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## SUPPLEMENTARY MATERIALS BASED ON CONSTRUCTIVISM PRINCIPLES FOR STUDENTS' EFFECTIVE LEARNING

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**Abstract:** Learning materials that are locally relevant with the diversity of students' condition and needs and meaningful for their learning are one of some factors influencing the students' achievement. However, it is not easy for teacher to provide the students with these adequate learning materials. Teachers are sometimes just left with a set of textbooks to use without additional learning materials. Besides, there are just few teachers trained to adopt, adapt, and mediate locally available learning materials to meet the current needs of the students. As a result a number of learners do not achieve the learning objective. This paper is in the form of descriptive study talking about supplementary materials for reading skill based on constructivism principles for students' effective learning. It proposes a practical model for developing supplementary materials following constructivism principles by fostering teachers to do self-evaluation of their teaching and need analysis for accommodating the students' diversity condition. Supplementary materials are designed to provide students with engaging activities through which they develop skills, acquire concepts and be responsible for their learning.

**Keywords:** *Supplementary Materials, Constructivism Principles, Effective Learning*

### 1. INTRODUCTION

Students in EFL context have limited opportunities to use English outside of the class since they have less immediate English needs. To support the students in gaining real progress, teacher needs to provide enough learning exposure and opportunities. In this case, as learning manager, teacher ideally needs to be curious in tailoring potential learning materials that are suitable for his/her students' learning. Learning materials in this context are in the form of supplementary materials that are locally relevant with the diversity of students' condition and needs and meaningful for their learning. In fact, it is not easy for teacher to provide the students with these adequate learning materials. Teachers are sometimes just left with a set of textbooks to use without additional learning materials. Besides, there are just few teachers trained to adopt, adapt, and mediate locally available learning materials to

Meet the current needs of the students. As a result a number of learners do not achieve the learning objective.

In brief, this article is a descriptive study focused on supplementary materials for reading skill based on constructivism principles fostering teachers to do self-evaluation of their teaching and need analysis for accommodating the students' diversity condition for their effective learning. It proposes a practical model for developing supplementary materials for reading skill in accordance with teaching and learning problems found in research setting.

### 2. RATIONALE

#### 2.1. Supplementary Materials Based on Constructivism Principles

Supplementary materials in this article are in the form of extended materials designed to provide sufficient exposure and opportunities for language skill's practices. Supplementary materials are academic support linked to the regular materials. According to Elizabeth Coelho in

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Kessler (1992: 37-38), a primary requirement for second language acquisition is the provision of opportunities for frequent and extended interaction in the target language. In this case, these supplementary materials are for compensating the limits of the regular classroom materials. They also can be the help for a teacher when encountered with insufficient learning materials while teaching English in a classroom.

According to constructivism, people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences (Thirteen Ed Online; 2004). Essentially, in a constructivist classroom, the activities lead to the concepts; the students construct the meanings (Cooperstein & Weidinger; 2004). In another words, it can be said that in learning process, students engage in activities through which they develop skills and acquire concepts. From this statement it is know that in learning process, learners construct and build on their prior knowledge through activities chosen to simulate those that will be encountered in real life. Moreover, according to (Vygotsky, 1978) in (Cooperstein & Weidinger; 2004), an important aspect of constructivism is the need for social interaction. Social interaction is not only essential for knowledge construction, but it also allows students to verify their understanding, group activity increases discussion, experimentation, enthusiasm, and participation.

In constructivist learning, Gagne (1985) in (Cooperstein & Weidinger; 2004) stated that the teacher needs to “arrange the conditions of learning” in such a way that students will learn what is intended. Constructivist learning usually begins with a question, a case, or a problem. In typical constructivist sessions, as students work on a problem the instructor intervenes only as required to guide students in the appropriate direction (Cooperstein & Weidinger; 2004). In the process of learning, teachers need to provide

scaffolding or a supportive framework guiding students through a series of small steps, carefully fit together, to the appropriate discoveries (Vygotsky (1978) in Cooperstein & Weidinger (2004)). At the end of the session, teachers are also advised to give feedback on students’ progress. In this context, feedback is important as an instructional tool and as a motivational factor (Bruner et al., 1956; Mayer, 1987). Moreover, “If students are to function as self-regulated learners, they will need opportunities to assess their progress in understanding content or mastering skills” (Good and Brophy, 1994: 245).

Based on the explanation above, it can be inferred that the construction of knowledge in constructivist learning is a dynamic process requiring active engagement of the learners who will be responsible for ones' learning, while the teacher only creates an effective learning environment. In order to create an effective learning environment for students’ learning teacher may focus his/ her attention on constructing supplementary materials, extended materials designed to provide sufficient exposure and opportunities for language skill’s practices, accommodating the strength of the constructivism principles for students’ effective learning so that students will learn what is intended. In general, doing the supplementary learning activities, students will find opportunities to discuss with teammates, to compare notes about important concepts/ course material, to develop strategies for studying the subject leading to mastery learning.

## **2.2. Developing Reading Supplementary Materials Based on Constructivism Principles for Students’ Effective Learning**

According to Nunan (1998: 33), reading is a process of decoding written symbols, working from a smaller unit (individual letters) to larger ones (word, clauses, and sentences). Reading is also defined as an ability to draw meaning from printed pages and interpret this information

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appropriately (Grabe and Stoller, 2002); an interactive process between a reader and a text which leads to automaticity or reading fluency (Alyousef; 2005: 144). Besides, Hedge (2003) states that any reading component of an English language course may include a set of learning goals for the ability to read a wide range of texts in English. This is the long-range goal most teachers seek to develop through independent readers outside EFL/ESL classroom. Based on the experts' ideas above, reading in this article is defined as an active and complex process in which the reader makes or constructs meaning from written symbols or text and by which students understand and take part in the world around them.

In reading English text, a reader interacts dynamically with the text as he/she tries to elicit the meaning and where various kinds of knowledge are being used: linguistic or systemic knowledge (through bottom-up processing) as well as schematic knowledge (through top-down processing) (Alyousef; 2005: 144). Besides, Harmer (2001:201) listed different skills in reading that will frequently depend on what a reader is reading for as follows: (1) identifying the topic; (2) predicting and guessing; (3) reading for general understanding; (4) reading for specific information; (5) reading for detailed information; and (6) reading for interpreting text. Instead of focusing attention on the skills to process the written text, Burns (1984: 203) stated that there are some questioning techniques in comprehension skill, namely: main idea questions, detail question, vocabulary questions, sequence questions, inference question, evaluation question, and creative response question. Based on the explanation above, it can be synthesized that the indicators of reading require that the students or readers are able to: (1) find main idea; (2) find explicit information; (3) find implicit information; (4) find word references; (5) find meaning of words and phrases based on the context and (6)

make critical and contextual inferences about the text (make the synthesis and evaluation about the ideas provided in the text).

Considering both the importance and the complex process of reading skill, the researchers put their attention on how far students' progress in teaching and learning process in the classroom. The data collected from interview with the English teachers in MGMP Bahasa Inggris SMA in Karanganyar regency presents a number of particular problems which will need to be overcome. The problems deal with (1) the language or the reading text that is considered difficult for students' level, (2) insufficient or inappropriate comprehension tasks, and (3) building students' positive expectation in their reading skill. In order to make betterment for this condition, the researchers propose Supplementary Materials Based on Constructivism Principles for Students' Effective Learning.

Developing reading supplementary materials based on constructivism principles for students' effective learning is an effort to create an effective learning environment for students' learning. In this case, the focus is on the learner in thinking about learning or it is not on the subject/lesson to be taught. The extended reading materials here are designed to provide sufficient exposure and opportunities for practices, accommodating the strength of the constructivism principles for students' effective learning. Besides, learning materials is tailored to form a material that is locally relevant with the diversity of students' condition and needs and meaningful for their learning so that students will be engaged in learning what is intended and achieve their best progress. In more detailed description, teachers ideally become more curious and critical in adopting or adapting learning materials from their textbooks and mediating locally available learning materials to meet the current needs of the students.

### 3. RESEARCH DESIGN

The study on supplementary materials based on constructivism principles for students' effective learning employed a descriptive qualitative research design. It was conducted in MGMP SMA Karanganyar. The data were collected through classroom observation, interview and document analyses. Descriptive research design had been the research specification model to be more focused on the detailed information (Nunan and Bailey, 2009). Besides, this study was relevant to the characteristic of qualitative method as the researcher observed directly the process of developing supplementary materials following constructivism principles (Mackey and Gass, 2005; Tomal, 2003; Bogdan and Biklen, 1992) in order to (1) propose a practical principles for developing reading supplementary materials following constructivism principles by fostering teachers to do self-evaluation of their teaching and need analysis for accommodating the students' diversity condition; (2) underline the importance of teachers' self-evaluation of their teaching and need analysis for accommodating the students' diversity condition in developing supplementary reading materials.

### 4. FINDINGS AND DISCUSSION

In brief, this section is intended to 1) explain about practical principles for developing reading supplementary materials following constructivism principles to overcome reading problems found in research setting and 2) underline the importance of teachers' self-evaluation of their teaching and need analysis for accommodating the students' diversity condition in developing supplementary reading materials as the following.

#### 3.1. Practical principles for developing reading supplementary materials following constructivism principles

In designing supplementary material for reading skill that is fit with the current needs and

condition of students in MGMP Karanganyar, in accordance with three basic problems found in research setting, there are some principles to be noted. The principles here are adapted from Richards and Rodgers (2014), Harmer (2001), and Ornstein (2000) as follows:

Table 1

Students' Reading Problems	Practical Principles for Designing Supplementary Materials Following Constructivism Principles
	<p><b>A. Knowing how to teach the “what”</b>                      The very basic principle for designing supplementary reading materials is knowing how to teach the “what”. Teachers need to identify the goals of their teaching or the indicators of reading that are underlined as the focus of teaching. In general, the blue print of the teaching materials should be based on specific instructional objectives derived from reading skill’s construct and indicators and teaching syllabus. Richards and Rodgers (2014: 34) stated that “the instructional material is specified with respect to objectives, content (i.e. syllabus)”. Besides, teacher needs to consider about the relation of materials to other sources of input (i.e., whether they serve as the major source of input or only as minor component of it) (Richards and Rodgers; 2014: 34). In this article, the instructional material is supplementary the major input for learning. Supplementary materials are then tailored to form a material that is relevant with the diversity of students (high achiever and low achiever) and their current needs in order to compensate the limits of finely tuned materials from textbooks for students’ maximum progress. In this case, teachers are scaffolding the lesson or modifying the instructions to cover students’ needs.</p>
<p><b>The language or the reading text is considered difficult for students’ level</b></p>	<p><b>B. Knowing “who our students are”</b>                      Based on the data collected from the research participants, the two things that make reading text difficult for some students are the number of unfamiliar words and the sentence-length found in reading text. Handling this challenge, before designing the lesson plan and constructing learning materials, teachers have to do need analysis to reveal students’ comprehension level, learning experiences that they need, and model of competent assistance to help their learning. According to Scrivener (1994b: 149),</p>

	<p>when asking students to read, teachers want to avoid texts and tasks that are either far too easy or far too difficult or they want to get the level of challenge right. In this case, Krashen (1985) in Harmer (2004) stated that the best kind of language those students could be exposed to is the ‘comprehensible input’ or language which students understand the meaning of, but which is nevertheless slightly above their own production level.</p> <p><b>C. Providing Students with Pre-Teaching Vocabulary</b>                  Only knowing students’ comprehension level is considered not enough to support their learning. Teachers could ease students’ barriers in understanding reading text by accommodating the tasks that is focused on vocabulary.</p> <p>It is quite common that teachers have encouraged students not to worry about the meaning of every single word in reading for general understanding but in the same time students tend to be desperate to know each word in reading text. In this case, teachers may encourage students to read for general understanding without understanding every word on first or second read-through. But then, depending on what else is going to be done, we can give them a chance to ask questions about individual words and/ or give them a chance to look them up (Harmer; 2014: 213-214).</p>		<p>designing teaching materials, teachers have to vary the difficulty of tasks among students according to their skill levels.</p> <p>In order to provide tasks that are appropriately challenging for a group of students (high achievers or low achievers) or to help students whose skills vary requires individualizing the complexity of the tasks; teachers may accommodate various forms of questioning. According to Ornstein (2000: 179-180); questions explored to provide students with effective reading can be categorized in many ways: (1) according to thinking process involved, from low level to high level, or (according to the cognitive taxonomy) from knowledge to evaluation; and (2) according to type of answer required, convergent or divergent.</p> <p>Low level questions emphasize memory and recall of information while convergent questions tend to have one correct or best answer (Ornstein; 2000: 179-180). These questions are good for both low and high achievers to assess readiness for complex and abstract thinking (or in some situations the number of these questions is extended to help the low achievers increase their confidence). On the other hand, High-level and divergent questions go beyond memory and call for complex and abstract thinking. They can challenge the high achievers, make them think, and stimulate lively discussion for the class.</p>
<p><b>Insufficient or inappropriate comprehension tasks</b></p>	<p><b>D. Accommodating various forms of questioning as instructional modification</b>                  In general, comprehension tasks can promote understanding in teaching receptive skills. According to Richards and Rodgers (2014: 35), “Within the framework of autonomous learning, materials allow learners to progress at their own rates of learning”. This statement implies that instructional materials should be locally bound with students’ condition and needs. Concerning this principle and the heterogeneous condition of students, in</p>	<p><b>Building students’ positive expectation in their reading skill</b></p>	<p><b>E. Manufacturing success</b>                  Harmer (2014: 208) stated that teachers can ensure that students are successful by getting the level of challenge right (in terms of language, text, and tasks). A clear and achievable purpose of learning, and materials fit to students’ level can create ideal condition for positive learning engagement.</p> <p><b>F. Accommodating students’ individual factors</b>                  Richards and Rodgers (2014: 28) mentioned about (1) learning style</p>



	<p>preferences (such as whether learner likes to learn in groups or prefers learning alone); and (2) motivation, which refers to the learner's attitudes, desire, interest in, and willingness to invest effort in learning a second language. Teacher may accommodate students' learning style preferences and motivation in designing complex materials. It is possible that students in general are not quite outstanding but in the same time they are motivated to study so that teacher may set challenging materials for them. By doing additional tasks that is slightly higher than their level in groups they will find supportive atmosphere to share learning strategies.</p> <p><b>G. Providing appropriate feedback for students' learning</b></p> <p>Teacher's feedback should be clear, leading the students to know whether their response and reading strategies are correct/ appropriate or not. These may stimulate mind to think further about the basic concepts taught</p>
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Practical principles reflect the way teachers provide scaffolding or a supportive framework guiding students through a series of small steps, carefully fit together, to the appropriate discoveries of reading strategies and natural learning engagement for effective comprehension.

### **3.2. The importance of teachers' self-evaluation of their teaching and need analysis for accommodating the students' diversity condition in developing supplementary reading materials**

In an ideal condition, concerning the heterogeneous condition of students' reading comprehension, teachers are advised (1) to provide supplementary materials that are appropriately challenging for a group of students (high achievers or low achievers) and (2) to help students whose skills vary requires individualizing the complexity of the tasks. This situation reminds teachers to

scaffold the lesson or modifying the instructions to accommodate both the current trends in teaching and learning English and students' current condition and needs. To do these things, teachers formerly need 1) self-evaluation, a process of personal reflection and evaluation where teachers evaluate their instruction in teaching reading in accordance with students' achievements and learning barriers to increase the quality of all students' learning, and 2) need analysis in accordance with students' current needs for accommodating the students' diversity in designing learning materials that support effective learning.

## **5. CONCLUSION**

Effective learning requires appropriate exposure over time that makes learners feel more stimulated and valued then naturally engaged with the process of learning; being responsible for their own learning leading them to the mastery learning. Specifically underlying their attention to students' reading skill, the researchers proposed the idea for teachers to scaffold the lesson or modifying learning materials by accommodating both the current trends in teaching and learning English and the current condition and needs of the students following constructivism principles. Besides, to support the process of accommodating teaching instruction, both a process of personal reflection and evaluation where teachers evaluate their instruction in teaching reading in accordance with students' achievements and learning barriers to increase the quality of all students' learning, and 2) need analysis in accordance with students' current needs for accommodating the students' diversity in designing learning materials that support effective learning are absolutely needed.

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