

The Alignment of Assessment Tasks with Teaching Objectives and Activities Based on Bloom Taxonomy: Case Study

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Abstract

Assessment plays an important role in teaching process to show students' understanding and comprehension about the material. Good assessment task is the one which can achieve the teaching objective. Then, this research discusses about the alignment of assessment task with teaching objectives and activities on Junior High School Teacher' lesson plan based on Bloom Taxonomy. This study uses qualitative descriptive which focuses on document analysis. In getting the data, the researcher asked the Junior High School Teacher's lesson plan and analyzed each components based on Taxonomy Table. The results highlighted that the assessment tasks which Junior High School teacher designed do not align with teaching objectives and activities since the teacher did not break down the objectives properly even though the analysis on the Taxonomy Table shows good alignment. Further discussion is elaborated in this research.

Keywords: Assessment Task, Teaching Objective, Activities, Constructive Alignment, Bloom Taxonomy

INTRODUCTION

Language teachers do not only have to master the knowledge theoretically but also have to implement their understandings practically. Before conducting the teaching and learning process, one thing that language teachers need to do is that designing lesson plan as one of the instructional design's components. Planning is a systematic process of deciding what and how students should learn (Cicek & Tok, 2014). Lesson plan gives teachers an overview and guideline about what they are going to teach during the learning process. Good lesson plan describes *what, when, where*, and with *which* method students should learn and *how* they should be assessed (N & Heidari, 2014). Therefore, teachers should pay attention when designing lesson plan. They need to consider the specific teaching objectives, effective learning activities, and appropriate assessment tasks for the students.

The first thing and vital aspect in designing lesson plan is that determining teaching objectives (Brown, 2000). They show what teachers want their students to learn at the end of the lesson (Anderson, Krathwohl, Airasian, & al., 2001). Teaching objectives are behaviors which stated specifically as well as measurably. They cover knowledge, skills, attitude, and

value which students need to acquire (Saad, 2011). The clearer the teaching objectives are, the easier to conduct the teaching process. It shows that teaching objectives are the key to decide appropriate learning activities and assessment tasks. The Regulations of Minister Education state that teaching objectives are formulated from Basic Competence (KD) and mentioned in operational verbs which can be observed and measured in terms of attitude, knowledge, and skills aspects (Permendikbud, 2016). In language teaching, teaching objectives focus on KD 3 (*knowledge*) and KD 4 (*skill*).

In order to develop students' understanding, teachers should arrange appropriate learning activities since they reflect the step by step which students should do to accomplish the material. The teachers have to look at both their perspectives and students' perception and abilities. If teachers do not arrange the learning activities in order, the students will be difficult to understand the material and follow the lesson. So that, learning activities should be clear and applicable. Then, to measure students' accomplishment about the material, teachers have to design an appropriate and relevant assessment task. The more relevant the assessment tasks are, the easier to judge whether the students achieve the teaching objectives or not. The relevance is related to the correlation between the assessment and the materials which have been learned before. If the teachers give unfamiliar task which is different from the material for the students, the results will not show the students' comprehension and understanding of the lesson since it is not relevant with the materials that have been discussed. Therefore, good assessment tasks should align with the teaching outcomes and learning activities which have been set before.

The alignment of each teaching's components can be called as constructivism alignment. Constructivism alignment is an outcome-based approach to curriculum design that is grounded in constructivist learning theory (Biggs J. , 1996). It can be used as a guideline to construct a good and effective lesson plan. To determine the alignment and decide specific teaching objectives, appropriate learning activities and relevant assessment tasks, teachers can use and follow Bloom Taxonomy as their guideline. Bloom taxonomy is a means to classify systematic learning outcomes, activities, and assessments which describe how students' performance grows in complexity when mastering tasks (Biggs & Collins, 1982). Bloom's taxonomy is widely used in United State of America for guideline to construct lesson plan in terms of deciding the objectives, activities and assessment in order and operationally.

The concept of Bloom Taxonomy emphasizes on cognitive processes domain and knowledge dimension. The cognitive processes domain are classified into 6 levels (Anderson, Krathwohl, Airasian, & al., 2001); *Remember, Understand, Apply, Analyze, Evaluate, and Create*. While, the knowledge dimension are stages of knowledge which students can do during the leaning process (Anderson, Krathwohl, Airasian, & al., 2001). They are divided into four aspects; *factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive process*. In accordance with this issue, the researcher did preliminary research and found that misalignment in designing lesson plan and doing real teaching still appear during the learning process. Due to the importance to establish an effective learning process, this study is conducted to describe teacher's competences in designing teaching process which focuses on the alignment of teaching components in lesson plan as a case study. Therefore, this study is intended to investigate the following research question:
How is the alignment of teachers' assessment tasks to the teaching objectives and activities based on Bloom Taxonomy?

Constructive Alignment

Constructive alignment is an outcome-based approach in teaching and learning process in which the learning outcomes are defined before the teaching takes place (Biggs J. , 2014).

Biggs adds that learning activities and assessment methods are designed to achieve the intended learning outcomes. So that both learning activities and assessment tasks need to be aligned with learning objectives. Constructive alignment is one of the major in psychology which means that students are gaining their own knowledge and actively participating in the teaching and learning activities (Biggs J. , 2014). Through this idea, Biggs emphasizes that there are stages which teachers have to do before they teach in the class. It is essential since the stages show the alignment of the teaching process which students engage to.

The operational framework for the teaching design are (Biggs J. , 2014):

- a. Describe the *intended learning outcomes* (ILOs)
- b. Create a learning environment using *teaching/learning activities* (TLAs)
- c. Use *assessment tasks* (ATs)
- d. Transform the judgments into final grades

Bloom Taxonomy

Bloom Taxonomy is the idea from Benjamin S. Bloom. The concept of Bloom Taxonomy deals with cognitive domain for classifying level of questions which occur in educational settings (Anderson, Krathwohl, Airasian, & al., 2001). It was released in 1956 and revised in 2001 by David R. Krathwohl. He said that the taxonomy of educational objective is a framework for categorizing teaching objectives of what teachers expect their students to learn at the end of the lesson.

By using Bloom Taxonomy, teachers are helped to classify cognitive processes domain in determining learning objectives, activities and assessment tasks. This is because Bloom Taxonomy is classified clearly as well as specifically. Related to cognitive processes domain, there are 6 levels which consist of 19 categories and cognitive processes. All of them help educators determine and classify learning objectives, activities, and assessment based on students' perception and show an integral relationship between knowledge and cognitive processes (Anderson, Krathwohl, Airasian, & al., 2001). While the knowledge dimension are divided into four aspects which consist of 11 categories. Here are the tables of cognitive process domain and the knowledge dimension which have been revised by David R. Krathwohl in 2001.

1.1 Bloom's Taxonomy Revised Version of Cognitive Processes Domain

Cognitive Processes Domain		
Category	Definition	Cognitive Process
Remember	(Regaining relevant knowledge from long-term memory)	Recognizing Recalling
Understand	(Determining the meaning of Instructional messages)	Interpreting Exemplifying Classifying Summarizing Inferring Comparing Explaining
Apply	(Carrying out or using a procedure in a given situation)	Carrying out Using
Analyze	(Breaking material, detecting how the parts relate to one another)	Differentiating Organizing Attributing
Evaluate	(Making judgments based on criteria and standards)	Checking Critiquing
Create	(Putting elements together to form a creation or make an original product)	Generating Planning Producing

1.2 Bloom's Taxonomy Revised Version of Knowledge Dimension

The Knowledge Dimension		
Categories	Definition	Knowledge Dimension
Factual Knowledge	Getting information about basic components of certain material	Knowledge of terminology Knowledge of specific details and elements
Conceptual Knowledge	Gaining the relationship between basic knowledge and the larger component of the material which have been learned	Knowledge of classifications and categories Knowledge of principles and generalizations Knowledge of theories, models and structures
Procedural Knowledge	The ability to produce something based on the knowledge which have been learned	Knowledge of subject-specific skills and algorithms Knowledge of subject-specific techniques and methods Knowledge of criteria for determining when to use appropriate procedures
Metacognitive Knowledge	Self-regulation and self-knowledge of cognition in relation to various subject matters	Strategic knowledge Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge Self-knowledge

METHOD

The research design which was used in this research was descriptive qualitative which focused on document analysis. It was aimed to find out the teacher’s competence in designing lesson plan in terms of the alignment between assessment tasks with teaching objectives and activities based on Bloom Taxonomy. The subject of this study is English teacher in Junior High School in Sidoarjo. She teaches in Islamic Junior High School. The researcher asked a copy of her lesson plan about one of the materials which have been taught. Then, the researcher analyzed the data by classifying the teaching objectives, learning activities and assessment tasks based on Bloom Taxonomy. The alignment among those three components were discussed on the discussion below.

FINDING AND DISCUSSION

Before deciding whether the assessment tasks align with teaching objectives and activities, the first thing the researcher did to know the alignment was determining the teaching objectives related to its cognitive process domain and knowledge dimension. The lesson plan was used for students on the eighth grade and the material of that day was *present perfect continuous (now)*. The teaching objectives were as below.

Tujuan Pembelajaran	KD 3	KD 4
	3.8 <u>Menerapkan fungsi sosial, struktur teks, dan unsur kebahasaan teks interaksi transaksional lisan dan tulis yang melibatkan tindakan memberi dan meminta informasi terkait keadaan/tindakan/kegiatan/kejadian yang sedang dilakukan / berlangsung saat diucapkan, sesuai dengan konteks penggunaannya. (perhatikan unsur kebahasaan present continuous tense).</u>	4.8 Menyusun teks interaksi transaksional lisan dan tulis sangat pendek dan sederhana yang melibatkan tindakan memberi dan meminta informasi terkait keadaan/tindakan/kegiatan/kejadian yang sedang dilakukan/ berlangsung saat diucapkan, dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan yang benar dan sesuai konteks.
	IPK 3	IPK 4
	3.8.1 <u>Menentukan fungsi sosial, struktur teks, dan unsur kebahasaan teks interaksi transaksional lisan dan tulis kalimat deklaratif dan interogatif yang ada di buku paket.</u>	4.8.1 Membuat <u>kalimat deklaratif dan interogatif dalam present continuous tense dengan menggunakan adverbial: now.</u>

To place the objectives in the Taxonomy Table, the researcher examined the verb and noun phrase in relation to the categories of the table. Specifically, the verb used for the first objective is “*menentukan*” which belongs to “*recognizing/identifying*” on the *Remember* level and the noun phrase is “*fungsi sosial, struktur teks, dan unsur kebahasaan teks interaksi transaksional lisan dan tulis kalimat deklaratif dan interogatif*” which refers to “*Conceptual knowledge*” because social function, structure text and language feature of declarative and interrogative sentence are knowledge of theories and structure.

While the verb used for the second objective is “*membuat*” which refers to create level and the noun phrase is “*kalimat deklaratif dan interogatif dalam present continuous tense dengan menggunakan adverbial:now*” that deals with “*conceptual knowledge.*” It should be *create conceptual knowledge*, yet looking at the teaching objectives above the teacher wanted the students to arrange or apply the concept which have been learned before into sentences (familiar task). It means that the second objective belongs to *executing* on the *Apply* level, so it should be *apply conceptual knowledge*. Those objectives can be drawn on the Taxonomy Table below.

4.1 Placement of The Objective in The Taxonomy Table

The Knowledge Dimension	The Cognitive Process Domain					
	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual Knowledge						
B. Conceptual Knowledge	Objective 1		Objective 2			
C.						

Procedural Knowledge						
D. Metacognitive Knowledge						

Key:

Objective 1: “Students are able to identify social function, structure text, and language feature of transactional text either spoken or written in present continuous tense.”

Objective 2: “Students are able to arrange declarative and interrogative sentences in present continuous tense (now).”

It can be seen that the first objective is in B1 (*Remember Conceptual knowledge*) and second objective is in B3 (*Apply Conceptual knowledge*). Then, the researcher determined the learning activities of the lesson. There were five activities which the teacher designed and they were shown as follow.

<p>Langkah pembelajaran:</p> <ol style="list-style-type: none"> 1. Merumuskan Pertanyaan Siswa dan guru mengadakan tanya-jawab mengenai pengertian, ciri-ciri, pola dan struktur <u>kalimat eklaratif dan interogatif dalam present continuous tense dengan menggunakan adverbia: now.</u> 2. Mengumpulkan dan menganalisis data guru memberikan penjabaran pengertian, ciri-ciri, pola dan struktur <u>kalimat eklaratif dan interogatif dalam present continuous tense dengan menggunakan adverbia: now.</u> 3. Merencanakan penyelidikan Guru memberikan instruksi pada siswa untuk menganalisis <u>kalimat eklaratif dan interogatif dalam present continuous tense dengan menggunakan adverbia: now.</u> 4. Menarik kesimpulan Guru dan siswa sama-sama menarik kesimpulan dari materi yang dijabarkan 5. Aplikasi dan tindak lanjut Untuk menguji pemahaman siswa, guru memberikan tugas membuat teks eksplanasi merujuk pada pengalaman masing-masing individu.

According to the activities above, the verbs used in each single objective: “identify”, “explain”, “analyze”, “conclude”, and “arrange”. From the Taxonomy Table about cognitive processes domain, identifying is something belongs to *recognizing (Remember)*, explaining is one of the categories of *Understand*, analyzing is on the *Analyze* level, concluding is an alternative term for *inferring (Understand)*, and arranging what have been learn or carrying out is an alternative term for *Executing (Apply)*.

Because students may make errors in *executing*, it seems reasonable to emphasize *metacognitive knowledge* during the learning activities. For instance, students are taught about *present continuous tense (now)* and when they are asked to implement what they have learned by arranging their own sentences. They need to *recall* the material. So that, *metacognitive knowledge* is done in this case. Thus, the learning activities are more complicated that it would appear. They might provide the opportunities for students to develop three types of knowledge (*Factual, Conceptual, and Metacognitive*) and engage in at least four cognitive processes (*identifying, analyzing, concluding, and executing*) associated with three process categories (*Remember, Understand, Apply, and Analyze*). An analysis of the learning activities in terms of Taxonomy Table can be looked at below.

4.2 Placement of The Objective and Activities in The Taxonomy Table

The Knowledge Dimension	The Cognitive Process Domain					
	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual Knowledge	Activity 1					
B. Conceptual Knowledge	Objective 1	Activity 2 Activity 4	Objective 2 Activity 5	Activity 3		
C. Procedural Knowledge						
D. Metacognitive Knowledge	Activity 6		Activity 7			

Key:

Objective 1: “Students are able to identify social function, structure text, and language feature of transactional text either spoken or written in present continuous tense.”

Objective 2: “Students are able to arrange declarative and interrogative sentences in present continuous tense (now).”

Activity 1: activity intended to have students identify social function, structure text, and language feature of declarative and interrogative sentences.

Activity 2: activity intended to give explanation for the students

Activity 3: activity to intended to have students analyze declarative and interrogative sentences in present continuous tense

Activity 4: activity intended to conclude the material

Activity 5: activity intended to have students arrange their own sentences

Activity 6: activity intended to recall metacognitive strategies

Activity 7: activity intended to implement metacognitive strategies

The Taxonomy Table above showed that students had additional activities to do before they finally arranged the sentences. They activities were *recalling* activities in *metacognitive strategies* to review their answers whether they are correct or not. After the objectives and activities are analyzed, finally the assessment tasks could be analyzed to check the alignment. The researcher determines the assessment tasks which the teacher’s concern about analyzing *declarative and interrogative sentences* in *present continuous tense* and arranging those sentences in *present continuous tense (now)*. The assessment form which the teacher designed was as below.

Asesmen:

1. Pengetahuan : uji kompetensi pemahaman siswa melalui tanya jawab dan kuis
2. Praktik: siswa membuat kalimat eklatif dan interogatif dalam present continuous tense dengan menggunakan adverbia: now.



There are two assessment tasks which the teacher designed. The first was about quiz related to the use of *present continuous tense (now)* in question and answer and the second was picture cued to arrange sentences in *present continuous tense (now)*. The teacher sees the assessment as formative in nature. She gave her students four pictures and had them find out the verbs and arrange the verbs into sentences in *present continuous tense (now)*. In examining the assessment in terms of the Taxonomy Table, the researcher focuses on the assigned point values. The score point are given for “analyzing declarative and interrogative sentences in *present continuous tense (now)* and arranging those four pictures into sentences in *present continuous tense (now)*.” Then, the results of the analysis can be summarized as follow.

4.3 Placement of The Objective, Activities, and Assessment in The Taxonomy Table

The Knowledge Dimension	The Cognitive Process Domain					
	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual Knowledge	Activity 1					
B. Conceptual Knowledge	Objective 1	Activity 2 Activity 4 Task 1	Objective 2 Activity 5 Task 2	Activity 3		
C. Procedural Knowledge						
D. Metacognitive Knowledge	Activity 6		Activity 7			

Key:

Objective 1: “Students are able to identify social function, structure text, and language feature of transactional text either spoken or written in present continuous tense.”

Objective 2: “Students are able to arrange declarative and interrogative sentences in present continuous tense (now).”

Activity 1: activity intended to have students identify social function, structure text, and language feature of declarative and interrogative sentences.

Activity 2: activity intended to give explanation for the students

Activity 3: activity to intended to have students analyze declarative and interrogative sentences in present continuous tense

Activity 4: activity intended to conclude the material

Activity 5: activity intended to have students arrange their own sentences

Activity 6: activity intended to recall metacognitive strategies

Activity 7: activity intended to implement metacognitive strategies

Test 1, Test 2: cells associated with analyzing and arranging sentences

Based on the analysis above, it shows that the lesson plan has good alignment since it contain objectives, some activities and assessment tasks. Nevertheless, the researcher finds out something missing on the construction of the teaching objectives which affects the arrangement of activities and assessment. The objectives are not broken down properly based on the Basic Competence and the activities are not suitable with the objectives. As the result, the assessment are not relevant to test students’ comprehension. At the end of the lesson, the students are asked to ask and give information about the activity done in this time in a short dialogue, but the teacher only asked the students to make sentences without any connection to ask and give information. It seems that the assessment tasks is far from the real objectives and they could not achieve the objectives stated on the syllabus.

Discussion

The alignment question can be addressed on the Table 1.3. Cells which consist of an objective, one or more learning activities and some aspects of assessment tasks indicate high degree of alignment. In contrast, cells which consist only an objective or only an activity or only some aspects of assessment indicate weak alignment (Anderson, Krathwohl, Airasian, & al., 2001). According to the analysis above, the table contain two objectives, seven activities and two assessment tasks which means that it has high/good alignment. The alignment appears on cells B2 and B3 which contain learning activity and a score point of assessment. So, the activity is assessed by certain assessment to know the students’ progress and understanding. As the example in B3 in the activity 5, the teacher intended the students to arrange sentences based on the pictures given in *present continuous tense (now)*. Then, the teacher assessed the sentences whether they were appropriate with the verbs and grammatically correct as in *present continuous tense (now)*.

Unfortunately, the assessment tasks did not align with the activities and objectives stated, so misalignment appears on the analysis. The *first* is the construction of the teaching objectives. Based on the Basic Competence (KD 3), *the students are asked to give and ask information about an activity done in this time in a certain context*, but the teacher did not give any context when breaking down the objective. She just wrote that the context was on the *workbook*, while the appropriate context is such as *at school* or *in the classroom*. So, the students face real situation in learning the material. Then, it happens for the second objective. On the Basic

Competence (KD 4), *the students are asked to give and ask information about the activity in this time either orally or written.*” The fact shows that the teacher cannot break down the objectives specifically and properly so the objectives given on the example are not appropriate with what should have been. In addition, the second objective is appropriate for instructional activity rather than students’ outcome in the end of the lesson. Due to misinterpretation of the objectives, the learning activities and assessment tasks are not arranged well and suitable with the basic competences.

It is in line with the study which is conducted by (Yulianto & al, 2018) who stated that most of language teachers in Indonesia are having trouble constructing instructional teaching objectives due to their misunderstanding to interpret basic competences. His study revealed that twenty Indonesian Secondary School teachers in Surabaya have lesson plans, but none of them create by themselves. They copy and paste the existing lesson plans from their friends because they feel overwhelmed with the instructions given on the syllabus. As the result, they determine an ambiguous instructional teaching objectives in which it leads them to design the wrong teaching activities and assessment tasks. Thus, teachers need to learn more how to determine suitable instructional objectives to increase the alignment in the teaching process.

Furthermore, there are some activities that are not assessed and provide information to the step of students’ works, such as activity 6 and 7 which reflect “progress check” after doing task 2. The activities are used to review the works, so they can check whether they arranged correct sentences or not. The review process will reinforce students’ understanding. On the task 2, the teacher gave *formative assessment* which is done during the teaching process and the results are used to improve the future learning. The assessment was arranging sentences based on the picture given or it can be called as *picture cued*. As the findings above, the assessment are not in line with the teaching objectives and activities. Students have to arrange a short dialogue to ask and give information about activities done in that time, but the fact on the assessment did not reflect so. The assessment did not support the students to achieve the real objectives as basic competences said. It is due to misinterpretation of the teacher and discrepancy of the activities. As the result, the teacher has to make changes in the statement of teaching objectives, so she can arrange appropriate learning activities and relevant assessment tasks to achieve the objectives to increase the overall alignment. It is essential since all teaching components in the lesson plan should work together to produce an effective instruction for the students (Dick, Carey, & Carey, 2015).

CONCLUSION

Alignment in language teaching is essential to improve the learning process. Not only does reinforce the teaching development, but also encourages students’ comprehension to learn the material. The alignment can be taken from the relevance from objectives, activities, and assessment. This study reveals that the assessment tasks are not appropriate with the teaching objectives and activities as the teacher misinterprets the basic competences so she could not arrange the objectives properly. Therefore, it affects to the construction of learning activities. The assessment should get students to give and ask information about an activity in this time in present continuous tense and ask them to compose a short dialogue in present continuous tense in certain context. In fact, the teacher only asked the students to arrange sentences in present continuous tense from the picture given. It showed that the assessment tasks are not in line with the teaching objectives and activities. In addition, this research is limited for gaining information which only used document as the data. It will be better if the data are gotten from the document and observation in the class to support and look at the real alignment between

the lesson plan and the teaching practice. So, it can be the concern for future research to gain more information and elaboration.

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