CHAPTER 2

LITERATURE REVIEW

2.1 Learning-Teaching Processes

As the significant element in education, learning-teaching is a complex process which is defined as a change in disposition; a relatively permanent change in behavior over time and this is brought about partly by knowledge (Shabiralyani, Hasan, Hamad & Iqbal, 2015). A meaningful learning is described as a process of relating and anchoring a new material to relevant establish entities in cognitive structure and the items are subsumed (generalized) under higher-order categories for a meaningful retention (Brown, 2006). The outcomes of learning are afresh attained skills, principles, perception, facts, and new information at hand (Adeyanju, 1987).

In Indonesian learning-teaching process, the thinking levels which directed to be used are understanding (identifying, comparing, and interpreting), applying, analyzing, and evaluating of the factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive knowledge (Silabus Mata Pelajaran Bahasa Inggris, 2016).

Learning-Centered Paradigm has grown in recent years by situating the students at the center of the experience, empowering and motivating them to assume responsibility for the learning, adopting teaching and learning strategies designed to encourage students as the active thinkers and problem-solvers (McManusio, 2001). The most effective way of

maximizing student participation and learning is through the projects and the help from traditional teaching methods is useful to introduce factual and conceptual knowledge for enabling students to work together and use more complex cognitive processes while working on the projects (Ferguson, 2002).

A powerful influence in learning is emerged by teachers' cognitions such as having *instructional concerns* or *consideration*, implementing *principles* or *maxims*, thinking about different *levels of context*, and possessing *pedagogical knowledge* (Borg, 2003). The first step of teaching activity is planning and preparation that consists of educational aims, need analysis, context, and structure of cognition (Haynes, 2010).

2.2 Communicative Competence

As cited from Celce-Murcia and Dörnyei (1995), the first comprehensive model of communicative competence is that of Canale & Swain (1980), further elaborate by Canale (1983) and posited four components as:

1. *Grammatical competence* - the knowledge of the language code (grammatical rules, vocabulary, pronunciation, spelling, etc).
2. *Sociolinguistics competence* - the mastery of the sociocultural code of language use (appropriate application of vocabulary, register, politeness and style in a given situation).

3. *Discourse competence* - the ability to combine language structures into different types of cohesive text (e.g., political speech, poetry).
4. *Strategic competence* - the knowledge of verbal and non-verbal communication strategies which enhance the efficiency of communication and, where necessary, enable the learner to overcome difficulties when communication breakdowns occur.

Another model of communicative language abilities has been proposed by Bachman (1990) and Bachman & Palmer (in preparation), as an elaboration of the Canale & Swain model, in the latest version of the Bachman & Palmer model (in preparation) that divides language knowledge into two main categories:

1. *Organizational knowledge*; the knowledge of the "components involved in controlling the formal structure of language for producing or recognizing grammatically correct sentences and for ordering these to form texts."
   (a) Grammatical knowledge – similar to Canale & Swain's grammatical competence.
   (b) Textual knowledge – similar to but more elaborate than Canale and Swain's discourse competence.
2. *Pragmatic knowledge*; the knowledge of the "components that enable us to relate words and utterances to their meanings, to the intentions of language users and to relevant characteristics of the language use contexts".

(a) *Lexical knowledge*; the knowledge of the meanings of words and the ability to use figurative language.

(b) *Functional knowledge*; the knowledge of the "relationships between utterances and the intentions, or communicative purposes of language users.

(c) Sociolinguistics knowledge – similar to Canale & Swain's sociolinguistics competence.

In situational language use, *language knowledge* interacts with metacognitive strategies, which are of three kinds, (a) *assessment*, (b) *goal-setting*, and (c) *planning*.

As cited from Celce-Murcia and Dörnyei (1995), Bachman (1990) and Bachman & Palmer (in preparation) separate knowledge of/about language from general cognitive skills involved in language use, which are better understood as ability, or capacity, rather than as knowledge.

2.3 Bloom's Revised Taxonomy

The Taxonomy of Educational Objectives is a framework for classifying statements of what is expected and intended from the students to learn as a result of instruction (Krathwohl, 2002). Bloom (1956) developed a framework for classifying educational goals and objectives into a hierarchical structure representing different forms and levels of learning. The framework is known as Bloom's Taxonomy of Educational Objectives and consists of three domains; The Cognitive Domain, The

Effective Domain and The Psychomotor Domain (Bloom, 1956). A revision of Bloom's Taxonomy is published in 2001 entitled A Taxonomy for Teaching, Learning, and Assessment, updates the taxonomy for 21st century and includes significant change in terminology and structure (IACBE, 2014)

A clear and robust tool for guiding the development of teaching and learning is provided by Bloom's Taxonomy (IACBE, 2014). The categories in the cognitive domain were ordered from simple to complex and from concrete to abstract (Krathwohl, 2002). The structure of the Cognitive Process Dimension of the revised Taxonomy are *remember*, *understand*, *apply*, *analyze*, *evaluate*, *and create* and the structure of the Knowledge Dimension of the revised Taxonomy are *factual knowledge*, *conceptual knowledge*, *procedural knowledge*, *and metacognitive knowledge* (Krathwohl, 2002). The explanation of the Cognitive Process Dimension and Knowledge Dimension are shown in the table.

Table 1
Structure of the Cognitive Process Dimension of the Revised Taxonomy

1.0	***Remember*** – Retrieving relevant knowledge from long-term memory. ***1.1 Recognizing*** ***1.2 Recalling***
2.0	***Understand*** – Determining the meaning of instructional messages, including oral, written, and graphic communication. ***2.1 Interpreting*** ***2.2 Exemplifying*** ***2.3 Classifying*** ***2.4 Summarizing*** ***2.5 Inferring*** ***2.6 Comparing*** ***2.7 Explaining***

3.0	***Apply*** – Carrying out or using a procedure in a given situation ***3.1 Executing*** ***3.2 Implementing***
4.0	***Analyze*** – Breaking material into its constituent parts and detecting how the parts relate to one another and to an overall structure or purpose. ***4.1 Differentiating*** ***4.2 Organizing*** ***4.3 Attributing***
5.0	***Evaluate*** – Making judgements based on criteria and standards. ***5.1 Checking*** ***5.2 Critiquing***
6.0	***Create*** – Putting elements together to form a novel, coherent whole or make an original product. ***6.1 Generating*** ***6.2 Planning*** ***6.3 Producing***

Remember involves retrieving relevant knowledge from long term memory. The two associated cognitive processes are *Recognizing*/*identifying* (involves locating knowledge in long-term memory that is consistent with presented material) and *Recalling*/*retrieving* (involves retrieving relevant knowledge from long-term memory) (Mayer, 2002). As shallow processing by drawing out factual answers, testing recall and recognition, the list of *remember* verbs for objectives are *choose*, *describe*, *define*, *identify*, *label*, *list, locate, match, memorize*, *name*, *omit, recite*, *recognize*, *select*, and *state* (Anderson & Krathwohl, 2001).

Understand involves constructing meaning from instructional messages and building connection between the new knowledge to be gained and the prior knowledge. Cognitive processes in the category of

Understand include *interpreting* also called *clarifying*, *paraphrasing*, *representing*, or *translating* (occurs when converting information from one form of representation to another), *exemplifying* also called *illustrating*/*instantiating* (occurs when finding a specific example or instance of a general concept or principle), *classifying* also called *categorizing*/*subsuming* (occurs when determining that something belongs to certain category), *summarizing* also called *abstracting*/*generalizing* (occurs when producing a short statement that represents presented information or abstracts genera theme) , *inferring* also called *concluding*/*extrapolating*/*interpolating*/*predicting* (involves drawing a logical conclusion from presented information), *comparing* also called *contrasting*/*mapping*/*matching* (involves detecting similarities and differences between two or more objects, events, ideas, problems, or situations), and *explaining* also called constructing model (occurs when mentally constructing and using a cause-and-effect model of a system or series) (Mayer, 2002). As translating, interpreting and extrapolating process, the list of *understand* verbs for objectives are *classify*, *defend*, *demonstrate*, *distinguish*, *explain*, *express*, *extend*, *give*, *example*, *illustrate*, *indicate*, *interrelate*, *interpret*, *infer*, *judge*, *match*, *paraphrase*, *represent*, *restate*, *rewrite*, *select*, *show*, *summarize*, *tell*, and *translate* (Anderson & Krathwohl, 2001).

Apply involves using procedures to perform exercises or solve problems and is closely link with *Procedural Knowledge*. The *Apply*

category consists of two cognitive processes *executing* also called *carrying out* – when the task is an exercise (i.e., familiar to the learner), and *implementing* also called *using* – when the task is a problem (i.e., unfamiliar to the learner) (Mayer, 2002). As the process of knowing when to apply; why to apply; and recognizing patterns of transfer to situations that are new, unfamiliar or have a new slant for students, the list of *apply* verbs for objectives are *apply*, *choose*, *dramatize*, *explain*, *generalize*, *judge*, *organize*, *paint*, *prepare*, *produce*, *select*, *show*, *sketch*, *solve*, and *use* (Anderson & Krathwohl, 2001).

Analyze involves breaking material into its constituent parts and determining how the parts are related to each other and to an overall structure. This category includes the cognitive processes of *differentiating* also called *discriminating*/*selecting*/*distinguishing*/*focusing* (occurs when discriminating relevant from irrelevant parts or important from unimportant parts of presented material), *organizing* also called *finding coherence*/*integrating*/*outlining*/*parsing*/*structuring* (involves determining how elements fit or function within a structure), and *attributing* also called *deconstructing* (occurs when determining the point of view, biases, values, or intent underlying presented material) (Mayer, 2002). As the process of breaking down into parts or forms, the list of *analyze* verbs for objectives are *analyze*, *categorize*, *classify*, *compare*, *differentiate*, *distinguish*, *identify*, *infer*, *point out*, *select*, *subdivide*, and *survey* (Anderson & Krathwohl, 2001).

Evaluate is defined as making judgements based on criteria and standards. The criteria most often used are quality, effectiveness, efficiency, and consistency. This category includes the cognitive processes of *checking* (which refers to judgements about internal consistency) and *critiquing* (which refers to judgements based n externa criteria) (Mayer, 2002). As the process of according to some set of criteria, and state why, the list of *evaluate* verbs for objectives are *appraise*, *judge*, *criticize*, *defend*, and *compare* (Anderson & Krathwohl, 2001).

Create involves putting elements together to form a coherent or functional whole; that is, reorganizing elements into a new pattern or structure. *Create* can be broke down into three cognitive processes: *generating* also called *hypothesizing* (involves inventing alternative hypotheses based on criteria), *planning* also called *designing* (involves devising a method for accomplishing some task), and *producing* also called *constructing* (involves inventing a product) (Mayer, 2002). As the process of combining elements into a pattern not clearly there before, the list of *create* verbs for objectives are *choose*, *combine*, *compose*, *construct*, *create*, *design*, *develop*, *do*, *formulate*, *hypothesize*, *invent*, *make*, *make up*, *originate*, *organize*, *plan*, *produce*, *role play*, and *tell* (Anderson & Krathwohl, 2001).

Table 2
Structure of the Knowledge Dimension of the Revised Taxonomy

A.	***Factual Knowledge*** – The basic elements that students must know to be acquainted with a discipline or solve problems in it. **Aa. Knowledge of terminology** **Ab. Knowledge of specific details and elements**
B.	***Conceptual Knowledge*** – The interrelationships among the basic elements within larger structure that enable them to function together. **Ba. Knowledge of classifications and categories** **Bb. Knowledge of principles and generalizations** **Bc. Knowledge of theories, models, and structures**
C.	***Procedural Knowledge*** – How to do something; methods of inquiry, and criteria for using skills, algorithms, techniques, and methods. **Ca. Knowledge of subject-specific skills and algorithms** **Cb. Knowledge of subject-specific techniques and methods** **Cc. Knowledge of criteria for determining when to use appropriate procedures**
D.	***Metacognitive Knowledge*** – Knowledge of cognition in general as well as awareness and knowledge of one's own cognition. **Da. Strategic knowledge** **Db. Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge** **Dc. Self-knowledge**

Bloom (1956) state that each level of learning is a prerequisite for the next level, i.e., mastery of a given level of learning requires mastery of the previous levels. Indonesian syllabus has adopted the BRT as the outcomes of students' competencies. In the Core Competencies are proposed the cognitive processes of *understanding*, *applying*, *analyzing*, and *evaluating* the *factual knowledge*, *conceptual knowledge*, *procedural knowledge*, and *metacognitive knowledge* to solve the problem and to process, think, present, and create in concrete and abstract situation in relation to a development of what has been learned in school

autonomously, act effectively and creatively and be able to use appropriate scientific method (Silabus Mata Pelajaran Bahasa Inggris, 2016).

For English subject, the competencies students have to master are *applying* and *analyzing* the social function, text structure, and language feature in relation to the texts. Then arranging and comprehending the meaning contextually by paying attention and relating to the social function, text structure, and language feature of texts (Silabus Mata Pelajaran Bahasa Inggris, 2016).

2.4 Genre Based Approach

Genre is applied in various aspects of life and in linguistics study genre becomes a kind of language object to study (Dirgeyasa, 2016). Language is said to be functional because its organization quite fundamentally reveals the purpose for which any natural language came into being and to be understood as text: any meaningful passage of language that serves some social purpose. Text and context are related, context gives text life and context is known only because of the text that realizes it (Christie, 1999).

Genre is a stage of purposeful activity (Martin, Christie, & Rothery, 1987) which is structured as it is because it serves several important social goals as it opens. When people create a text, the choices they make with respect to register are said to involve the context of situation, whereas those choices made with respect to the overall genre are said to involve the *context of culture* (Malinowski, 1935). A teacher

engages in more specialized genres such as lesson plans, student reports and feedback sheets (Hyland, 2007).

2.5 Systemic Functional Linguistics (SFL)

SFL is a potent framework for describing and modeling language as a resource for making meaning and choices (Cunanan, 2011). As cited by Cunanan (2011), this framework treats language beyond its formal structures and takes the context of culture and the context of situation in language use (Halliday 1985, 1994; Matthiessen, 1995; Martin & Rose, 2003). SFL emphasizes that language has three general functions – the interpersonal function, to do with the relationships that are enacted by language, known as the tenor of social relations (who is involved), the ideational function, to do with the experiences that are construed by language, known as the field of the experience, and the textual function (to do with the role that language plays in the context, how language works to create connected and coherent discourse, known as the mode of communication, such as speaking or writing (Rose & Martin, 2012).

Each function is realised through different systems of grammar. The experiential metafunction is realised through the Transitivity system, the textual metafunction through the Theme patterns of grammar and the interpersonal metafunction through the Mood patterns of the grammar (Eggins, 1994).

The grammar of ideational metafunction construes the experiment of change in the form of a process configuration: the fundamental element

of grammar is a clause, and the clause presents the parameters within which processes may unfold, and the grammar does this by deconstructing the process into component parts; the process itself, certain phenomena construed as participants in the process and other phenomena that are associated with the process circumstantially (Halliday & Matthiessen, 1999). Cited from Cunanan (2011), Transitivity is part of the ideational function, which concerns with the transmission of ideas. Its function is that of representing processes or experiences like actions, events, processes of consciousness, and relations that covers "all phenomena and anything that can be expressed by a verb: event, whether physical or not, state, or relations" (Halliday, 1985; Halliday, 1976). Process is the center part of a clause which is realized by the verbal groups, also regarded as what 'goings-on' are represented in the whole clause (Bloor & Bloor, 1995). The process types consist of material (happening (being created), creating, changing, doing (to), acting), behavioural (behaving), mental (seeing, feeling, thinking), verbal (saying), relational (having attribute, having identity, symbolizing), and existential (existing) (Halliday, 1985 (1994 edition)). In a material process, the thing is functioning as Actor, as Goal, and as Beneficiary. In a mental process, the thing is functioning as Phenomenon. In a verbal process, the thing is functioning as Sayer, as Verbiage, and as Target. In a relational process, the thing is functioning as Carrier, as Taken, and as Value (Halliday & Matthiessen, 1999).

2.6 Previous Research

Researchers have examined the learning-teaching processes in the classroom settings to improve students' cognitive processes for thinking critically (Masduqi, 2011; Djiwandono, 2013). Masduqi begun the research because of Indonesian universities students are often ineffective in exchanging ideas and writing in English critically. It was assumed as the factor of limited use of critical thinking skills, lack of meaningful activities and probably most of the students previously studied in teacher-centered approach setting at primary and secondary schools. Thus, those factors were the reasons for Masduqi to focus on presenting how critical thinking skills and meaning should be implemented in English Language Teaching. At first, Masduqi discussed English Language Teaching in Indonesia in general perspectives and then clarified the reasons why critical thinking skills and meaning should be prioritized in English classes. The findings revealed that collaborative activities can corporate the realization of critical thinking skills and meaning in English Language Teaching to develop students' English competences and variety of classroom activities carter students' communicative competence and create lively learning atmosphere.

A study from Djiwandono begun with the foundation of critical thinking education in Indonesia has yet to become stronger and more solid. So, his study reported of a small-scale exploratory research on the implementation of critical thinking exercise for junior students of English

as foreign language in Business Correspondence class; how critical thinking skills is introduced and proceed after executing some learning task. The result found that brief training on critical thinking and critical attitude such as engaging students in an independent learning (finding, searching and evaluating learning materials to become trustworthy, complete and can be used to achieve the goal as have been taught and trained) has prompted their awareness of critical thinking.

Another researcher did the evaluation of English text books based on Bloom's Revised Taxonomy which were being used in the learning-teaching processes (Razmjoo & Kazempoufard, 2012; Rahpeyma, 2015). Razmjoo and Kazempufard intended to evaluate Interchange series (2005) which are still fundamental coursebooks in the EFL curriculum setting, in terms of learning objectives in Bloom's Revised Taxonomy to see which levels of Bloom's Revised Taxonomy were more emphasized in these coursebooks. Razmjoo and Kazempufard codified the contents of Interchange textbooks based on a coding scheme in Bloom's Revised Taxonomy of learning objectives. The reliability of the coding scheme was also tested through two kinds of reliability analysis, namely, inter-coder and intra-coder reliability. The data were then analyzed and the frequencies and percentages of occurrence of different learning objectives were calculated. The results of the study revealed that Lower Order Thinking Skills (LOTS), the three low levels in Bloom's Revised Taxonomy, were the most prevalent learning levels in these books.

Moreover, a significant difference was also found among the coursebooks in their inclusion of different levels of learning objectives. The other result of this study was the total absence of metacognitive knowledge.

A study from Rahpeyma was carried out to evaluate the Iranian junior high school English text books according to learning objectives of Bloom's Revised Taxonomy (2001) to find which learning levels of Bloom's Revised Taxonomy were more common in these text books. The primary data in this study came from the newly published English text book, English for Schools series consisting of two three-volume series named Prospect 1, 2 and English book grade three named Right Path to English. Therefore, the data sources were junior high school English text books contents. The study was important as these course books are the first English text books that have been prescribed for Iranian junior high school students to study from 2014. To fulfill the purpose of this study, the contents of junior high school English text books were codified by a coding scheme of BRT. The data were then analyzed; at the first step the frequency and percentage of occurrence of different learning objectives from each book was separately considered and then the average of the whole books were calculated. Results from the codification of 439 tasks and exercises indicated that in three grades, the first three low levels in BRT were the most prevalent than higher learning levels in Iranian junior high school English text books. In addition an important difference was

found among the text books in their inclusion of different levels of learning objectives of two dimensions of BRT (knowledge and cognitive).