

CHAPTER II

LITERATURE REVIEW

2.1 Teaching Skills

Teaching skills are very important aspects of teaching and learning process. Every teacher has to master these points in order to be an effective teacher. Based on Cruickshank (2006) there are 7 teaching skills in helping students; establishing set, using variety, optimizing instructional time, providing clear instruction, monitoring students' progress, providing feedback and reinforcement, and using question. This study will be focused on the last teaching skills which is using question.

2.2 Teachers' Questions

In classroom setting, Cotton (2003) claimed that teacher questions and student answers are considered a powerful teaching approach if they are used to expose contradictions, challenge assumption, and lead to new wisdom and knowledge. To vitalize the classroom questions, teachers should design questions which can expand students' knowledge and promote creative thinking.

Currently, questioning is the most ubiquitous phenomenon detected in classroom, as well as one of the most practical instructional devices used by most of the teachers (Cotton, 2003). Based on Cruickshank (2006), teachers must be sure to phrase questions clearly and abruptly. Teachers often ask questions that almost impossible for students to answer accurately. They fail to make clear what is they want to know of students and how them to answer. To be effective, questions should require students to process or think about what they are learning and to compose an answer.

From a teacher's perspective, questions are useful in determining their students' knowledge and understanding. In the classroom, questions provide an opportunity for teachers to listen their students and based on what they hear, to measure the knowledge and understanding these students process. By asking questions, teachers are able to determine the extent to which their students have learned what they were expected to learn and have understood the explanation given.

According to Azerefegn (2008), there are some reasons teachers ask questions. Firstly, to check whether the students understand what the teachers have explained. Secondly, to make the students practice, for example, the teachers ask questions for the students to practice certain language structures. Besides, questions are asked by teachers to figure out students' thought. By asking questions, teachers can make the students express what they have in mind and share their knowledge and experience.

A beginning step may be teachers leading the thinking through the use of questions as Socrates modeled years ago (Vlastos, 1995). “The first step in asking better questions is to identify the types of questions we are currently asking, why we are asking them, and finally what techniques can we utilize to improve the questioning that occurs in our classrooms” (McComas & Abraham, 2004).

2.2.1 The Functions of Teacher’s Questions

According to Cruickshank (2006), the most effective teacher will establish and preserve highly interactive activities during learning process in the classroom. Dealing with classroom settings, teacher will use effective question as a tool to give instruction or stimulate learner in learning activity. Teachers will give direction to students about what are they going to do and how learners do it by questioning them.

Qashoa (2013) as cited in (Brown and Wragg, 2001; Cotton, 2003; Richard, 1996; Morgan, 1991) stated the following functions that teachers’ questions serve in the classroom. First, asking questions helps teachers to follow up and elaborate on what a student has said. Second, students can openly express their ideas through answering teacher questions. Third, asking questions enhances students’ interest and keep them actively involved. Next, the act of questioning let students benefit from various explanations of the material by their peers. And then, questioning is a good tool for evaluating student learning and reviewing

the lesson as necessary. Last, asking questions enables teachers to control class discipline and student behavior.

In addition, Toni (2013) wrote questions can be used for different aims in education. They can be asked for the purpose of directing the students to the target, providing them to think at high level and effectively by directing them to questioning, determining the efficiency of education, increasing students' attendance, improving students' listening skills and increasing tolerance and respect. It can be benefited from questioning for the purpose of providing effective classroom management and decreasing classroom problems.

2.3 Types of Question

According to Nagappan (2001), question is a second way that teacher use overt speech to elicit specific types of thought. The type of questions teachers asks—high- or low-quality questions—is of particular importance in the classroom. Lee (2011) as cited in (Ogu and Schmidt 2009) define “quality questions” as questions that stimulate the students' learning process and expand the students' thinking. Teachers' high-quality questions can effectively facilitate students' involvement in inquiry-based science activities

On the other hand, Blooms (1969) stated that as teachers, they should utilize higher order level of questions. These questions require much more “brain power”, eliciting a more extensive and elaborate. Below are the six question categories as defined by Bloom.

Type of Questions based on Bloom

Adapted from *Effective Classroom Questioning*. Goodwin, S.S., Sharp, G.W., Cloutier, E.F., Diamond, N.A., & Dalgaard, K.A. (1992). University of Illinois-Urbana: Office of Instructional and Management

Questioning Category	Category / Skill	Cognitive Tasks	Types of Questions
LOWER LEVEL	KNOWLEDGE Memorizing Recalling identification Recalling information Recognizing Remembering	Define Describe Label List Match Name Order Recall Recognize Record Relate Repeat Reproduce Select State Underline	What is the definition of ...? Who did ...? When did ... occur? How many/much ...?
	COMPREHENSION Describing in one's own words Interpreting Organization and selection of facts and ideas Paraphrasing Translating from one medium to another	Arrange Compare Identify Discuss Estimate Explain Indicate Infer Interpret Generalize Paraphrase Report Restate Summarize	How did ... occur? Why does ... occur? What are example of ...? Name types of ...?
	APPLICATION Applying knowledge to actual situations	Apply Choose Compute Demonstrate Employ	Think alternative word ... Can you use the word in a different context ...?

		<p>Illustrate</p> <p>Manipulate</p> <p>Measure</p> <p>Modify</p> <p>Operate</p> <p>Practice</p> <p>Prepare</p> <p>Show</p> <p>Use</p> <p>Utilize</p>	<p>Can you think of another example that shows ...?</p> <p>Does the same idea apply to ...?</p>
HIGHER LEVEL	<p>ANALYSIS</p> <p>Applying information to produce some result.</p> <p>Finding the underlying structure of a communication.</p> <p>Identifying motives.</p> <p>Problem solving.</p> <p>Separation of whole into component parts.</p> <p>Subdividing something to show how it is put together.</p>	<p>Analyze</p> <p>Calculate</p> <p>Categorize</p> <p>Compare</p> <p>Compile</p> <p>Differentiate</p> <p>Distinguish</p> <p>Elicit</p> <p>Examine</p> <p>Imagine</p> <p>Outline</p> <p>Separate</p> <p>Subdivide</p>	<p>What are the parts or features of ...?</p> <p>Classify ... according to ...</p> <p>Outline/diagram ...</p> <p>How does ... compare / contrast with ...?</p> <p>What evidence can you list for ...?</p> <p>If .. occurs, what would happen?</p> <p>If ... changes, what would result?</p> <p>How is ... an example of ...?</p> <p>How is ... an example of ...?</p> <p>How is ... related to ...?</p> <p>Why is ... significant?</p>
	<p>SYNTHESIS</p> <p>Combination of ideas to form a new whole.</p> <p>Creating a unique, original product that may be in verbal form or may be a physical object.</p>	<p>Assemble</p> <p>Blend</p> <p>Combines</p> <p>Compose</p> <p>Construct</p> <p>Create</p> <p>Design</p> <p>Integrate</p> <p>Manage</p> <p>Organize,</p> <p>Plan</p> <p>Set Up</p> <p>Synthesize</p> <p>Unite</p>	<p>What would you predict/infer from ...?</p> <p>What ideas can you add to ...?</p> <p>How would you create/design a new ...?</p> <p>What might happen if you combined ...?</p> <p>What solutions would you suggest for ...?</p>

	<p>EVALUATION</p> <p>Development of opinions, judgments or decisions.</p> <p>Making value decisions about issues.</p> <p>Resolving controversies or differences of opinion.</p>	<p>Advise</p> <p>Agree or disagree</p> <p>Argue for or against</p> <p>Choose</p> <p>Evaluate</p> <p>Express an opinion</p> <p>Judge</p> <p>Justify</p> <p>Propose</p> <p>Present Advantages or disadvantages</p> <p>Recommend</p>	<p>Do you agree that ...?</p> <p>What do you think about ...?</p> <p>What is the most important ...?</p> <p>Place the following in order of priority ...</p> <p>How would you decide about ...</p> <p>What criteria would you use to assess ...?</p> <p>What is the best solution?</p> <p>Why?</p>
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The table above represents the level of questions from lower to higher level questions based on Bloom (1956).

2.4 Questions Levels

Anderson (1989) stated that questions differ in level of thinking required to be answer by students. Some questions require students to recall from memory specific facts, concepts, or rules they have recently been taught. Others require students to think about what they are being asked, to search connections in their memories in order to give correct, reasonable, or defensible answer. Questions are divided into two categories: (1) lower-level and (2) higher-level questions. Lower-level questions are those asked at the knowledge, comprehension, and simple application levels of Bloom's Taxonomy (Bloom, 1956). Higher-level questions require complex application, analysis, synthesis, and/or evaluation skills.

Cruickshanks (2006) wrote that lower order questions required students to respond at the knowledge, comprehension, and sometimes application levels of the taxonomy. Students can generally answer these questions using existing knowledge, either by recalling and then restating them, by rephrasing them, or by performing task. On the other hand, Nagappan (2001) as cited in Redfield and Rousseau (1981) suggested that high order questions appear to be instrumental in enhancing student thinking.

According to Goodwin, Sharp, Cloutier, Diamond and Dalgaard (1992) in Dyer (2008) from University of Florida, lower-level questions are appropriate to: (i) evaluate students' preparation and comprehension, (ii) diagnose students' strengths and weaknesses, (iii) review and/or summarizing content, while higher-level questions are effective when the teacher is trying to: (i) encourage students to think more deeply or more critically, (ii) solve problems, (iii) encourage discussions, (iv) stimulate students to seek information on their own.

William F. McComas and Linda Abraham (2006) compared low and high order question as this following table:

Low Order	High Order
This question checks a student's ability to recognize color and identify the color. There is a very narrow range of possible answers	This question allows the student to recognize and identify color, but then asks the student to consider the relationship of the lion's color to other

	things (its environment, other lions, other species of animal, its place on the food chain)
Example: What color is the lion in that diorama?	Example: Why do you suppose the lion is that color?

2.5 The Levels of Thinking Skills

Limbach (2010) defined thinking as the cognitive process used to make sense of the world: questioning everyday assumptions will direct students to new solution that can positively impact the quality of their life. Teachers' questions which involve students' thinking skills that can influence on the understanding between teachers and students in the learning process are logically to be understood. The three process (questioning, thinking and understanding) empower students in learning, performing, and achieving the ultimate goals or language learning.

Smith (2010) as cited in Lewis & Smith (1993) stated that higher order thinking occurs when a person takes new information and information stored in memory and interrelates and/or rearranges and extends this information to achieve a purpose or find possible answers in perplexing situations.

Based on Anderson (2001), Bloom's Taxonomy describes cognitive process which categorized by verb and noun. The verb describes the cognitive process dimension that contains six categories: (1) remember, (2) understand, (3) apply,

(4) analyze, (5) evaluate, (6) create. The continuum underlying cognitive process dimension is assumed to be cognitive complexity; that is, understand is believed to be more cognitively complex than remember, apply believed to be more cognitively complex than understand, and so on.

Table of Cognitive Domain based on Revised Blooms' Taxonomy

Category	Relevant Sample Verbs	Sample Assignments
1. Remembering Retrieving, recognizing, and recalling relevant knowledge from long-term memory, eg. find out, learn terms, facts, methods, procedures, concepts	Acquire, Define, Distinguish, Draw, Find, Label, List, Match, Read, Record, Identify, Recognize, Select.	Define each of the terms, Recite the policy.
2. Understanding Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining. Understand uses and implications of terms, facts, methods,	Compare, Demonstrate, Differentiate, Fill in, Find, Group, Outline, Predict, Represent, Rewrite	Trends, consequences, tables, cartoons
1. Applying Carrying out or using a procedure through executing, or implementing. Make use	Convert, Demonstrate, Differentiate between, Discover, Discuss, Examine, Experiment, Prepare, Produce,	Use a manual to calculate an employee's vacation time. Apply laws of statistics to evaluate

of, apply practice theory, solve problems, use information in new situations	Record	the reliability of a written test.
4. Analyzing Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing. Take concepts apart, break them down, analyze structure, recognize assumptions and poor logic, evaluate relevancy.	Classify, Determine, Discriminate, Form generalizations, Put into categories, Illustrate, Select, Survey, Take apart, Transform	Troubleshoot a piece of equipment by using logical deduction. Recognize logical fallacies in reasoning. Gathers information from a department and selects the required tasks for training
5. Evaluating Making judgments based on criteria and standards through checking and critiquing. Set standards, judge using standards, evidence, rubrics, accept or reject on basis of criteria.	Argue, Award, Critique, Defend, Interpret, Judge, Measure, Select, Test, Verify	Letters, group with discussion panel, court trial, survey, self-evaluation, value, allusions
6. Creating Putting elements together to form a coherent or functional whole; reorganizing elements into	Synthesize, Arrange, Blend, Create, Deduce, Devise, Organize, Plan, Present,	Article, radio show, video, puppet show, inventions, poetry, short story

a new pattern or structure through generating, planning, or producing. Put things together; bring together various parts; write theme, present speech, plan experiment, put information together in a new & creative way	Rearrange, Rewrite	
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2.6 Tests

Tests are the set of questions as ‘measurement’ tool. Brown (2004) stated that selecting good tests to match the purposes of a particular language program is therefore very important. Defining the purpose will help to choose the right kind of tests, and it will also help to focus on the specific objectives of the tests.

2.6.1 Types of Test

Tests can be categorized according to the types of information they provide. There are four types of test, they are proficiency tests, achievement tests, diagnostic tests and placement tests. First is proficiency test, Hughes (1989) defined proficiency test as a designed to measure people’s ability in a language, regardless of any training they may have had in that language. Furthermore, Brown (2004) stated that proficiency tests have traditionally consisted of standardized multiple-

choice items on grammar, vocabulary, reading comprehension, and aural comprehension. But sometimes, writing and oral production performance tests are also include.

Second, Brown (2004) also stated that Achievement tests are limited to particular material addressed in a curriculum within a particular time frame and are offered after course has focused on the objective in questions. In addition, Hughes (1989) said that achievement tests are related to language courses directly, the purpose of this tests is to establish how successful individual students, groups of students, or the courses themselves have been in achieving objects. There are two kinds of this test, they are final achievement tests and progress achievement tests.

Final achievement tests are those administered at the end of a course of study, they may be written and administered by minister of education or by members of teaching institution. The final achievement tests should be based on course syllabus or on the books and other materials used. Beside, progress achievement tests are intended to measure the progress that students are making. The example of this test is quiz.

Next is diagnostic tests, according to Hughes (1989), diagnostic tests used students' strengths and weaknesses as a criterion to be identified. They are intended to determine what learning still needs to take place. Moreover, Brown (2004) stated that diagnostic test is

designed to diagnose specified aspects of a language. For example, a test in pronunciation might diagnose the phonological features of English that are difficult for students.

The last is placement tests, based on Brown (2004), the purpose of the placement tests is to place a student into a particular level or section of a language curriculum or school. In line with Brown, Hughes (1989) stated that placement tests typically used to assign students to classes at different level. The students will be placed in the most appropriate level based on their abilities. Brown (2004) also said that there are many varieties of placement tests; assessing comprehension and production, responding through written and oral performance, open-ended and limited response, selection (e.g., multiple-choice) and gap-filling formats.

2.6.2 Types of Test Item

There are two types of test item, they are indirect test and direct test.

2.6.2.1 Indirect Test Item Types

Brown (2004) wrote that indirect test attempts to measure the abilities that underlie the skills in which students are interested. For example, a test of lexical items relating to history might be used to predict how well student will be able to function in a history class with competent speakers of the target language. There are three

types of indirect test, they are multiple-choice, fill-in and cloze, and transformation.

First is multiple-choice, Harmer (2007) stated that multiple choice questions are those where students are given alternatives to choose from. Kearney, et al (1985) said that multiple-choice tests are uniquely suited to certain assessment needs, such as monitoring the performance of large numbers of children, or measuring change over time. Many of the thinking skill are well suited to measurement by multiple-choice item types.

Second, Harmer (2007) also wrote that a variation on fill-ins and gap-fills is the cloze procedure, where gaps are put into text at regular intervals. Students are force to produce a wide range of different words based on everything from collocation to verb formation. And the last, according to Harmer (2007), in the transformation items students are asked to change the form of words and phrases to show their knowledge of syntax and word grammar. Students are asked to use many variations of vocabularies.

2.6.2.2 Direct Test Item Types

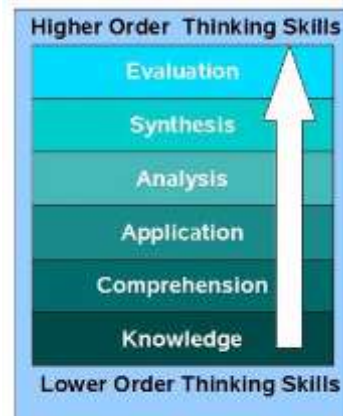
In direct items students are asked to use language to do something, instead of just testing their knowledge of how the language itself work. Hughes (1985) stated that direct test is easier to carry out when it is intended to measure the productive skills of

speaking and writing. The test could be called direct when it requires the candidate to perform precisely the skill that teachers wish to measure. For example, tests that assess the ability to gather important ideas from a lecture, write summary or an essay expressing opinion, or read and understand academic written discourse. Performance tasks, performance checklist, and observation in similar setting can also help inform teacher's prediction of student performance.

2.7 Blooms' Taxonomy

Bloom's taxonomy is a familiar tool of educators. It was created in 1948 by psychologist Benjamin Bloom and several colleagues. Originally developed as a method of classifying educational goals for student performance evaluation. The original Taxonomy provided carefully developed definitions for each of the six major categories in the cognitive domain. The categories were *Knowledge*, *Comprehension*, *Application*, *Analysis*, *Synthesis*, and *Evaluation*. The Original Bloom's Taxonomy dimensions are shown in this picture:

The Original Bloom's Taxonomy



Blooms' Revised Taxonomy by Anderson (2001) was published. It revised the arrangement in increasing order from lower order to the high order. Thinking skills level can be low order thinking and high order thinking. Low order thinking requires the students to simply recall a single fact, while high order thinking requires the students to understand the relationship between a fact or piece of knowledge within the greater context of situation. The categories of Revised Bloom's Taxonomy were *Remember*, *Understand*, *Apply*, *Analyze*, *Evaluate*, and *Create*.



In high order thinking, there are three levels. They are analysing, evaluating and creating. The first is analysing, students are analyze how the information relate to other. For example giving comparison to the two information. The next is evaluating, students are encouraged to make judgements about the value of ideas or materials. For example selecting the most effective solution. And the last is creating, students are encouraged to create a new and original product or point of view. For example creating a new point of view by own thinking related to information that have been given.

2.8 Theoretical Framework

This study focus on the questions both spoken and written posed by teachers in 3 courses of English Department in order to know how the questions and tests used by teachers to stimulate students to do high order thinking. All of the theories discussed above, the study will be guided by Blooms' Taxonomy (1968) and Revision of Blooms' Taxonomy (2001). There are 6 classifications of the questions levels Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation. Furthermore, there are six classifications of the thinking skills, those are Remember, Understand, Apply, Analyze, Evaluate and Create.