CHAPTER II

LITERATURE REVIEW

This chapter discusses theoretical review and theoretical framework underlying this study. The theoretical review exposes about the concept of the instruction, levels of thinking, instruction to promote thinking skills, previous related studies, and theoretical framework of this study.

2.1. Instruction

There are various definitions of instructions that have been created by various experts. Teacher's instructions provide preceding learning activities and task that students are about to carry out. The statement was supported by Watson (2008, p.26) who defined instruction as a series of directives that are possibly combined with explanation in order to get students to do certain activity. Added by Huitt (2003), he argues that instruction as a purposeful guidance of learning process that is complex and can take many forms. Another definition mentioned by De Graaf and Housen (2009, p. 1) that instruction as any deliberate attempt to language learning by manipulating the mechanisms of learning and/or conditions under which these operate.

As stated by Nudinia (2015, cited in Haycraft, 1978, p.6-8), providing good instruction is a technique needs to be mastered by the teacher since it is an essential element in teaching learning. If the teachers doesn't provide a good instruction, it just waste of time because the students don't understand what it is they are supposed to do (Harmer, 1998,p. 16). Providing instruction at student-appropriate level is particularly important. When students are presented with information and materials beyond their current skills level, they become frustrated and may engage in behaviours that avoid engagement in the lesson Oliver &Rechly (2007, p. 8. cited in Wehby, Symons, Canale, & Go, 1995). While some students may remain focused on tasks, others may appear to be distracted or confused. It is important for teachers to check that the students have understood what they are being asked to do. This can be achieved either by asking a students to explain the activity after the teacher has given the instruction or by getting someone to show the other people in the class how the exercise works.

If the instructions are not effectively and clearly formulated, there will be a number of students who will simply not have assimilated what is to be done or have only caught part of the information (Rhalmi: 2010). Any failure to hear or understand teacher's directions will undoubtedly result in many unwanted behavior. Pangrazi (2004, p.67- 68) maintains that it is impossible to ensure the entire class understands all of the instructions and that it wastes activity time to

try to do so. He suggests that teachers give enough instructions to get the activity going, letting the students show their actions what they do or do not understand, then the class should be stopped and a few instruction added. It is important to note also that not all students will understand or not understand at the same things.

They are two general rules for providing instructions (Harmer, 1998, p.16). The instruction should be set as simple as possible, and they must be logical. Every student comes to a classroom with his or her own reserve of prior knowledge on the subject at hand. Psychologists call this level of knowledge a student's "zone of proximal development." It defines as the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). It is important for teacher to target this zone, if teacher presents students with too little information, the students may experience cognitive overload because they aren't familiar enough with the concept at hand. Otherwise, if teacher presents students with too much information, they may suffer from the "expertise reversal effect," where they overanalyze a concept they already understand but don't recognize because they think they've missed something. From a cognitive perspective, planning the instructions around the student's prior knowledge will work because it neither overwhelms the student with new

knowledge nor limits his or her cognitive resources with redundant information (expertise reversal effect). It falls right within her zone of proximal development. (Briggs: 2013).

Penny Ur (1991) proposes some guidelines for giving effective explanations and instructions. She advises teachers to think ahead what words and illustrations to use. She also recommends making sure to have all the students' attention before giving instructions and giving them before dividing students into groups or handing out materials. The use of repetition or paraphrase as well as the presentation of the instructions in different modes is also proposed. She remarks the need to be brief in explanations, but this should also be considered when giving instructions to students and mainly if these contain a series of directives. Students will tend to respond to the final of a list of questions and commands (Liruso&Debat, 2003, p. 6).

In summary, instructions in educational context is a part of teacher talk as his/her statement that give directives or orders to students to do something in completing a task or carrying out a learning activity. Instructions are given in order to achieve the learning objective. If they get them wrong, it may cause problem that affect learning process. In short, giving instruction can be seen as a key element of the teaching learning activity.

2.2. Types of Instruction

Students achieve more in classes in which they spend much of their time being directly taught by their teacher (Hughes, 2011, p. 9, cited in Rosenshine& Stevens, 1986) in which provides instruction as a series of directives that are possibly combined with explanation in order to get students to do certain activity. Willes (1975 as cited in Holmes, 1983) explains that students are moved by a strong desire to please their teacher.

In giving instructions, Holmes (1983) groups teacher's instructions into three main categories: imperatives, interrogatives, and declaratives. The explanation can be seen from the table below:

Speech Function: Directives		
	Form	Example
1. imperatives	a. Base form of verb	*Speak louder*
	b. You + imp.	*You go on with the work*
	c. Pres. Part.	*Looking at me*
	d. Verb ellipsis	*Hands up*
	e. Imp + modifier	*Turn around, please Jo*
	f. Let + 1st pers.pro.	*Let's try*
2. Interrogatives	a. Modals	*Will you read this page for me?*

	b. Non-modals	
		People at the back are you listening?
3. Declaratives	a. Embedded agent b. Hints	*I want you to draw a picture* *Sally, you are not saying much*

Table. 2.1. *Syntactic forms of directives. Based on Holmes, 1983.*

The classifications of forms of directives by Holmes can be applied to all skills which are speaking, listening, reading, and writing. So that, this study used this analysis to classify the forms of teacher's instruction that emerge in the teaching learning process. The detail description of each forms according to Holmes (1983) are as follow:

a. Imperatives

According to Holmes (1983), imperatives consist of six forms (*base form of verb, you + imperatives, present participle form of verb, verb ellipsis, imperative + modifier, and let + 1st pronoun*).

First form is *base form of verb*. *Base form of verb* is begin with the verb without any endings such as (-s, -ed, and –ing). It appears in the Present Tense. *You + imperatives* is the second form, it begins with "you" in front of the sentence then followed by imperatives form which is giving command to someone to do something. In this context, "you" address to all students, small

students, or an individual student. Next is *present participle form of verb*. Mentioned in Holmes' article entitled *Analysing New Zealand English in the Workplace,* the utterances that she found during her observation are classified into the form of present participle form of the verb because present participle form of verb is used frequently by New Zealanders. So that, this from is classified into imperative form. *Verb ellipsis* eliminates the verb and directed to the noun. This type also includes the example of a child's name used by teacher when necessary action is quite obvious (Nuidina, 2015,p. 9). In *imperative + modifier*, teacher uses post-modifier such as 'please' and 'ok' after imperatives. The last imperatives are *let + 1ˢᵗ pronoun*. In giving command, *let*is use to form of first person or sometimes third person. In this context, this form is use to suggest solidarity rather than power.

b. Interrogatives

The classification of interrogatives mentioned by Holmes (1983) is divided into two forms which are *modals* and *non-modal*. From the example given above (see table 1) teacher uses modal "will" before state the command or order to make the directive softer. Sometimes it uses "please" to show politeness in order to get students' willingness to do teacher's request or expectation. The second form is non-modals. This kind of form is not commanding enough to get the students to do something (Nuidina, 2015, p. 10).

c. Declaratives

This type of instruction is divided into two form based on explicitness and amount of inference required to interpret the utterances (Embedded agent and Hints). *Embedded agent* is uses to express explicitly. It means the use of this form is straight to point. Conversely, *hints* is use to express implicitly. It has meaning behind the sentence delivered or in other words it's not straight to the point because the utterances conveyed an implication meaning.

In the article *Analysing New Zealand English in the Workplace*, Holmes (1983) analyzes instructions in Ll classrooms in New Zealand and Britain, showing how the successful interpretation of these instructions by students requires matching a complex range of linguistic forms to the social rules of the classroom. Holmes found in her data that imperatives were the most frequent type in all its variants and these were explicit enough not to cause any misunderstanding except for those that contained elliptical forms. Indirect forms did not cause much trouble either especially if they referred to required or proscribed activities. Most of the interpretation problems she found were related to contextual factors or behavioral expectations of the teacher.

Added by Nuidina (2015) in her research which describes form of teacher's instruction which accommodate cognitive, psychomotor, and affective domain in student's learning experience found that *base form of verb* which is imperatives was also most dominant form used to accommodate three learning domains.

2.3. Levels of Thinking

Thinking level plays important role especially in students' language acquisition. It can be describes as the set of basic and advanced skills and sub-skills that govern a person's mental processes. These skills consist of knowledge, dispositions, and cognitive and metacognitive operations (Cotton 1991, p. 3 cited in Alvino, 1990).

In the educational context, students should practice the skills and tools necessary for democratic living such as problem solving methods and scientific inquiry (Oktaviani 2015, p.13 cited in Hunkins and Ornstein, 1998, p. 45-46). The learning materials that have been taught in the classroom as demanded of learning objectives need to be equipped with relevant examples from the real world; students should be able to see the connection between what they learn with the fact of what they see from the environment around them. Students must obtain and use the tools that they need to be able to describe the real work environment so that they acquire the necessary skills at a high level as expected to face the challenges of the real world. In this case, the teachers have a very vital role and fundamental in guiding, directing, and educates students in the learning process (Davies and Ellison, 1992).

In the learning process, students who actively engage with what they are studying tend to understand more, learn more, remember more, enjoy it more and be more able to appreciate the relevance of what they have learned, than students who passively receive what teachers teach them (Park, 2003, p. 183). This is in line by situates learners at the center of the experience, empowers and motivates

them to assume responsibility for their own learning, and adopts teaching and learning strategies designed to encourage students to see themselves as active thinkers and problem-solvers (Park 2003, p. 283 cited in McManus, 2001). In other words, to create thus situations, teachers need to develop the learning objectives which promote their thinking skills.

In developing the objectives, teachers need framework to help them developing common knowledge base and a common language for teaching thinking (Oktaviani, 2015, p. 14). So far the most well-known framework is Bloom's Taxonomy which was created in 1985 mentioned by (Sanchez, 2013.p, 1). The taxonomy is a kind of framework which has continuum categories. It is used for analyzing unit or course that is currently being taught or for planning a unit or course that will be taught in the future. The analysis allows teachers to determine appropriate objectives for their teaching learning process.

Bloom's original taxonomy consisted of three domains: (1) cognitive – knowledge- based domain, (2) affective –attitude-base domain, and (3) psychomotor –physical-base domain (Munzenmaier and Rubin, 2013, p. 4). Cognitive domain refers to content and intellectual knowledge. Then, affective domain is used to analyze emotional knowledge. This domain was addressed by David Krathwohl (1964). While, psychomotor domain focuses on physical or mechanical knowledge.

The cognitive domain of Bloom's Taxonomy is used to analyze the thinking skills. It has six educational objectives (Bloom et al., 1956) – knowledge, comprehension, application, analysis, synthesis, and evaluation. The final four objectives in the taxonomy have come to define "higher order thinking" and the movement from the first two goals (knowledge and comprehension) to the final four goals (application, analysis, synthesis, and evaluation) represents a shift from lower order thinking to higher order thinking (Swartz and Mcguinness, 2014, p. 5). The knowledge level of Bloom's taxonomy can be seen in the following table :

Skill	Definition	Verbs
Knowledge	Recall information	Identify, describe, name, label, recognize, reproduce, follow
Comprehension	Understand the meaning, paraphrase a concept	Summarize, convert, defend, paraphrase, interpret, give examples
Application	Use the information or concept in a new situation	Build, make, construct, model, predict, prepare
Analysis	Break information or concepts into parts to understand it more fully	Compare/contrast, break down, distinguish, select, separate
Synthesis	Put ideas together to form something new	Categorize, generalize,

Evaluation	Make judgments about value	Appraise, critique, judge, justify, argue, support

Table. 2.2. Cognitive Level on Bloom's Taxonomy. *Bloom's Taxonomy: Whats Old in New Again.* Munzenmaier and Rubin, 2013

    The knowledge level, at the bottom of the hierarchy, is defined as remembering or retrieving previously learned material. Learning objectives at this level often include defining key terms, listing steps in a process, or repeating something heard or seen. Comprehension represents the largest category of cognitive skills and abilities. The key skill at this level is processing new information. At the application level, a learner should be able to solve a new problem by applying information without having to be prompted. Objectives at this level might require learners to interpret information, demonstrate mastery of a concept, or apply a skill learned. Analysis requires learners to recognize relationships among parts. Objectives at this level of the hierarchy often include verbs such as *differentiate*, *compare and contrast*, *criticize*, or *experiment.* Synthesis calls for creative behavior because learners produce newly constructed and, many times, unique products. At this level, objectives might have learners create a plan, propose an idea, design a product, or organize information. At the top of hierarchy, Evaluation involves making judgments about value. Learning objectives at this level require learners to measure, value, estimate, choose, or revise something, perhaps information, a product—or solve a problem. (Munzenmaier and Rubin, 2013, p. 7)

More recent modifications by Anderson &Krathwohl (2001) also known as Revised Bloom's Taxonomy mention six levels of knowledge included remember, understand, apply, analyze, evaluate, and create.

Categories	Cognitive Process	Key Verbs
Remember	Retrieving relevant knowledge from long-term memory. Remembering is when memory is used to produce definitions, facts, or lists, or recite or retrieve material.	Recognizing, recalling, and retrieving.
Understand	Determining the meaning of instructional messages, including oral, written, and graphic communication.	Interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
Apply	Carrying out or using a procedure in a given situation.	Executing and Implementing
Analyze	Breaking material into its constituent parts and detecting how the parts relate to one another and to an overall structure or purpose.	Differentiating, Organizing, and Attributing
Evaluate	Judging and making assessment by referring to relevant criteria and standards.	Checking and critiquing
Create	Putting elements together to form a novel, coherent whole or make an original product	Generating, planning, and producing.

Table. 2.3. Cognitive Domain on revised Bloom's Taxonomy by Anderson &Krathwohl, 2001

Thus, Bloom's Taxonomy and Revised Bloom's Taxonomy have become a prevailing influence in the field of teaching higher order thinking and in moving

students' learning away from rote memory and superficial understanding (Sanchez, 2013).

2.4. Instruction to Promote Thinking Level

Mentioning in Oktaviani (2015, p.18) teacher's instructions can promote students' thinking through generally two major ways. They are by : (1) setting up and maintaining the cognitive demand of task or an activity (cited in Meyer, 2003; Doyle, 1983), and (2) providing direction and guidance for students in doing such cognitively demanding learning task or activity (cited in Huiit, 2003; Ur, 1991; Vygotsky, 1987).

Instructions can promote student's level of thinking. Added by (Childs and Ryan 2003, p.1) teacher's instructions can signify the students' levels of thinking demanded in a learning activity or task and clarify what it is that students are supposed to do in completing task. Thinking about tasks by considering both the level of cognitive demand and the instruction provided for the task is useful because it gives a better sense of the intellectual work that a student must go through in order to complete the task (Benko 2012,p.17 cited in Doyle 1983). Thus ways can lead students to engage in meaningful learning.

Meaningful learning is recognized as an important educational goal. It requires that instruction go beyond simple presentation of *Factual Knowledge* and that assessment tasks require more of students than simply *recalling* or *recognizing FactualKnowledge* (Mayer, 2002, p. 277 cited in Bransford, Brown, & Cocking, 1999; Lambert & McCombs, 1998). Meaningful learning occurs when students build the knowledge and cognitive processes needed for successful problem solving (Mayer, 2002, p. 277). The cognitive processes summarized here describe the range of students' cognitive activities in meaningful learning; that is, these processes are ways where students can actively engage in the process of constructing meaning.

2.5. Previous related study

There are some previous researches about teacher's instruction and teacher's talk that engage students in a cognitive process. The first research was conducted by Susanna LethamBenko (2012). She examined the instruction of four pre-service English teachers (PSTs) for cognitively demanding literature-based writing tasks in order to investigate the types of tasks that PSTs identify as cognitively demanding, how PSTs' instruction for such tasks maintains or degrades the task's intellectual rigor, and possible influences and/or constraints during instruction. She collected the data from three ways. First, classroom observations to see the teacher's instruction that began at the task's introduction and continued until the students completed the

task. Second, interview was also used by her as additional data. It was conducted before the task was handed out, after every classroom observation, and after the final task was completed. It was delivered to all pre-service English. The last is classroom artifacts such as the tasks, handouts, and other materials used by teachers.

During her observation, she found that all of the studies of PSTs demonstrated a high understanding of "cognitive demand" for writing tasks, they presented tasks of varying levels of cognitive demand during their instruction. While some of the PSTs' instruction aligned with recommended best practices in writing instruction (e.g., modeling, use of writer's workshop), it was unclear how such instruction was supporting students to think about the text in relationship to the task and to write in response to the task. Findings from this study suggest that PSTs need the opportunity to closely study writing tasks in order to understand a task's intellectual work and design instruction to appropriately prepare students to write in response to cognitively demanding literature based writing tasks.

Another similar case by KurniasihDwiOktaviani (2015) which studied about the level of thinking that are stimulated by the lecturer's instruction. The data was collected from classroom observation and students' performances and portfolio. The data were instructions given to the students both as written in the study guide and as orally delivered during classroom activities. Statement taken from sample of students' performances and

portfolio contents (observation reports, modified scholar's lesson plans, and self-design lesson plan. Her research implied that in all activities, instructions that emerge during the learning process do not only help student realizing what they are supposed to perform but also how to do the performances; and direct students to practice their thinking skills from the lower levels to the higher level, it is proved that there was a rise in quality for students who perform with specific instructions compared to students who are not influenced by the assistance provided in the instruction. She found that in her research, the thinking skills understanding and applying that are mostly simulated by the instructions implied the realization of the ELTM 2 course objective which is enabling students to gain knowledge on teaching English and be competent in running an English lesson.

The last study which has the closest relation to the present study was carried out by NoviaraWistaNudinia (2015) who also focused on discourse analysis to find out the types, forms, and frequency of teacher's instruction emerged during the learning process. The study was aimed to describe instructions which accommodate cognitive, psychomotor, and affective domain in student's learning experiences. The data were collected by classroom observation, document analysis, and interview. During her research, she found that the use of instruction on imperative form was highly used by teachers and then followed by declarative, and interrogative. The result on domain of learning, it found in cognitive domain, result showed that

teachers focused in accommodating students' understanding towards the subject learnt in the classroom. In psychomotor domain showed the most accommodated level of psychomotor which has three levels (perception, guided-response, and mechanism) was guided response. While for affective domain, all instructions found in the observation belong to responding and receiving level. Between these levels, responding was the most accommodated level.

2.6. Conceptual Framework

In this study, the researcher wants to describe how teachers stimulate their instructions to promote students' levels of thinking. The focus is more on describing what are the instructions and types of instructions are and analyzing the thinking level stimulated by teacher's instruction only in spoken form. The classification of instructions and types of instructions propose by Jannet Holmes (1983) who groups instructions into three main categories: imperatives, interrogatives, and declaratives. While for the thinking level is conducted by using Revised Bloom's Taxonomy by Anderson (2001) into six categories; (1) Remember, (2) Understanding, (3) Apply, (4) Analyze, (5) Evaluate, and (6) Create.

In getting findings, the researcher will use classroom observation. It will carry out to collect information about instructions that emerge in the classroom. The data will collected from the teacher's instruction given to

students in the teaching and learning processes and how the instructions promote students' level of thinking. After the data were recorded, the recordings will be transcribed and put into table containing columns of IRF by Halliday (2004), types of instruction by Holmes (1983), and categorization of teacher's instruction level based on Revised Bloom's Taxonomy by Anderson and Krathwohl (2001). Sample of student's performances and portfolio will also be analyzed to get evidences if student's thinking skills are promoted along with the given information.