collection Techniques

No	Data	Source of Data	Data Collecting Instrument
1	Preliminary data	Teachers, Students and Schools as well as Learning Document	Learning Observation Sheet, the Relevance of Planning with Learning Implementation Analysis Sheet, Learning Documentation, Interview Guides
2	Model Book's Validity Data (BM)	Validator	Validation Instrument for Model Book's validation instrument, model book's validation instrument
3	Teacher Book's Validity Data (BG)	Validator	Teacher Book's Validation Instrument
4	Student Book's Validity Data (BS)	Validator	Student Book's Validation Instrument
5	Teacher Book's Practical Data	Teacher	Teacher Book's Practical Instrument
6	Student's Book Practical Data	Student	Student Book's Practical Instruments
7	Learning Effectiveness Data	Teacher and Students	Learning Observation Sheet and Analysis of Learning Documentation Sheet
8	Learning Outcomes Data	Students and Teacher	Learning Outcomes test
9	Teacher's Perception Data	Teacher	Questionnaire

Source: Nofrion (2017)

While the data analysis technique used in this research are:

- 1) Validity and Practicality Analysis with the average formulas and percentages to see the validity and practicality of the instrument and model book, teacher book and student book.
- 2) Intercorrelation Class/ICC Analysis to see the comparison of scores between validators.
- 3) Analysis of Validity, Reliability, Differentiation potential and level of questions difficulty.
- 4) Normality and homogeneity test.
- 5) "t" test to see whether there are differences in learning outcomes between the experimental class and the control class
- 6) Analysis of learning descriptions

In order to know the effectiveness of EXO OLO Task learning model after the implementation is based on the following data:

- 1) There is an improvement in learning activities of students both basic learning activities and advanced learning activities. This activity includes individual activity, paired activity and group activity. Learning model is said to be effective if the number of students who get 1 decreases and the number of students who get 3 increases.
- 2) There are differences between experimental class learning outcomes with control class learning outcomes. The experimental class which is applied EXO OLO TASK learning model is higher than the control class

3. Result and Discussion

The Operational Core Components of the Learning Model consists of:

3.1 Learning Syntax.

Syntax is a systematic sequence of activities within the model. The EXO OLO TASK learning model has the following syntax or learning steps:

Table 2. Syntax of EXO OLO TASK Learning Model

No	Syntax	Description of Learning Activities
1	<i>Concepts Strengthening</i>	Strengthening Concepts. Study the level of student understanding of the assigned material and the way to know the initial capability for the next step. Using "the <i>power of keywords</i> " technique. Teachers prepare keywords through a media and build common perceptions of learners towards the "scope and sequence" of the material being study. Teachers motivate students to relate one keyword to another with correct and logical analysis.
2	<i>EXO TASK (Examination Oriented Task)</i>	Giving questions or tasks in the category of "examination oriented" (questions or tasks that suitable with the demands of the curriculum/exam). Teachers adjust the task to the level of achievement in indicators and learning objectives. If in the indicator the learning objective is C3, then the variation of questions or tasks designed by teachers is from C1 to C3 (based on Revised Bloom's Taxonomy). Teachers organize learning activities in the work of this task in the form of individual activities and in pairs. Paired activities are done if there are students who have difficulty working on tasks individually, students who have not been able are being encouraged to ask questions or ask explanations to learners who have been able to do the task/questions. Teachers prepare a package of tasks/questions that will be done by students with adjusted duration.
3	<i>Discussion</i>	Discussing EXO tasks. Teachers can share the roles with students and play more roles as facilitator, observer and learning motivator. Teachers must ensure all students are able to complete the task/questions correctly. The teachers' answer or explanation is the final step in the session.
4	<i>OLO TASK (Olympiad Oriented Task)</i>	Giving tasks/questions above the demands of the curriculum or "Olympiad oriented" or task/questions that require higher-order thinking skills/"HOTS". The assignment or question of this category is presented per number and done in groups of four and heterogeneous. Related with the level of questions, if the indicators and learning objectives stated C3 then the task/question in the OLO TASK category starting from C4-C6. However, teachers may start with C3 as a warming up task/question or as a bridge for students before facing the difficult/challenging tasks. Questions or assignments may be in the form of multiple choice, essay, or problems.
5	<i>In-Depth Discussion</i>	Discussion of task/questions in this level requires students to learn actively and work together in groups, if necessary between groups. Students elaborate the task together under the guidance of teachers.
6	<i>Reflection</i>	Teachers and students pick up the meaning and wisdom from learning activities that have been undertaken together. This reflection is important for teachers and students to know what good things have been done during the lessons that need to be maintained and what bad things have happened during the lesson and must be eliminated in the next lesson.

Source: Nofrion (2017)

3.2 The Principle of Reaction

The expected reaction formed in the learning through this learning model is a mutual beneficial reaction between student and another student. When there is a student who has not been able to complete the task and he/she asks for help from another student then these two students will take a benefit from the reaction given. For students

who have not been able to ask questions or ask for an explanation then they will get a brief explanation and solutions to the problems faced. In addition, for student who's being asked, by giving explanations to other students will strengthen their understanding of the material being studied. Actions and reactions that occur in learning will form mutual care among each other (*caring community*).

3.3 Social System

The social system referred to in this learning model is the interaction system between the teacher and students as well as the interaction between students and the other students in learning. Whenever the students are faced with challenging or difficult questions/tasks then some of them will experience problems/difficulties and feel the need to establish relationships with the other students. Whenever interacting with others either in pairs or in groups, students will have additional strength, gain emotional and social support and have a "step" to complete their unfinished tasks. However, one of the principles in this learning model is, there is no action of clever students teach the other students who do not understand. Instead, the students who do not understand are encouraged to ask for explanations to their friends so that effective mutual care will be created.

This learning model develops mutual social relationships (reciprocity), interdependence, caring community, and mutual benefit. All the learning activities are created when the students are given challenging questions/tasks (OLOTASK) which begins with the standard questions/tasks (EXOTASK) as a stair/bridge (scaffolding) for students. At the time students are doing the learning activities both in individual, paired and group, teacher's role is as a supervisor and controller as well as learning's motivator. At the time when there are students who face difficulty, the teacher encourages them to try again by giving some instructions aid (not telling the answers). If it is not enough then the teacher give an instruction to students to ask the closest friends (EXO TASK) or other groups (OLO TASK).

3.4 Supporting System

The support system in a model describes the supporting conditions that teachers should create or have in applying the learning model. The support here refers to additional prerequisites beyond the skills, human capacities in general and technical facilities in particular like books, media, teaching materials, worksheets and so on. In order for this learning model can be well implemented in learning and can create the objectives that have been set then this learning model is supported by the support system in the form of Model Books, Teacher Books and Student Books including teaching Materials and Students Worksheets which consists of EXO TASK and OLO TASK Questions Package.

3.5 Instructional Impact

Instructional impact is the expected impact created after the direct learning is conducted in the form of mastery of the material by students and created skills in the students themselves. Mastery of the material by the students is obtained after following the learning process that begins with the initial assignment, the main activities of the learning model, execution of the task category EXO and OLO TASK which is done individually, in pairs, groups or between groups. Mastery of skill is gained through questioning, explaining, responding and communicating during the learning activities take place.

3.6 The Impact that follows

The students get the impact that follows or *nurturant effect* after they participate in the learning. This is the impact of indirect learning which means the follow-up impact of learning activities. The form is the creation of positive attitudes or characters in the students such as the sense of caring each others, honesty, responsible, mutual respect, responsive, active, initiative, discipline and so on. The impact that follows is the result of the learning implementation which is expected to be an asset for students in their social life in the future.

3.7 The Effectiveness of Learning Model EXO OLO Task

Furthermore, to see the effectiveness of EXO OLO Task learning model, the author applies the model in two schools namely SMA Negeri 3 Padang and Padang State University Laboratory High School. For the learning observation's purpose, it is made a rubric of students' learning activity assessment consisting of basic learning activities and advanced learning activities as shown in the following table:

Table 3. Rubric of Basic and Advanced Activity Assessment

DIMENSION	VERY GOOD	GOOD	QUITE GOOD
Scale	3	2	1
Individual Activity: A. Basic Activity: 1. Observing 2. Questioning 3. Collecting Information B. Advanced Activity: 4. Associating 5. Communicating 6. Discussion	Showing the basic and advanced learning activity consistently and enthusiastically.	Showing the basic learning activity consistently and enthusiastically. Or Showing the advanced learning activity but less consistently and enthusiastically.	Showing the basic learning activity but less consistently and enthusiastically.

Source: Nofrion (2017)

This learning model can be said to be effective if the implementation results show an increasing in the number of students who get 3 on learning activities both in individual, pairs or groups learning activities. On the other hand, the number of children who get 1 is also decreased. If it is viewed from the day of study, the EXO OLO Task learning model can be said to be effective if the "t" test results show that there is a difference in experimental class learning outcomes with control class in both schools.

The Results of Model Implementation in Padang State University Laboratory High School

The hypothesis test using "t" test or differential test is conducted after the data meet the requirements of normality and homogeneity. The result is as follows:

Table 4. Hypothesis Test Results in Padang State University Laboratory High School

Independent Samples Test				
		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
Learning Outcomes	Equal variances assumed	9.281	60	.000
	Equal variances not assumed	9.281	59.948	.000

Source: Research Data Tabulation (Nofrion, 2017)

Based on the results of statistical parametric test Independent - Sample t Test, it is obtained the calculated t-value is 0, 9.281 with degrees of freedom (df) of 60 and the sig value (2-tailed) is 0,000. Level of significance $\alpha = 0.05$ then it can be seen the value of significance is smaller than α . It means that there are differences in learning outcomes between classrooms that use the EXO OLO Task Learning Model with classrooms that do not.

The Results of EXO OLO Learning Model Implementation in SMA Negeri 3 Padang

The hypothesis test with "t" test by using Levene Test is conducted after tested the normality and homogeneity of learning result data. The result is as follows:

Table 5. Two-average Test Results with “t” test

	Levene's Test for Equality of Variances		t-test for Equality of Means	
	Df	Sig. (2-tailed)	Mean	Difference
Learning Outcomes Equal variances assumed	58	.000		3.733
Equal variances not assumed	55.123	.000		3.733

Source: Research Data Tabulation (Nofrion, 2017)

By using Levene test, it is obtained the sig value of 0,000. Thus, the calculated t-value is smaller than the α -value of 0, 05. That is, there are differences in learning outcomes between experimental and control classes. The statistical tests' result on the learning outcomes of these students strengthens the fact that the application of EXO OLO Task Learning Model based Lesson Study in learning geography can improve learning outcomes significantly.

The implementation's result of the learning model in the two schools proved that the EXO OLO Task learning model is effective, characterized by:

- 1) There is a development of student learning activities in the form of an increasing in the number of students who got 3 and a decreasing in the number of students who got 1.
- 2) There is a difference in learning outcomes between experimental and control class where the experimental class' average value is higher than the control class'.

4. Conclusion

EXO OLO Task learning model is developed on the basis of cognitive and constructivist learning theory and adopt the principle of active and collaborative learning. The development design uses the "ADDIE" pattern with six syntaxes: concepts strengthening, EXO Task, discussion, OLO Task, in-depth discussion and reflection. This model has four main pillars i.e. effective learning activities, multilevel questions/task, dialogue, interaction and collaboration, and the sustainable development of teacher competence. The result of the model implementation proves that the EXO OLO Task learning model can improve students' learning activity both individual, paired and group learning activities. Implementation of the model also proves that the experimental class' learning outcomes are higher than the control class' learning outcomes. Based on the development and implementation of EXO OLO TASK learning model, the authors recommend this model to be implemented by teachers in learning, both geography teachers and other teachers. This model can trigger student learning activities and foster collaboration. It also can be used to train the higher-level thinking skills among students. The application of this model is more specifically suited for learning to prepare students for the Science Olympiad and similar competitions.

References

- Arani, M, R, S., Keisuke, F., & Lassegard, J. P. 2010. “Lesson Study” as Profesional Culture in Japanene Schools; An Historical Perspectives on Elementary Classroom Practices. *Japan Review* (22), 171-200
- Badan Standar Nasional Pendidikan (2010). *Paradigma Pendidikan Nasional Abad-21*. Jakarta:BSNP
- Kemdikbud RI. 2017a. Panduan Penilaian oleh Pendidik dan Satuan Pendidikan Sekolah Menengah Atas. Jakarta
- 2017b. Panduan Implementasi Kecakapan Abad 21 Kurikulum 2013 di Sekolah Menengah Atas. Jakarta
- 2017c. Modul Penyusunan Soal ‘Higher Order Thingking Skills/HOTS’. Jakarta
- Kusumarasyati. 2015. Penerapan Lesson Study untuk Meningkatkan Kualitas Pembelajaran Bahasa Inggris di Pendidikan Tinggi;Masalah dan Solusi. *Prosiding Seminar Nasional Lesson Study*. Hal 137-151. ISBN: 978-602-71506-3-8
- National Endowment for the Humanities (NFAH). 2012. *Geography for Life;National Geography Standard 2nd Edition 2012*. Washington DC. Department of Education
- Nofrion. 2017. *Buku Model Pembelajaran EXO OLO Task*. Produk Disertasi. Tidak diterbitkan
- Nofrion, dkk. 2017a. Model Pembelajaran EXO OLO TASK;Peningkatan Aktivitas Belajar dan Kolaborasi Siswa dalam Pembelajaran Geografi Berbasis Lesson Study. Artikel disajikan dalam SEAGA 2017 di Universitas Indonesia tanggal 29 November – 3 Desember 2017. *Prosiding dalam proses penerbitan*

- 2017b. Efektivitas Model Pembelajaran EXO OLO TASK Berbasis Lesson Study pada Pembelajaran Geografi. Artikel disampaikan dalam IGEOS 2017 di UPI Bandung. Prosiding dalam proses penerbitan
- Parjito. 2015. Visi Pendidikan Geografi di Abad 21. Prosiding Seminar Nasional 2015. Hal. 249-251. ISBN:978-602-71506-3-8
- Permendikbud RI Nomor 20 tahun 2016 tentang Standar Kompetensi Lulusan
- Permendikbud RI Nomor 22 tahun 2016 tentang Standar Proses Pembelajaran Sekolah Menengah
- Sato, Manabu. 2012. *Mereformasi Sekolah*. Jakarta. PELITA/JICA
- Sato, Masaaki. 2012. *Dialog dan Kolaborasi di Sekolah Menengah Pertama. Praktek "Learning Community"*. Jakarta. PELITA/JICA
- Suharyono & Moch. Amin. 2013. *Pengantar Filsafat Geografi*. Penerbit Ombak. Yogyakarta